DIALECT SURVEY OF THE KAMASAU LANGUAGE

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0. INTRODUCTION

This paper gives the findings of a dialect survey in the Kamasau language. The data collected is being considered in two ways - the lexicostatistical relationships, and sound correspondences and differences. The purpose of the paper is to utilise information about the dialects to formulate a multi-dialectal orthography.

The Kamasau language is one of six languages in the Marienberg language family which is a part of the Torricelli Phylum (Laycock 1973: 15-17). The seven villages of the Kamasau language group are located between Wewak and Angoram. There are about 800 speakers residing in the area.

The village of Samap is now a separate language in the Marienberg language family.[1] The reason it was included in this survey is that the only feasible way of reaching this village with literature in the vernacular will be for them to read material in the Kamasau language. Therefore we wanted to know which sound differences we might need to take into consideration in designing an alphabet that would be usable by the people from Samap.

1. METHODOLOGY

The majority of the data for this paper was collected in March 1978 after eight months of residence in the village of Tring under the auspices of the Summer Institute of Linguistics. A 179 item word list was collected from seven villages by Arden Sanders. In all but two cases we collected the lists from speakers of the language residing in their home villages. The Kenyari list was collected from a 50 year old

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man who now lives in Tring but lived in Kenyari as a boy and visits there often. The list from Samap was collected from a man living in Wau. Its reliability was confirmed by comparison with a list collected during our initial language survey of the Marienberg family in 1977. A short list from Paruwa village, elicited by Phil Staalsen in 1977, has also been included. Although the people rarely include this village as belonging to the same language, it appears to be linguistically a part of the Kamasau language. It may later prove to be a 'mixed' village with some speakers from the Kamasau language and some from the neighbouring Urimo language.

The basic wordlist suggested by Bryan Ezard (1978:55-59) was used. This includes 73 words from the Swadesh 100 wordlist. Two items were deleted: *'heart'* because it is difficult to elicit reliably, and *'rain'* because it and *'water'* constitute a doublet. The other items were selected because they included sounds and verb prefixes which we wanted to compare with those of other villages. Some of these sounds do not occur very frequently in Tring, and so we used all of the words that we thought we could easily elicit with these less common sounds. We wanted a sufficiently wide base of data to allow a margin for variation as we knew all of the words would not be cognate. Sounds of special interest initially were the affricates and palatalised sequences, and glottal stops. Other words were added to be sure that all the common sounds were represented as well (see Appendix for data).

Following the survey a few items were eliminated from the cognate scoring as they did not seem to get a consistent response. This brought the total number of items down to 175. Two of these were the term for *'it is thundering while the sun is shining'*, and *'a type of lizard'*. The remaining items were marked as cognate or non-cognate. Cognates are here being defined as phonetically similar words for which cognate sets have not yet been determined. In order to be considered cognate, items had to be 50 percent or more similar. If two phonetic segments differed by only manner of articulation or a slight shift in the point of articulation, the segments were considered to be the same. Consonants were given more weight than vowels in making the decisions.

Since one of the main purposes of our survey was to discover the sound correspondences between various villages, in some cases when we were not given a cognate form we then asked if they also used the term found in Tring. There were cases where this resulted in additional forms which we feel are historical cognates, whereas the forms elicited initially are synchronic cognates. In these cases, if that meant that there were two sets of cognates in the data, then they were all included

in the scoring. Two items (*'star'* and *'lice'*) were included that were marginally cognates in Kenyari, but were clearly cognate in the other villages. These were included because sound correspondences would indicate that they were historical cognates. In the words that were considered cognate, correspondence sets were drawn up for all seven villages.

2. RESULTS

2.1. *LEXICOSTATISTICS*

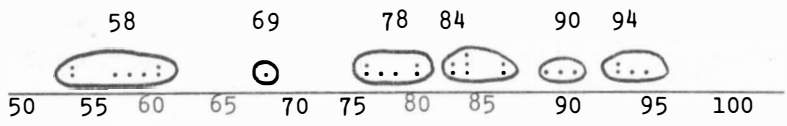
The lexicostatistic data collected resulted in the following percentages.

