

SEBOP, PENAN, AND KENYAH INTERNAL LINGUISTIC CLASSIFICATION

Alexander D. Smith
University of Hawai'i at Mānoa
Smithad@hawaii.edu

1 INTRODUCTION. Sebop and Penan are closely related languages spoken in remote Brunei Darussalam and northern Sarawak, Malaysia, around the Baram river and its tributaries, and to a lesser degree along the Rejang river and various smaller tributaries. This paper revisits the issue of Kenyah internal subgrouping, with special reference to the linguistic position of Sebop and Penan with respect to other Kenyah languages. Although it is generally agreed that Kenyah, Penan, and Sebop descend from an immediate common ancestor (Soriente 2003, 2006, 2008, Blust 1974, 1998, 2000, 2007, 2010, and Smith 2015), the details of each proposal vary greatly. The updated linguistic subgrouping presented in this paper has implications beyond linguistics, and can be used to provide a second opinion on the culture history of the Penan, specifically, their history as nomadic hunter gathers and ultimate origins. Three claims are made in this paper, 1) The Penan and Sebop form a subgroup within the Western Lowland Kenyah group (as first proposed in Smith 2015), 2) that after considering Sebop and Penan evidence, a more conservative Proto-kenyah phonology must be reconstructed, and 3) that the linguistic evidence in this paper supports the idea that the Penan are descended from speakers of a particular Proto-Western Lowland Kenyah dialect, which was spoken in the area of the Usun Apau watershed by agriculturalists.

The evidence in this paper is entirely linguistic and consists of regular sound changes, lexical replacement innovations, semantic shifts, and a small number of irregular yet exclusively shared sound changes. Subgrouping conclusions are made by considering all of these data.

2 INTERNAL SUBGROUPING OF PENAN, SEBOP, AND KENYAH LANGUAGES.

In the following sections I put forth the evidence for a Penan-Sebop group. This is a bottom-up argument, which will first show that there is a discrete Penan subgroup, which in turn is one half of the Penan-Sebop group. The Penan-Sebop group is itself most closely related to Lebo' Vo' Kenyah, which is a Lowland Kenyah Language. From this, a revised Kenyah family tree is constructed at the end of this section with two primary branches, Highland and Lowland, with Penan-Sebop within the Lowland group. I use the comparative method to draw subgrouping conclusions, which relies on exclusively shared innovations to define the boundaries of a particular group. Briefly, if a group of languages shares an innovation, be it lexical or phonological, and if those shared innovations are not likely the result of borrowing, linguistic universals, parallel but independent change, or similarity due to chance, then it can be assumed that the innovation occurred only once, in a single language ancestral to all languages which show the innovation. Blust (2014) provides perhaps the clearest explanation yet of what the comparative method is, and how it might be employed.

2.1 The Penan subgroup.

Penan dialects form a single subgroup, defined by both phonological innovations, lexical innovations, and at least one irregular sound change. There is only one phonological innovation exclusively shared by all Penan languages; word final high vowel breaking. All Penan languages reflect word final high vowels, *i and *u, with diphthongs, -əyʔ and -əwʔ. For example, *təlu > tələwʔ ‘three’ and *laki > lakəyʔ ‘man’. The glottal stops are secondary, and will be discussed more below. There are also several Penan only lexical innovations, which form additional evidence for a Penan subgroup. An irregular reflex of Proto-Kenyah (PKEN) *l in a single lexical item is also restricted to Penan languages. In this change, *l is reflected with *r in Proto-Penan (PPEN) *rəduh ‘woman’ but with *l in all other cases. In all, there are only a handful of lexical innovations which define the Penan subgroup, but this is consistent with the hypothesis that Penan very recently diverged from a larger group. The full list of evidence is given below¹.

PKEN *taʔu ‘right’ > Ø
 PPEN *naʔaw ‘right’

PKEN *əndiŋ ‘wall’ > Ø
 PPEN *tapiʔ ‘wall’

PKEN *ait ‘sand’ > Ø
 PPEN *napun ‘sand’

PKEN *ləd^huh ‘woman’
 PPEN *rəduh ‘woman’ (irregular sound change)

PKEN *ujan ‘rain’ > Ø
 PPEN *taʔ ‘rain’

PKEN *palay ‘some’ > Ø
 PPEN *kəluəʔ ‘some’

PKEN *dau laŋit ‘thunder’ > Ø
 PPEN *ləŋəduh ‘thunder’

2.1.1 Eastern and Western Penan².

Needham (1954) was the first to coin the terms Eastern and Western Penan to describe two dialects spoken in Brunei and Sarawak, while Needham (1972) and Nothofer (1991) provide short wordlists of Eastern and Western Penan. These works, however, do not make a clear linguistic argument, and the existence of an eastern and western dialect of Penan has been

¹ Supporting data for all of the lexical innovations and reconstructed forms used in this paper are listed in the appendix. Wherever possible Proto-Malayo-Polynesian and Proto-North Sarawak forms are also provided. Proto-North Sarawak is the immediate common ancestor of Kenyah and several other languages of the Baram river including Kelabit, Bintulu, and Berawan. Proto-Malayo-Polynesian is the ancestor of all Austronesian languages spoken outside of Taiwan.

² In this paper, Eastern Penan data is from Long Mubui and Western Penan is from Long Beku. Not listed in this paper are supporting data from Long Labid Penan (Eastern) and Long Jekitan Penan (Western) which offer no significant dialectal variation.

assumed without much discussion on the merits of such a split. The aim of this section is to provide a clear linguistic argument for Western and Eastern Penan, with supporting evidence. Geographically, Eastern and Western Penan are located on opposite sides of the Baram river. Eastern Penan occupies the north-eastern banks and continues north to the interior of Brunei Darussalam. Western Penan occupies the south-western banks, and extends south into the headwaters of the Rejang river. Eastern Penan is the more conservative dialect, while Western Penan has more distinguishing phonological innovations. Three sound changes in Western Penan define the group:

- PKEN *-h- > Ø
- PKEN *-ʔ- > Ø
- PKEN *-aʔ, -ah > -əʔ, -ə

Eastern Penan dialects do not have any exclusive phonological innovations, which means that they may not represent a single subgroup. However, it is treated as a single entity here, because there is almost no dialectal variation in Eastern Penan. Lexically, Eastern and Western Penan do not have any significant differences, and I have not attempted to define either subgroup with lexical innovations. Altogether, the differences between Eastern and Western Penan are slight, and probably do not have a major effect on intelligibility. Raising of *-a to ə before word final glottalics in Western Penan is the strongest piece of evidence for separating the groups, while *h > Ø and *ʔ > Ø are more common in other languages and thus provide weaker evidence. Two tables below give several examples of these sound changes.