Figure 1
Cognate Percentages

Paruwa						
93	Kenyari					
80	84	Kamasau				
93	90	91	Tring			
84	83	89	94	Wau		
76	78	80	86	86	Yibab	
69	76	77	84	83	95	Wandomi
54	54	57	61	60	59	61 Samap

The method used to determine the significant differences between these percentages was the method outlined by Gary Simons (1977c:75-106). He stated that since "each cognate percentage indicates a range rather than a specific value, the ranges of two different cognate percentages may overlap. If the amount of overlap is great enough, we cannot say with confidence that the two different percentages represent different degrees of relationship" (1977c:75). Therefore some technique is needed to make sure that two different percentages actually represent different degrees of relationship. This can be done by using confidence tables to take into consideration the amount of probable error, and compute averaged percentages. By this method the percentages were grouped after being charted on a number line (Figure 2).

Figure 2
Number Line for Averaging Percentages



Significance

Internal:	.20				.20		.30		.30	.30
External:		.05		.05		.10		.10		.10

This resulted in six groups of percentage figures in which the extreme values within the group were not significantly different at a .10 confidence level. This means basically that there is no more than a 10% chance that we are wrong. When comparing the averages of the adjacent groups, the differences between the averages of the groups were significant at a confidence level of .10. The only grouping in which there were any questions were the percentages in the 90 percentile. If grouped as one unit, the internal criterion was .05, indicating too great a spread of the numbers. When split into two groups, the internal criterion was .30, and the external criterion was between .10 and .20 but closer to .10. So this would be the best grouping.

When each original percentage is replaced by the average for its significant group the matrix in Figure 3 results.

Figure 3
Matrix Resulting from Averaging Percentages

Paruwa						
94	Kenyari					
78	84	Kamasau				
94	90	90	Tring			
84	84	90	94	Wau		
78	78	78	84	84	Yibab	
69	78	78	84	84	94	Wandomi
58	58	58	58	58	58	58 Samap

With these figures, it is possible to determine the meaningful differences more easily. Samap is clearly a separate language as it shows significantly lower percentages of cognates with all the other villages. Three sets of villages clearly group as dialects: Paruwa-Kenyari, Tring-Wau and Yibab-Wandomi. Kamasau is clearly closer to Tring and Wau than to any other villages. However, Tring also scored 90% and 94% cognate with Kenyari and Paruwa respectively. Looking at the percentage figures

of Kamasau and Wau with Kenyari and Paruwa it is seen that they are only 84% cognate or lower. The probable reason for the high cognate figures of Tring with Kenyari and Paruwa is the method of counting cognates, where multiple cognates were allowed. Therefore, Kamasau is grouped with Tring and Wau, whereas Paruwa and Kenyari are grouped separately.

The optimisation model proposed by Joseph Grimes (1974) was applied to the raw cognate percentages.[2] The purpose is to combine the villages into groupings as well as defining the center of each grouping. A matrix of 'cost' figures is formed by subtracting the cognate percentage from 100. Different threshold values are applied, as described by Grimes, until all the villages combine into one group. A contour map is then drawn with one line representing each threshold level. The number of lines between two villages indicates the distance between them. More lines indicate a greater distance.

Optimisation Matrix

	Pr	Kn	Km	Tr	Wu	Yb	Wn	Sm
Pr	0	7	20	7	16	24	31	46
Kn	7	0	16	10	17	22	24	46
Km	20	16	0	9	11	20	23	43
Tr	7	20	9	0	6	14	16	39
Wu	16	17	11	6	0	14	17	40
Yb	24	22	20	14	14	0	5	41
Wn	31	24	23	16	17	5	0	39
Sm	46	46	43	39	40	41	39	0