Table 1
*raising of *a before final glottalics in W Penan*

PKEN	E. Penan	W. Penan
*pijah ‘cheek’	pija	pijə
*lah ‘scale’	la	lə
*salah ‘nest’	sala	salə
*dahaʔ ‘blood’	dahaʔ	dəəʔ
*lutaʔ ‘vomit’	lutaʔ	lutəʔ
*mataʔ ‘raw’	mataʔ	matəʔ

Table 2
deletion of medial glottalics in W Penan

PKEN	E. Penan	W. Penan
*piʔən ‘nine’	piʔən	piən
*paʔa-n ‘thigh’	paʔan	paan
*təlaʔuh ‘barking deer’	təlaʔo	təlau
*dahaʔ ‘blood’	dahaʔ	dəəʔ
*uhat ‘vein’	kəluhat	kəluat
*aham ‘scaly anteater’	aham	aam

2.2 Penan-Sebop.

The Penan group (Eastern and Western Penan) fits in a larger Penan-Sebop group, with Sebop³ and Proto-Penan forming two primary branches. The phonological evidence for this subgroup concerns the innovation of word final glottalics. In Penan and Sebop, an innovated glottal stop closed all word final high vowels, and *h* closed word final *a. Data showing these changes are organized in table three below.

Table 3
Innovated word final glottalics

PKEN	Sebop	E. Penan	W. Penan
*əj ^h a ‘one’	jah	jah	jah
*dua ‘two’	duah	duah	duah
*ləma ‘five’	ləmah	ləmah	ləmah
*təlu ‘three’	təluʔ	tələwʔ	tələwʔ
*asu ‘dog’	acuʔ	asəwʔ	asəwʔ
*kayu ‘tree’	kayuʔ	kayəwʔ	kayəwʔ
*tali ‘rope’	taliʔ	taləyʔ	taləyʔ
*laki ‘man’	lakiʔ	lakəyʔ	lakəyʔ
*lati ‘earthworm’	kəlatiʔ	latəyʔ	latəyʔ

No other Kenyah languages share this innovation with Penan-Sebop. Additionally, Penan-Sebop is supported by a large list of lexical innovations, irregular sound changes, morphological innovations, and semantic shifts. That list is given below where PPS stands for Proto-Penan-Sebop. Many of these examples are found in basic vocabulary, and borrowing seems an unlikely explanation for such a large set. Note that although a majority of the lexical innovations given below are found in all groups, there are several innovations which are found in Sebop and Western Penan, but not Eastern Penan. The significance of this is discussed in section 4.

PKEN *mahih > Ø
PPS *maguʔ ‘skinny’

PKEN *səŋim ‘cold’ > Ø
PPS *gənin ‘cold’

PKEN *puti ‘banana’ > Ø
PPS *balak ‘banana’

PKEN *tawa ‘laugh’ > Ø
PPS *aləʔ ‘laugh’

PKEN *kamit ‘scratch’ > Ø
PPS *kərip ‘scratch’

³ Sebop data are from Sabang (2015)

PKEN *sui 'bird' > Ø
PPS *juhit 'bird'

PKEN *luəŋ 'seed' > Ø
PPS *tulin 'seed'

PKEN *kəlaŋan 'empty' > Ø
PPS *usan 'empty'

PKEN *ikəŋ 'you plural' > Ø
PPS *kaʔah 'you plural'

PKEN *amiʔ dua 'we two exclusive' > Ø
PPS *amo 'we two exclusive'

PKEN *ikəŋ dua 'you two'. > Ø
PPS *kawa 'you two'

PKEN *?
PPS *tawəŋ 'lost'

PKEN *uhat 'vein'
PPS *kəl-uhat (morphological innovation)

PKEN *muduŋ 'mountain' > Ø
PPS *tukuŋ 'mountain'

PKEN *bətʊʔən 'star' > Ø
PPS *kəñuhay 'star'

PKEN *naŋih 'cry' > Ø
PPS *m-aŋaʔ 'cry'

PKEN *bulan 'moon' > Ø
PPS *bəlilik 'moon'

PKEN *ləmbam/nəmbam 'tomorrow' > Ø
PPS *sagam 'tomorrow'

PKEN *taga 'awake' > Ø
PPS *tuʔut 'awake'

PKEN *dalam 'inside; deep' > Ø
PPS *diləm 'inside; deep'

PKEN *babuy 'wild boar' > babuy (E. Penan)

PPS *mabuy ‘wild boar’

PKEN *madaŋ ‘fly’ > maraŋ (E. Penan)

PPS *mañap ‘fly’

PKEN *ənduŋ ‘nose’ > roŋ (E. Penan)

PPS *uŋit ‘nose’

PKEN *pəsi ‘hook’ > Ø

PPS *bitik ‘hook’

PKEN *midan ‘when’

PPS *s-iran ‘when’

PKEN *muŋ/məŋgaŋ ‘dry’ > Ø

PPS *maʔaŋ ‘dry’

PKEN *əd^haw ‘day’ > daw (E. Penan)

PPS *laŋit ‘day’ (from *laŋit ‘sky’)

PKEN *buluʔ ‘bamboo’ > boloʔ (E. Penan)

PPS *ləpək ‘bamboo’

PKEN *ʔ

PPS *saput ‘morning’

PKEN *nəpəjuk ‘jump’ > Ø

PPS *uduk ‘jump’

The most important phonological innovations which are specific to Sebop are the deletion of inherited word final glottal stops, except after schwa, where glottal stops are retained. Some examples of this change are listed in Table 4 below.

Table 4

Deletion of inherited word final glottal stops in Sebop

PKEN	Sebop	E. Penan	W. Penan
*əj ^h uʔ ‘far’	ju	juʔ	juʔ
*pusuʔ ‘heart’	pucu	posoʔ	posun
*itiʔ ‘breast’	iti	eteʔ	etiʔ
*putiʔ ‘white’	puti	-	potiʔ
*alaʔ ‘take; receive’	ala	alaʔ	aləʔ
*mataʔ ‘raw’	mata	mataʔ	matəʔ
*kələwəʔ ‘spider’	kələwaʔ	kələwaʔ	kələwaʔ
*əmbəʔ ‘primary forest’	vaʔ	vaʔ	vaʔ

2.2.1 Regular exceptions in Penan-Sebop.

Exceptions to rules can at times be frustrating when analyzing data. However, if an exception or an irregular change is found throughout a specific group, it can provide additional high quality subgrouping evidence. This is because it's more likely that an exception or irregular change occurred only once, and was inherited by daughter languages than to assume that the same exceptional change happened multiple times. Penan and Sebop both share several exceptions in in two areas, 1) reflexes of *-aʔ and 2) reflexes of *-b-.

PKEN *-aʔ has distinct reflexes in Sebop and Western Penan. In Sebop *-aʔ is reflected with *-a* and in Western Penan, with *-aʔ*. Generally, if *-aʔ is irregularly reflected with *-aʔ* in Sebop, then it is also irregularly reflected with *-aʔ* in Penan. Two examples have been located.

Table 5
*Irregular reflexes of *-aʔ*

PKEN	Sebop	W. Penan	E. Penan
*jəlaʔ 'tongue'	jəlaʔ	jəlaʔ	jəlaʔ
*julaʔ 'spit'	julaʔ	julaʔ	julaʔ

PKEN *-b- is reflected with *v* in Sebop and Penan, but again, where *-b- is irregularly reflected with *b* in one language, it implies that it will also be irregularly reflected with *b* in cognate words in the other languages. Some of these irregularities may ultimately be due to borrowing, particularly animal names, but it is difficult to imagine that basic words such as 'saliva', 'tongue', 'footprint', or 'left' were borrowed. Taken together, the best way to explain these irregularities is that PPS irregularly retained *-b- as *b* and *-aʔ as *aʔ* in only a handful of words, and that Sebop, Western Penan, and Eastern Penan inherited these exceptions.