Figure 4
Optimisation Matrix and Contour Map

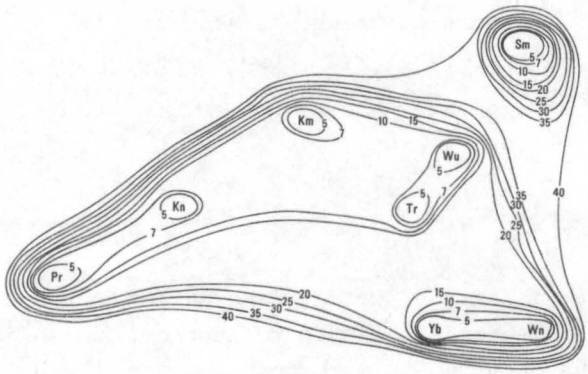


Figure 3 shows the optimisation matrix and contour map for the Kamasau language. Samap is quite separate from the other villages. This conclusion agrees with the findings of the other methods that it is a separate language. Yibab-Wandomi form a group at the beginning of operating the optimisation matrix (threshold of 5). Paruwa-Kenyari and Tring-Wau form two separate groups at a threshold of 7. These two groups combine with Kamasau at 10. Then Yibab-Wandomi combine with the others at 20. Samap is not included until a threshold of 40 is reached. This is in basic agreement with the phonological data in its groupings. The only discrepancy is that it would group Paruwa-Kenyari and Kamasau with Tring-Wau at the same time. This is due to Tring's high percentages with Paruwa-Kenyari.

2.2. *PHONOLOGICAL COMPARISONS*

Lexicostatistics is a convenient way of measuring relationships between languages at a language-family level. When dialects are being considered, phonological comparisons can give a more accurate picture of dialect borders. When languages become more separate the value of the phonological considerations becomes less (cf. Howard McKaughan 1964:118).

As the phonologies were studied, the villages seemed to divide into four groups: Paruwa-Kenyari, Kamasau-Tring-Wau, Yibab-Wandomi and Samap. Tring, Wau and Kamasau seem to group into one dialect with one basic set of phonemes (Arden Sanders 1980). These include three sets of stops at bilabial, alveolar, alveopalatal and velar points of articulation, fricative [ɸ] patterning as a voiceless stop, voiced bilabial and velar fricatives, a sibilant, four nasals, two semi-vowels, a liquid ([r]) and six vowels.

Figure 5

Phonemes of Tring, Kamasau and Wau

p	t	tš	k	ʔ	i	ɨ	u
b	d	dž	g		e	a	o
mb	nd	nj	ŋg				
ɓ	s		g				
m	n	ñ	ŋ				
w	r	y					

Between the three villages of Tring, Kamasau and Wau there are a few words which have one phoneme changed to another, but we did not find that these changes occurred in more than one word, so they would not be considered to be regular correspondences. There is one case of

regular loss of a phoneme from the verb root in Kamasau only. This occurs when the root of the verb begins with the symbol y. For example:

Tring	Kamasau	English
k-ye-o *I-give-you*	k-e-o *I-give-you*	*'I give to you'*
k-yes k-yewo *I-get.up I-go.up*	k-es k-ewo *I-get.up I-go.up*	*'I get up'*
n-ye? w-uge *he-puts she-go.down*	n-e? w-uge *he-puts she-go.down*	*'he puts a feminine object down'*
m-yes m-yewo *they-get.up they-go.up*	m-es m-ewo *they-get.up they-go.up*	*'they (men) get up'*

In other cases where the phoneme /y/ occurs it is not lost but is maintained as /y/. An exception to this is the /y/ in /iye/, *'coconut'*, which becomes /tš/, /tši/.

The other interesting change is that two Kamasau words had voiceless stops changing to voiced ones: ipikyi to mbiriki (*'rat'*), and tomiŋgyi to domiŋgi (*'star'*), and in one case to a homorganic nasal: kambe to ŋambe (*'yesterday'*).

Yibab and Wandomi villages make up a separate dialect, based on their phonological variations. The phonemes are basically the same as Tring except that the phoneme /s/ is replaced by a palatal t /ʈ/. It appears that palatal t is in contrast to alveolar t.

There is a tendency to voice and prenasalise some of the stops which are voiceless in Tring.