Table 6
*Irregular reflexes of *-b-*

PKEN	Sebop	E. Penan	W. Penan
*ibah 'saliva'	ibah	ibah	ibah
*babuy 'wild boar'	mabuy	babuy	mabuy
*kubuŋ 'flying lemur'	kabuŋ	kubuŋ	kubuŋ
*kəlabək 'valley'	ləbək	-	ləbək
*kabiŋ 'left'	kabiŋ	kabiŋ	kabiŋ
*uban 'hand or foot print'	uban	-	uban

2.2.2 Merger avoidance: two strategies one outcome.

Penan and Sebop are unique among Kenyah languages in that they have innovated word final glottalics, closing all inherited open syllables. This created the possible environment for a large number of mergers, eliminating form differences and creating homophony. Reflexes of *bulu 'body hair' and *buluʔ 'bamboo' show how this might have happened:

PKEN		*bulu	*bulu?
	*-u > -u?	*bulu?	*bulu?

Penan and Sebop both avoid this merger. Penan broke all high vowels before innovated glottal stops, and Sebop deleted inherited glottal stops. The result of both sound changes is merger avoidance, as shown below.

PKEN		*bulu	*bulu?
Penan	*-u > *-u? > əw?	*buləw?	*bulu?

PKEN		*bulu	*bulu?
Sebop	*-u > -u?, *-u? > -u	*bulu?	*bulu

Several Kayan languages show an apparent parallel change, where original final glottal stop has been lost, and original final vowels have added a glottal stop. Blust (2002) notes that this likely occurred in a series of changes where all vowels were lengthened before glottal stop, glottal stop was later added after final vowels which produced a length contrast in all vowels before final glottal stop, short vowels were then lowered, and glottal stop deleted after long vowels. Evidence from several languages supports his hypothesis and it is tempting to propose a similar step-by-step history for Sebop and Penan. However, there is no direct evidence which suggests such a series of intermediate steps in these languages and despite striking similarities between Kayan and Sebop regarding final glottal stops, the historical steps will likely differ in the details.

2.3 The location of Penan-Sebop within the Kenyah subgroup.

Several works have attempted a classification of Penan and Sebop in relation to Kenyah, and three competing hypotheses are found in the literature. 1) Soriente (2003, 2006, 2008) has proposed in several works a Kayan-Kenyah subgroup, of which Penan and Sebop form a primary branch, equidistant from Kayan and Kenyah. 2) Blust (1974, 1998, 2000, 2007, 2010) has for some time argued that Penan subgroup specifically with Lowland Kenyah, but has not grouped Penan and Sebop together in an exclusive Penan-Sebop subgroup. 3) Most recently, Smith (2015) has proposed a subgrouping of Kenyah languages that places Penan and Sebop together, forming a primary branch of Kenyah, essentially splitting the difference between Soriente's and Blust's competing hypotheses. Three family trees can be constructed from these hypotheses:

Soriente (2003, 2006, 2008)

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Kayan-Kenyah
  Kayan
  Kenyah
  Penan-Sebop

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Blust (1974, 1998, 2000, 2007, 2010)

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Kenyah
  Highland

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Lowland
 Lowland A
 Lowland B
 Lowland C (Penan)

Smith (2015)

Kenyah
 Highland
 Lowland
 Penan-Sebop

Blust (2007:6) placed Penan and Sebop in the Lowland group because the PKEN voiced aspirates are reflected as voiced stops. However, this observation alone does not make a convincing subgrouping argument. It is based on the assumption that the innovative forms in Penan and Sebop went through an earlier stage where *b^h, *d^h, *j^h, and *g^h were reflected as implosives that were later merged with the plain voiced series. However, there is no direct evidence which suggests that these stops were ever imploded in Penan or Sebop. Smith (2015:344) pointed this out and because of that (and because of the conservative Penan and Sebop pronouns) he removed Penan-Sebop from Lowland Kenyah. At the same time, however, he also noted that there might be lexical evidence for placing Penan-Sebop in the Lowland group, but only if more data were gathered. Such evidence has been found, and is presented below in favor of placing Penan-Sebop not only in Lowland Kenyah, but specifically in a *Western* Lowland group (See Smith 2015 for a more detailed internal subgrouping of Kenyah, with supporting evidence).

2.3.1 Lowland Kenyah, Penan-Sebop, and the Revised Tree.

According to Blust (2007) and Smith (2015) voiced implosive reflexes of PKEN *b^h, *d^h, *j^h, and *g^h justify a Lowland Kenyah group of languages, as opposed to Highland Kenyah where the same PKEN phonemes are reflected by voiceless stops. Smith (2015) further proposes a split in Lowland Kenyah between Western and Eastern Lowland. To justify this split, he relies on reflexes of PKEN nasal-obstruent sequences. To summarize, In Western Lowland, all nasal-stop sequences have been simplified. In the case of *mb, this created a new phoneme, v. In other cases, innovation led to merger with existing phonemes. Eastern Lowland has retained the nasal-stop sequences mostly unchanged. Examples include Lebo' Vo' *va?* but Uma' Pawa *mbə?* 'primary forest'; Lebo' Vo' *ləji* but Uma' Pawa *lənje* 'sunset'; and Lebo' Vo' *sigət* but Uma' Pawa *siŋgət* 'every'⁴. Also, in Eastern Lowland, *a in the final syllable was raised to e when in word-final position, while in Western Lowland, word-final *a was retained.

This phonological evidence seems to support a split in Lowland languages, but admittedly, the hypothesis would benefit from additional evidence. The Penan-Sebop group appears to provide such evidence. There are a large number of lexical replacement innovations, irregular sound changes, and semantic shifts that are found between Penan-Sebop and Western Lowland Kenyah,

⁴ Blust (2015) has pointed out that certain dialects of Lebo' Vo', like that spoken in Long Selatan in 1971, actually retained the nasal-obstruents *nj and *ŋg, and had reduced only *mb and *nd. Fieldwork in 2014, however, recorded fully simplified reflexes of all nasal-stop sequences.

but *not* Eastern Lowland. These are summarized below (PWLKEN is Proto-Western Lowland Kenyah).