Tring	Yibab/Wandomi	English
te tuge *that who*	de ndige *that who*	*'Who is that?'*
pu *pig*	mbu *pig*	*'pig'*
puwo *betel.nut*	buwo *betel.nut*	*'betel nut'*

In one instance a prenasalised stop becomes a regular voiced stop.

Tring	Wandomi	English
tami mba?i gamb *string.bag on.head put*	tami bai yage *string.bag on.head put*	*'Put the string bag on your head'*

In all the verbs elicited, the first person singular prefix k and plural prefix p are voiced.

Tring	Yibab/Wandomi	English
p-o	b-o	
we-go	*we-go*	*'we go'*
k-o	g-o	
I-go	*I-go*	*'I go'*
ʔuwi k-ati	ʔuwi g-ati	
cold I-die	*cold I-die*	*'I feel cold'*

Also, the consonant cluster /ky/ becomes /tš/ and /dž/.

Tring	Yibab/Wandomi	English
ipikyi	imbiritši	*'house rat'*
k-ye-o	dž-e-o	
I-give-you	*I-give-you*	*'I give to you'*
k-yes k-yewo	dž-et dž-awo	
I-get.up I-go.up	*I-get.up I-go.up*	*'I get up'*

The /dž/ seems to result from the voicing of the /k/ in the verbs to become gy. The gy then is realised as the unit phoneme /dž/, in this dialect. The word dagi (*'cassowary'*) in Tring, is spoken as dwadži. The ny cluster is retained in this dialect:

Tring	Yibab/Wandomi	English
n-yes n-yewo	n-yet n-yawo	
he-get.up he-go.up	*he-get.up he-go.up*	*'he gets up'*

So the /dž/ seems to be a portmanteau phone of /gy/ in this dialect. The unit phoneme /dž/ in Tring is also /dž/ in Yibab-Wandomi. The unit phoneme /tš/ is either /tš/ or /dž/ in Yibab-Wandomi, again a voicing difference.

Data about glottal stop did not present a consistent pattern. Yibab and Wandomi appeared to lose the word final glottal stops. Wandomi lost some glottals that Yibab speakers retained. Word initially and medially, some were retained, but most changed to a /w/ or /y/ or other consonant.

Tring	Yibab	Wandomi	English
ʔwaiyi	ʔwaiyi	ʔwaiyi	*'man'*
mweʔ	mweʔ	mwe	*'earthern saucepan'*
n-uʔond	n-uʔondž	n-uwondž	
he-sees.him	*he-sees.him*	*he-sees.him*	*'he sees him'*
njoʔu	jewu	njewu	*'black plam'*
simiʔu	timiyu	timiyu	*'woven sago palm'*
ʔusiŋg	yutiŋg	yutiŋg	*'comb'*
ʔinap	kiñap	kiñap	*'ashes'*
ʔi	ʔi	gi	*'ground'*

Vowel correspondences agree with Tring, except for a few irregular changes. Only one correspondence set, /e/ to /a/, had three examples:

Tring	Yibab/Wandomi	English
tšetše	džadže	*'older sibling'*
k-yewo	dž-awo	
I-go.up	*I-go.up*	*'I get up'*
bwede	bwiyade	*'ridge cap'*

In all of these examples the change comes following a palatalised sound on a stressed syllable. However there are other words where a palatalised sound is not followed by a change:

Tring	Yibab/Wandomi	English
yenu	yenu	*'he stands'*
wiye	wiye	*'water'*

Therefore the change does not seem to be predictable.

The phonemes of Kenyari and Paruwa[3] are the same as those of Tring except that /t/ and /s/ phonemes in Tring are both /h/ in Kenyari and Paruwa. The only two occurrences of /t/ found in Kenyari data were te tuge, *'Who is this?'*. Because the speaker from whom we got the word list lives in Tring village, he may have incorporated these terms into his idiolect. In two other words /t/ corresponded with /m/ in Kenyari.