PKEN *təliŋən ‘ear’

PWLKEN *kəliŋən ‘ear’ (irregular *t > k)

PKEN *itu ‘that, near’

PWLKEN *itu ‘this’ (semantic change from ‘that’ to ‘this’)

PKEN *nai ‘come’ > Ø

PWLKEN *tuay ‘come’

PKEN *saləŋ ‘black’ > Ø

PWLKEN *pədəŋ ‘black’

PKEN *maduŋ? ‘sit’

PWLKEN *mə-ñun ‘sit’

PKEN *iʔut ‘small’ > Ø

PWLKEN *jiʔik ‘small’

PKEN *tujuʔ ‘seven’ > tujuʔ (E. Penan)

PWLKEN *tujək ‘seven’

PKEN *puluʔ ‘ten’ > poloʔ (E. Penan)

PWLKEN *jap ‘ten’

PKEN *ujan ‘rain’ > Ø

PWLKEN *iməʔ ‘rain’

PKEN *daduʔ ‘long’ > Ø

PWLKEN *buat ‘long’

PKEN *butəʔ ‘blind’ > Ø

PWLKEN *bəŋ ‘blind’

PKEN *taʔi ‘excrement’ > Ø

PWLKEN *aniʔ ‘excrement’

PKEN *səŋit ‘urine’ > Ø

PWLKEN *sibəʔ ‘urine’

PKEN *su ‘grandchild’ > Ø

PWLKEN *ayam ‘grandchild’

PKEN *sigut ‘dirty’ > Ø

PWLKEN *səgit ‘dirty’ > Ø

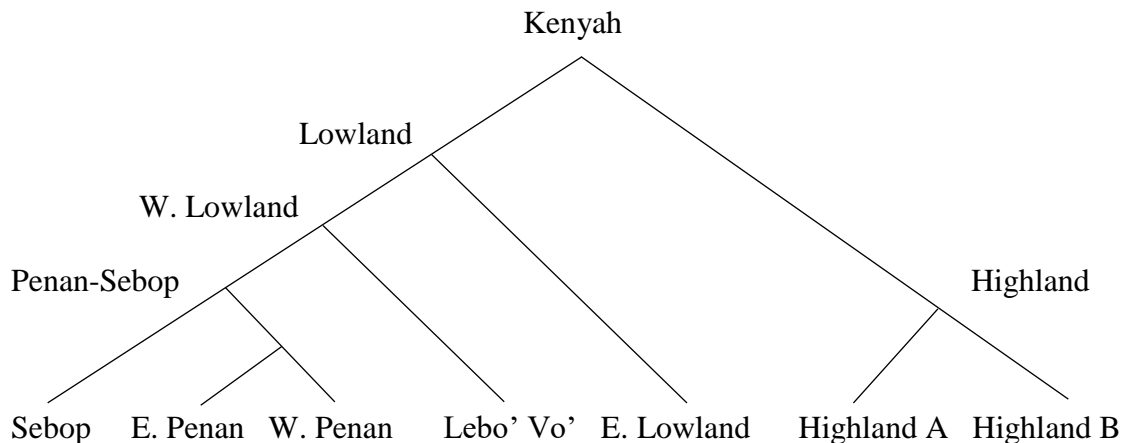
PKEN *atuk ‘fish’ > Ø

PWLKEN *təlu ‘fish’

PKEN *kitan ‘binturong’ > Ø

PWLKEN *pasuy ‘binturong’

Taken together, there is enough evidence in the form of exclusively shared lexical replacement innovations to propose an updated internal classification of Kenyah. Penan and Sebop form a subgroup, Penan-Sebop. This group fits in the slightly larger Western Lowland group, whose only other member is Lebo’ Vo’. This Western Lowland Group is one half of the still larger Lowland group, which also contains the Eastern Lowland dialects (the so-called “Uma” dialects, including Uma’ Pawe and Uma’ Kulit, sometimes referred to as Lebo’ Kulit). Finally, the newly defined Lowland group combines with Highland Kenyah, redefining Kenyah with only two primary branches.



3 RETHINKING PROTO-KENYAH CONSERVATISM.

Blust (2007:5) states that Kenyah is “phonologically the most conservative group of North Sarawak languages.” In the same paper certain statements about the shape of Proto-Kenyah reconstructions give the reader a general picture of the reconstructed language. In the following section I will discuss two specific statements regarding the shape of PKEN and offer evidence from Western Lowland suggesting that if anything, the conservative phonology of Proto-Kenyah has been slightly understated and some of the sound changes previously assigned to Proto-Kenyah are likely parallel innovations. Table 7 below shows updated sound correspondences between Proto-North Sarawak (PNS) and Proto Kenyah. Specifically, *-s and *-R were retained as *-h, and high vowels had not lowered to mid vowels before *-h. Supporting evidence for Table seven is provided in sections 3.1 and 3.2.

TABLE 7

PNS-PKEN Sound Correspondences

PNS	*p	*t	*k	*ʔ	*b	*d	*j	*g	*b ^h	*d ^h	*j ^h	*g ^h	*s	*R
PKEN	*p	*t	*k	*ʔ	*b/-p	*d/-t	*j	*g/-k	*b ^h	*d ^h	*j ^h	*g ^h	*s/-h	*h

PNS	*l	*m	*n	*ñ	*ŋ	*y	*w	*-aw	*-ay	*iw	*uy	*a	*i	*u	*ə
PKEN	*l/-n	*m	*n	*ñ	*ŋ	*y	*w	*-aw	*-ay	*iw	*uy	*a	*i	*u	*ə

3.1 PKEN *h.

Blust (2007:7) notes that *R and *s had merged as Ø in word final position. Distinct reflexes of *-a, *-aR, and *-as in Lowland Kenyah suggest, however, that reflexes of *R and *s were actually retained in word final position (as *h). I will review the evidence from each Lowland Kenyah language below.

All Western Lowland languages have altered word final a*. Uma' Pawe fronted *-a to e, Lebo' Vo' raised *-a to i, and Sebop and Penan both closed *-a with h, giving -ah. Words that show unexpected word final -a which have established etymologies are shown below, and all reflect either *-aR or *-as which suggest that *R and *s blocked the changes affecting *-a. *dua and *lima are included for comparison, to show regular reflexes of words that had final *-a. Note that Uma' Pawe has numerous exceptions, which suggest that raising of word final a in that dialect is still underway.

PNS	PKEN	Sebop	E Penan	W Penan	Vo'	Pawe
*dua 'two'	*dua	duah	duah	duah	lu ⁱ	lue
*lima 'five'	*ləma	ləmah	ləmah	ləmah	ləm ⁱ	ləme
*piŋas 'cheek'	*piŋah	piŋa	piŋa	piŋə	piŋa	piŋa
*akaR 'root; vine'	*akah	laka	-	lakə	aka	aka
*bəRas 'rice grain'	*bahah	-	-	-	baa	baa
-	*ŋasah 'run'	ŋaca	-	ŋasə	ŋasa	ŋasa
*las 'fish scale'	*lah	la	la	lə	la	-
*salaR 'nest'	*salah	sala	sala	salə	sala	-
*panas 'hot'	*panah	pana	pana	pana	pana	-
*məməs 'squeeze'	*məməs	-	-	mamah	mamah	məme
*ibəR 'saliva'	*ibah	ibah	ibah	ibah	ibah	ive
*usaR 'body'	*usah	usa	usah	usə	usah	use
*lipəs 'cockroach'	*lipah	lipah	lipah	lipah	lipah	lipe

3.1.1 How many times was *-h deleted?

Highland Kenyah languages offer no evidence that *-h was deleted more than once. In Lowland Kenyah, however, it appears that *-h was deleted multiple times. For example, Proto-Penan-Sebop must have retained *h in final position because a single sound change, *-a > *-ah, is attributable to PPS, and if inherited *h had already been deleted, it would have fed the later change, closing all word final vowels. The expected ordering for this scenario is shown below.

PKEN		*dua	*panah
Pre-PPS	*-h > Ø	-	*pana
PPS	*-a > *-ah	*duah	*panah
Sebop		<i>duah</i>	** <i>panah</i>

The Sebop word for ‘hot’ is *pana*, not ***panah*, which is only possible if PPS had retained word final *h. Because PPS is “below” Western and Eastern Lowland on the Kenyah tree shown above, the presence of *-h here implies its presence in all nodes above it. Furthermore, it implies that loss of *-h in Western and Eastern Lowland must have occurred independently⁵. Thus *-h was deleted at least three times in Lowland (at least once during the breakup of PPS, once in Lebo’ Vo’, and once in Eastern Lowland), and at least once in Highland Kenyah.

3.2 PKEN *-uh and *-ih.

Blust (2007:7) states that PNS *u and *i became *o* and *e* in final position in PKEN, where *h (from PNS *R and *s) had been lost. Until fieldwork for this paper was conducted, there seemed to be no exceptions to this rule. New data from Western Penan, however, forces us to reconsider whether PKEN had actually lowered these vowels, or if they were lowered in a series of parallel sound changes that failed to effect Western Penan. The conservative high vowels are listed below, with comparisons in Sebop, Lebo’ Vo’, and Lepo’ Tau (a Highland dialect).

PNS	PKEN	W. Penan	Sebop	Lebo’ Vo’	Lepo’ Tau
*ikuR ‘tail’	*ikuh	iku	iko	iko	iko
*dəd ^h uR ‘woman’	*ləd ^h uh	rədu	lədo	lədo	ləto
*bəs <u>u</u> R ‘full, of food’	*bəsuh	bəsu	bəco	bəso	bəso
*bibiR ‘lips’	*bibih	bevi	bive	biβe	bibe
*bətis ‘calf’	*bətih	bəti	bate	βəte	bəte
?	*kuli <u>h</u> ‘leopard’	kuli	-	kule	kule
*(ma)ñipis ‘thin’	*ñipih	nepi	nipe	ñipeh ⁶	ñipe

The evidence in the above table implies that *i and *u were lowered in a series of parallel innovations that were not inherited from PKEN. Like the deletion of *h, high vowels in Western

⁵ An anonymous reviewer pointed out that *-h > Ø might better analysed as the result of areal changes and hence not entirely independent. This point is well taken, but *-h > Ø is such a common sound change in itself, that I hesitate to use it to define a linguistic area. If independent but convergent soundchanges are to be proposed for any historical change, surely *-h > Ø is among the least objectionable. Also, independent in this context, means not inherited from an immediate common ancestor.

⁶ Note that Lebo’ Vo’ sporadically retains *-h in a number of words, and *ñipeh* ‘thin’ lends support to the hypothesis that PKEN had not lost final *h after *any* vowel.

Penan imply their presence at every node above and also imply that Sebop, Eastern Penan, Lebo' Vo', Eastern Lowland, and Highland languages lowered high vowels independently.

4 THE HISTORY OF KENYAH, PENAN, AND SEBOP SPEAKING PEOPLES.

The observations made in this paper suggest that any linguistic split between the Penan, Sebop, and Lebo' Vo' Kenyah communities must have been quite recent. Considering the quality of evidence, and the closeness of Sebop and Penan, it is unlikely that these groups have been separated for more than a few hundred years. Because Penan-Sebop subgroups most closely with Lebo' Vo', it is likely that these groups share a common ancestor that spoke a Proto-Western Lowland language in the Usun Apau highland area, where the Tinjar and Tikan rivers begin⁷. Eastern Lowland languages may also have originated from the Usun Apau area, and migrated to Kalimantan, where Uma' Pawe and Uma' Kulit languages are found in large numbers. Speakers of Highland languages, however, claim to be from the Apo Kayan highlands, just on the other side of the boarder in Indonesia. Although the evidence is slight, this early separation of Proto-Kenyah dialects, between the Usun Apau and Apo Kayan highlands, may have provided the separation necessary for them to develop into separate Highland and Lowland languages.

Some of the evidence also suggests that Western Lowland languages did not diverge in clear splits. Eastern Penan in particular poses some issues for the theory that the Penan split from a distinct Sebop *language*. Rather, it most likely split from a Sebop dialect of a Western Lowland dialect chain. Penan share distinct lexical and phonological innovations exclusively with each other, but among Western Lowland languages, Eastern Penan alone contains reflexes of PKEN *tuju? 'seven' and *pulu? 'ten'. Also, among Penan-Sebop languages, Eastern Penan alone contains reflexes of PKEN *lutən 'fire', *bulu? 'bamboo', *iap 'chicken', *əd^haw 'day', *ənduŋ 'nose', *madaŋ 'fly', and *babuy 'wild boar'. It appears that the changes which define both Western Lowland and Penan-Sebop were underway, but not yet complete, when Penan split from Penan-Sebop. This suggests a gradual divergence of a dialect chain, with some innovations appearing in Western Penan but not Eastern Penan. A possible history that may explain retentions in Eastern Penan follows: A distinct Penan dialect split from Penan-Sebop before many of the Western-Lowland innovations had spread throughout the larger dialect chain. Eastern Penan groups left the dialect area early, and established contact with other, non-Kenyah groups, while Western Penan speakers remained in forests around the Sebop and were in contact enough to be effected by lexical changes that took place after the split.

4.1 Penan and the “devolution” question. Hoffman's controversial 1986 hypothesis suggested that the Penan had “devolved” from an agrarian past, and for trade reasons abandoned agriculture and began hunting and gathering. Although his work was met with some sharp criticism, linguistic evidence continues to link the former hunter-gatherers with traditionally agricultural Kenyah groups. To be clear, Hoffman's methods, his unfamiliarity with the recent history of Punan and Penan, his argument that trade drove people to nomadism, his linguistic shortcomings, and his assumption that nomads in Borneo speak essentially the same language as nearby

⁷ Both rivers are themselves tributaries of the Baram river. The Lebo' Vo' also refer to themselves as coming from “Long Tikan” which is the estuary of the Tikan river, a tributary of the Silat river, itself a tributary of the upper Baram. Usun Apau is a large highland plateau whose watersheds feed these rivers. It is visible in satellite images of the upper Baram, and is close to the Indonesian Border.

longhouse communities are not being defended here. The Penan speak the Penan language, not the language of their settled neighbors. However, Penan do speak a language which is very closely related to Sebop and to Lebo' Vo' Kenyah. Particularly, the Lebo' Vo' seem to have always been settled farmers, and show regular reflexes of Austronesian words related to rice farming, including *pajay > *paray* 'field rice', *bəRas > *baa* 'husked rice', and *ləsuŋ > *soŋ* 'large mortar for pounding rice'. These data have several possible interpretations, 1) the Penan have always been hunter-gathers and the original Austronesian settlers of Borneo either were hunter-gathers or included hunter-gatherers, 2) the Penan have always been hunter gatherers and spoke a non-Austronesian language in the past, which was replaced with a Proto-Western Lowland language. 3) the Penan are previous settled rice farmers who separated from a Proto-Western Lowland Kenyah group. The first interpretation is quite difficult to reconcile with the linguistic and archaeological record. Reconstructable terms suggest that rice agriculture, millet agriculture, permanent dwellings, and villages were all present in PAN (see Blust and Trussle, ongoing, for evidence). Interpretations two and three are the most compelling, but both have issues, which I will discuss below.

With regard to the second interpretation, if the Penan switched to Proto-Western Lowland, one must ask why are there no formerly nomadic groups that we know of who speak Highland dialects, or Kelabit, or Kayan? When Proto-Western Lowland was spoken, it follows that Highland Kenyah and Eastern Lowland Kenyah had already evolved into discrete linguistic communities. It is also apparent that there were numerous other North Sarawak languages spoken along the Baram river, which could have influenced the Penan in much the same way as the Kenyah. Moreover, because the Penan currently occupy a rather large territory but speak a language whose immediate ancestor can be placed in the upper Baram and Tinjar watersheds, the Penan themselves likely once formed a discrete and compact group which later expanded into its current territories. This contradicts the idea that there were bands of hunter gatherers in the upper Baram in the distant past, since the Penan must be relatively recent migrants into areas outside of the PWLKEN homeland. Of course, it can be argued that other hunter gatherers in the area were absorbed into settled communities, leaving no trace, while the Penan resisted this trend and remained nomadic until the very recent past. This is a plausible scenario, but one for which direct evidence is difficult to find.

With regard to the third interpretation, Brosius (1988) and Sellato (1988) make three objections which apply to this paper (other objections are directed specifically at Hoffman's work, and have no implications for the present study) 1) worldwide it is rare for any settled group to abandon agriculture, 2) in recent recorded history there has actually been a trend of nomads settling down in Borneo, not the other way around, and this implies that this trend has been happening for some time, and 3) the fact that hunter-gatherers speak Austronesian languages does not in itself prove that the groups are descended from Austronesian-speaking peoples. Language shift could also explain the current linguistic situation. In response to the first objection, there are in fact known cases where settled groups have adopted nomadism. The Tasaday of the Philippines⁸ provide the most striking example. Molony and Tuan (1976) showed that the Tasaday speak a language closely related to the agricultural Blit Manobo and because all other known Philippine nomads

⁸ The Tasaday were first reported in 1971, and are a group of forest nomads discovered on the Philippine island of Mindanao. They are distinct from other nomads of the Philippines in that their physical appearance is Southeast Asian rather than Negrito.

are “Negrito”, the Tasaday almost certainly represent a breakaway group of former rice farmers. It is thus not unheard of for settled groups to abandon agriculture. Objections two and three are difficult to disprove. It is true that the formerly nomadic Penan have settled in longhouse communities and adapted rice farming in the very recent past. It is also true that language shift is a plausible explanation for why Penan speak a Kenyah language. The question remains, however, that if indigenous nomads throughout the Baram watershed (which is home to perhaps 15 linguistic communities) became farmers because of contact with Austronesian peoples, why do they all speak a Western Lowland Kenyah language and not any other language?

Linguistic work on the internal subgrouping of Kenyah languages continues to show an immediate genetic relationship between Penan, Sebop, and Lebo’ Vo’. Sellato (1988:119) points out that the French are ethnically Celtic and German, but speak a Romance language. He further makes the point that “A given group may be of ethnic origin A, speak B, and have been assimilated by culture C”. His point remains valid, and his example is extensively documented in writing by Latin historians. In Borneo, however, this point cannot be demonstrated easily, since there are no living traces of the languages people who must have inhabited Borneo before the arrival of Austronesian-speaking peoples⁹. However, without a solid answer as to why settled groups would abandon farming in favor of nomadism, the linguistic evidence and the anthropological inferences regarding the Penan are unlikely to be reconciled. Blust (this volume) provides such a scenario. In that article, he argues that the social realities of living in a longhouse may motivate small groups to abandon the larger community and adopt a nomadic lifestyle. In this scenario, linguistic and anthropological evidence seem to agree.

5 CONCLUSION

To summarize, this paper supports a hypothesis that Proto-Kenyah dialects were spoken in the highlands of the upper Baram, between the Usun Apau and Apo Kayan areas. These dialects diverged into separate languages while they were still located in the highland areas. Speakers of Lowland languages split into three groups, 1) a group that went into present day Kalimantan, 2) a group that followed the tributaries of the Tinjar river, and 3) a group that followed the Silat river into the upper Baram. Group 2 spoke Proto-Penan Sebop. The linguistic evidence suggests that Proto-Penan-Sebop must have descended from a larger group that included settled rice cultivators. Although direct evidence is difficult to come by, this is consistent with the theory that the Penan are in fact descended from an agricultural group. Speakers of Highland languages later spread from the Apo Kayan area into much of present day Kalimantan, the Rejang river area, and to the Baram river. The paper also slightly revises the shape of Proto-Kenyah, by hypothesizing a very conservative proto-language. Evidence from Lowland Kenyah languages suggest that PKEN had not deleted *h in final position, nor had it lowered high vowels before word final *h.

Appendix

Supporting Data for reconstructed forms found in this paper.

⁹ Adelaar (1995) does propose a link between Austronesian languages of Borneo and Austroasiatic languages of the Malay Peninsula, however, the evidence is restricted to only two words, ‘to die’, and ‘to bathe’ (although Penan has no such evidence, and reflects Proto-Malayo-Polynesian (PMP) *matay ‘to die’ and PKEN *əndu? ‘bathe’).

English	awake	bamboo	banana	barking deer	binturong	bird
PMP	*baŋun	*buluq	*punti	-	-	*manuk
PNS		*buluʔ	*putti	*təlaʔus	*kitan	*manuk
PKEN	*taga	*buluʔ	*pəti	*təlaʔuh	*kitan	*sui/*manuk
Sebop	tuʔut	ləpək	balak	təlaʔo	-	juit
E. Penan	toʔot	boloʔ	balak	təlaʔo	pasuy	juhit
W. Penan	toot	ləpək	balak	təlau	pasuy	juit
Lebo' Vo'	ḅəɾəŋ	ḅuloʔ	pəti	təlaʔo	pasoy	sui
Uma' Pawe	tage	buluʔ	pəti	təlaʔo	kitan	manuk
Lepo' Tau	bəteʔ	buloʔ	pəti	təlaʔo	kitan	sui
Lepo' Gah	taga	buloʔ	pəti	-	kitan	sui

English	black	blind	blood	boar	body	breast
PMP	*maqitəm	*buta	*daRaŋ	*babuy	-	*susu
PNS	*mitəm	*buta	*daRaʔ	*babuy	*usaR	*titiʔ
PKEN	*saləŋ	*butəʔ	*dahaʔ	*babuy	*usah	*itiʔ
Sebop	padəŋ	bəŋ	pulut	mabuy	usa	iti
E. Penan	padəŋ	pəsəwʔ	dahaʔ	babuy	usah	eteʔ
W. Penan	padəŋ	pəsəwʔ	dəəʔ	mabuy	usə	etiʔ
Lebo' Vo'	padəŋ	ḅəŋ	laaʔ	ḅaḅoy	usah	iteʔ
Uma' Pawe	saləŋ	butəʔ	laaʔ	bavuy	use	itiʔ
Lepo' Tau	saləŋ	butaʔ	daaʔ	babuy	usa	iteʔ
Lepo' Gah	saləŋ	butaʔ	daaʔ	babuy	usa	iteʔ

English	calf	cheek	chicken	cockroach	cold	come
PMP	*bətis	*piŋi	*manuk-manuk	*qali-ipəs		*ai/aRi
PNS	*bətis		*manuk	*lipəs		*aRi
PKEN	*bəlilih	*piŋah	*iap	*lipah	*səŋjim	*nai
Sebop	bate	piŋa	dik	lipah	gənin	tuay
E. Penan	bəte	piŋa	yap	lipah	gənin	tuay
W. Penan	bəti	piŋə	dik	lipah	gənin	tuay
Lebo' Vo'	ḅəte	piŋa	yap	lipah	mənin	tuay
Uma' Pawe	bəte	piŋa	yap	lipe	səŋjim	nai
Lepo' Tau	bəte	piŋa	yap	lipa	səŋjim	nai
Lepo' Gah	bəte	piŋa	yap	lipa	səŋjim	nai

English	cry	day	dirty	dry	dog	ear
PMP	*naŋis	*qalədaw		*kəRiŋ/kəRaŋ	*asu	*taliŋa
PNS	*naŋis	*ləd ^h aw			*asu	*taliŋa
PKEN	*naŋih	*əd ^h aw	*sigut	*muəŋ/məŋgaŋ	*asu	*taliŋa
Sebop	aŋa	laŋit	səgit	maʔaŋ	asuʔ	iŋən
E. Penan	aŋaʔ	daw	səgit	toʔo	asəwʔ	kəliŋən
W. Penan	aŋəʔ	laŋit	səgit	maəŋ	asəwʔ	(kəl)iŋən

Lebo' Vo'	naŋe	daw	səgit	muaŋ	asu	kəliŋi
Uma' Pawe	naŋe	daw	sigut	məŋgaŋ	asəw	təliŋe
Lepo' Tau	naŋe	taw	mano	muaŋ	asu	təliŋa
Lepo' Gah	naŋe	taw	sigut	muaŋ	asu	təliŋa

English	earthworm	empty	excrement	face	far	fish
PMP	*wati		*taqi	*away	*zauq	*ikan
PNS	*lati		*taʔi		*jauʔ	
PKEN	*lati	*kəlaŋan	*taʔi	*siluŋ	*əj ^{hu} ʔ	*atuk
Sebop	kalatiʔ	ucan	ani	siluŋ	ju	cəram
E. Penan	latəyʔ	usan	aniʔ	daʔin	juʔ	səluəŋ
W. Penan	latəyʔ	usan	aniʔ	dain	juʔ	bətəlu
Lebo' Vo'	lati	kəlaŋan	aniʔ	siləŋ	ʃoʔ	təlo
Uma' Pawe	laŋ atəy	kəlaŋan	-	siluŋ	suʔ	atok
Lepo' Tau	lati waŋ	kəlaŋan	taʔi	siləŋ	coʔ	atok
Lepo' Gah	lati	kəlaŋan	taʔi	siləŋ	coʔ	atok

English	five	fly	flying lemur	full, of food	grandchild	heart
PMP	*lima	*Rəbək	-	*bəsuR	*ampu/əmpu	*pusuq
PNS	*lima		-	*bəsuR	*su	*pusuʔ
PKEN	*ləma	*madaŋ	*kubuŋ	*bəsuh	*su	*pusuʔ
Sebop	ləmah	maŋap	kabuŋ	bəco	-	pucu
E. Penan	ləmah	marəŋ	kubuŋ	bəso	ayam	posoʔ
W. Penan	ləmah	maŋap	kubuŋ	bəsu	ayam	posun
Lebo' Vo'	ləmi	marəŋ	kuboŋ	ḃəso	ayam	pusoʔ
Uma' Pawe	ləme	marəŋ	kuvuŋ	bəso	səw	pusuʔ
Lepo' Tau	ləma	madaŋ	kuboŋ	bəso	su	pusoʔ
Lepo' Gah	ləma	madaŋ	kuboŋ	bəso	su	pusoʔ

English	hook	hot	inside	jump	laugh	left
PMP	*kawit	*panas	*daləm		*tawa	*ka-wiRi
PNS	*pəsi	*panas	*daləm		*tawa	*ka-wiRi
PKEN	*pəsi	*panah	*daləm	*nəpəjuk	*tawa	*kabiŋ
Sebop	bitik	pana	diləm	uduk	alaʔ	kabiŋ
E. Penan	bitik	pana	diləm	-	alaʔ	kabiŋ
W. Penan	bitik	pana	diləm	odok	alaʔ	kabiŋ
Lebo' Vo'	pəsi	pana	laləm	nəkəfok	tawi	kabiŋ
Uma' Pawe	pəsəy	lasuʔ	daləm	nəpəjok	tawe	kaviŋ
Lepo' Tau	pəsi	pana	daləm	nəpəjok	tawa	kabeŋ
Lepo' Gah	pəsi	pana	daləm	nəpəjok	tawa	kabiŋ

English	leopard	lips	long	lost	man	moon
PMP		*bibiR	*adaduq		*laki	*bulan
PNS	*kuliR	*bibiR	*dadu?		*laki	*bulan
PKEN	*kulih	*bibih	*dadu?	*daru	*laki	*bulan
Sebop	dura?	bive	buat	tawaŋ	laki?	bəlilik
E. Penan	səmuran	-	kəbit	tawaŋ	lakəy?	lase?
W. Penan	kuli	bevi	aru?	tawaŋ	lakəy?	bəlelek
Lebo' Vo'	kule	bibe	buat	paru	laki	bulan
Uma' Pawe	kule	bive	laru?	liŋəw	lakəy	bulan
Lepo' Tau	kule	bibe	dado?	daru	laki	bulan
Lepo' Gah	kule	bibe	dado?	daru	laki	bulan

English	morning	mountain	nest	nine	nose	one
PMP		*buləd	*salaR	*siwa	*ŋijun	*esa/*isa
PNS		*buləd	*salaR	*siwa	*ijun	*əj ^h a
PKEN		*muduŋ	*salah	*pi?ən	*ənduŋ	*əj ^h a
Sebop	caput	tukuŋ	sala	pi?ah	uŋit	jah
E. Penan	ñivun	tokon	sala	pi?ən	ron	jah
W. Penan	saput	tokon	salə	piən	uŋit	jah
Lebo' Vo'	ŋətəba	mudon	sala	pi?ən	ron	fo
Uma' Pawe	səmuap	murun	abat	pi?ən	ndon	se
Lepo' Tau	məmpam	mudon	laba	pi?ən	nton	ca
Lepo' Gah	kənəmbam	mudon	sala	pi?ən	ndon	ca

English	pinky	primary forest	foot print	rain	raw	rice grain
PMP	*kiŋkiŋ	*tuqan/*halas		*quzan	*ma-qataq	*bəRas
PNS	*kikkiŋ	*tu?an		*ujan	*mata?	*bəRas
PKEN	*ikiŋ	*əmbə?	*uban	*ujan	*mata?	*bahah
Sebop	iŋiw	va?	uban	ima?	mata	bilət
E. Penan	eŋew	-	-	ta?	mata?	-
W. Penan	eŋiw	va?	uban	tə?	matə?	-
Lebo' Vo'	ikiŋ	va?	uban	ima?	mata?	baa
Uma' Pawe	ikiŋ	mbə?	uban	usan	mata?	baa
Lepo' Tau	ikiŋ	mpa?	uban	ujan	mata?	baa
Lepo' Gah	ikiŋ	mba?	uban	ujan	mata?	baa

English	right	rope	saliva	sand	scale	scaly ant eater
PMP	*taqu	*tali	*ibəR	*qənay	*quhanap	*qaRəm
PNS	*taʔu	*tali	*ibəR	*nay	*anap	*aRəm
PKEN	*taʔu	*tali	*ibah	*ait	*lah/*kiŋ	*aham
Sebop	tauʔ	taliʔ	ibah	ait	la	-
E. Penan	naʔaw	taləyʔ	iba	napun	la	aham
W. Penan	mənaw	taləyʔ	ibah	napun	lə	aam
Lebo' Vo'	taʔu	tali	iʔah	aet	la	aam
Uma' Pawe	taʔu	taləy	ive	ait	kiŋ	aam
Lepo' Tau	taʔu	tali	iba	ait	la	aam
Lepo' Gah	taʔu	tali	iba	ait	kiŋ	aam

English	scratch	seed	seven	sit	skinny	sleep
PMP	*kamit		*pitu		*maRis	*tiduR
PNS	*kamit		*tujuʔ		*maRis	*tiduR
PKEN	*kamit	*luaŋ	*tujuʔ		*mahih	*lunduʔ
Sebop	kərip	tulin	tujək	məñun	magu	pəgən
E. Penan	kərip	tulin	tujuʔ	ñun	maguʔ	pəgən
W. Penan	məñəliʔ	tulin	tujək	məñun	maguʔ	pəgən
Lebo' Vo'	kamit	sah	tufək	məñon	muyu	luroʔ
Uma' Pawe	kamit	luaŋ	tusuʔ	ukoʔ	mipon	lunduʔ
Lepo' Tau	ñəmayaw	luaŋ	tujoʔ	madon	mae	luntoʔ
Lepo' Gah	kamit	luaŋ	tujoʔ	madon	mae	lundoʔ

English	small	some	spit	squeeze	star	take
PMP			*zulaq	*məsməs	*bituqən	*alaq
PNS			*julaʔ	*məməs	*bituʔən	*alaq
PKEN	*iʔut	*palay	*julaʔ	*məmah	*bətuʔən	*alaʔ
Sebop	jiʔək	ivay	julaʔ	məjəŋ	kəñoay	ala
E. Penan	siʔik	jəluaʔ	julaʔ	romek	kənuhay	alaʔ
W. Penan	siik	jah kəluaʔ	julaʔ	mamah	kəñuay	aləʔ
Lebo' Vo'	jiʔik	palay	ñəmulaʔ	mamah	bətuʔən	alaʔ
Uma' Pawe	iʔot	palay	ñulaʔ	məme	bətuʔən	alaʔ
Lepo' Tau	iʔot	palay	ləmulaʔ	məma	bətuʔən	alaʔ
Lepo' Gah	iʔot	palay	ñəmulaʔ	məma	bətuʔən	alaʔ

English	tail	ten	that, far	thigh	thin	this
PMP	*ikuR	*puluq		*paqa	*nipis	*ini
PNS	*ikuR	*pulu?	*itu	*paʔa	*nipis	*ini
PKEN	*ikuh	*pulu?	*itu	*paʔa	*ñipih	*ini
Sebop	iko	jap	-	paʔan	nipe	itu?
E. Penan	iko	polo?	-	paʔan	nepe	itəw?
W. Penan	iku	jap	etəy?	paan	nepi	etəw?
Lebo' Vo'	iko	ʃap	ite	paʔi	ñipeh	itu
Uma' Pawe	iko	pulu?	iti	suuŋ	ñipe	ini
Lepo' Tau	iko	pulo?	-	paʔa	ñipe	ini
Lepo' Gah	iko	pulo?	-	paʔa	ñipe	ini

English	three	thunder	tomorrow	tongue	tree	two
PMP	*təlu			*zəlaq	*kahiw	*duha
PNS	*təlu			*jəla?	*kayu	*dua
PKEN	*təlu	*dau laŋit	*nəmbam	*jəla?	*kayu	*dua
Sebop	təlu?	dau laŋit	cagam	jəla?	kayu?	duah
E. Penan	tələw?	ləŋədo	sagam	jəla?	kayəw?	duah
W. Penan	tələw?	ləŋədu	sagam	jəla?	kayəw?	duah
Lebo' Vo'	təlu	lau laŋit	vam	jəla?	kayu	lui
Uma' Pawe	tələw	bətati?	məsut	jəla?	kayəw	lue
Lepo' Tau	təlu	tau laŋit	nəmpam	jəla?	kayu	dua
Lepo' Gah	təlu	tau laŋit	nəmbam	jəla?	kayu	dua

English	urine	valley	vein	vomit	wall	we dual ex
PMP	*ihik/ihək	*ləbək	*uRat	*utaq	*diŋdiŋ	-
PNS		*ləbək	*uRat	*uta?	*diŋdiŋ	-
PKEN	*səŋit	*ləbək	*uhat	*n-uta?	*əndiŋ	*ami? dua
Sebop	iva?	ləbək	kəloat	luta	de	-
E. Penan	iva?	sawa?	kəluhat	luta?	tape?	amo
W. Penan	siva?	sawa?	kəluat	mə-lutə?	tapi?	amo
Lebo' Vo'	siba	kələbək	wat	nuta?	reŋ	ame? lui
Uma' Pawe	səŋit	abək	uat	nuta?	gəlaŋ	me? we
Lepo' Tau	səŋit	kələbək	uat	nuta?	nteŋ	ame? dua
Lepo' Gah	səŋit	kələbək	uat	nuta?	ndeŋ	ame? dua

English	when	white	woman	you pl	you two
PMP	*ijan	*putiq	*bahi	*i-kamu	-
PNS	*idan	*putiʔ	*dəd ^h uR	*i-kamu	-
PKEN	*midan	*putiʔ	*ləd ^h uh	*ikəm	*ikəm dua
Sebop	siran	puti	lədo	kaʔah	lawah
E. Penan	hun mah	mabeŋ	rədo	kaʔah	kawah
W. Penan	siran	potiʔ	rədu	kah	kawah
Lebo' Vo'	miran	puteʔ	lədō	ikəm	kui
Uma' Pawe	miran	putiʔ	lədō	kəm	kəm we
Lepo' Tau	midan	puteʔ	ləto	ikəm	ikəm dua
Lepo' Gah	midan	puteʔ	ləto	kəm	kəm dua

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