Tring	Wau	Kenyari	English
teri	treri	mereyi	*'two* (fem)'
temi	tremi	meremi	*'two* (masc)'

In one word /t/ corresponded with /p/:

Tring	Kenyari	English
tomiŋgi	pomi?i	*'star'*

As well as /t/ and /s/ being replaced by /h/, there were several other cases in which otherwise contrastive phonemes were also /h/.

	Tring	Kenyari	English
ƥ-h	uruƥwi	uruhwi	*'new'*
y-h	yuwon	hwan	*'good'*
	ƥayi	ƥwaha	*'short'*
	maiye	maih	*'heavy'*
?-h	mu?di	muhdi	*'now'*
tš-h	ƥutš	ƥuhi	*'piece/part'*

Devoicing of Kenyari consonants occurred as often as did voicing.

Tring	Kenyari	English
tšetše	dzedže	*'older sibling'*
džari	tširе	*'shelf in house'*
mbiski	ꝑindži	*'louse'*

Some of the voiced velar fricatives became /w/ and /y/.

Tring	Kenyari	English
beꝸi	bewi	*'we'*
ꝸimbɨ	wumbɨ	*'body'*
ꝸawo	yawo	*'you do it'*

but in wand ꝸand, *'you talk'*, the velar fricative remains unchanged.

The most frequent vowel changes were /o/ and /e/ being replaced by /a/.

	Tring	Kenyari	English
o-a	tšoŋgo	tšaŋgwo	*'skin'*
	moyu	mawo	*'mother'*
	yuwon	hwan	*'good'*
e-a	wase	waha	*'fire'*
	nase	naha	*'he lies down'*
	ꝑaye	ꝑwaha	*'short'*
	segi	hagi	*'no'*
but	teti ꝑu yenu	hehi ꝑu yenu	*'he is standing'*

In Kenyari the sequence /ky/ is realised by either /tš/ or /dž/.

Tring	Kenyari	English
k-ye-o *I-give-you*	tš-e-o *I-give-you*	*'I give you'*
k-ye? w-uꝸe *I-put she-go.down*	tš-e? w-uꝸe *I-put she-go.down*	*'I put a feminine object down'*
k-yes *I-get.up*	tš-eh *I-get.up*	*'I get up'*
k-yi r-ɨꝸe *I-put they-go.down*	tš-i r-ɨꝸe *I-put they-go.down*	*'I put them down'*
mbisk(y)i	pindži	*'louse'*

Samap, although lexicostatistically a different language, has phonological similarities with villages of the Kamasau language. In terms of the voicing of consonants, it follows the pattern of Yibab-Wandomi much of the time, especially in regard to the verb person-number prefixes.

Tring	Samap	Yibab	English
k-o *I-go*	g-o *I-go*	g-o *I-go*	*'I go'*
k-ye-o *I-give-you*	g-ya-o *I-give-you*	dž-e-o *I-give-you*	*'I give to you'*
tšar	tšar	džar	*'dense bush'*
tšwaɡi	tšuwaŋge	džaɡi	*'bast of coconut'*

However, as is seen, some of the words voiced in Yibab-Wandomi are not voiced in Samap.

The Tring phoneme /s/ corresponds to Samap /t/ and Yibab-Wandomi /ʈ/. Between /s/ and /t/ there is one difference in the manner of articulation: fricative versus stop, whereas between /t/ and /ʈ/ there is only a difference of point of articulation. Both are minor differences.

Glottals in Samap pattern more like Tring and Wau, not changing to /y/, /w/ or other consonants, nor being deleted as frequently as in Yibab-Wandomi (see examples in Section 3).

The vowel change, /e/ to /a/, also occurred in Samap. There are nine examples in which this change occurred, and seven examples in which it stayed the same. There were four examples in which /o/ changed to /a/. Some examples of both of these changes are:

Tring	Samap	English
ʔwemye	ʔwemya	*'white'*
ŋe	ŋa	*'I'*
bɨre	mbara	*'full'*
ňombwi	ňamp	*'dog'*

We have already considered the most frequently occurring correspondence sets in the data. In order to quantify the correspondence sets and get a broader picture of the phonological differences and similarities a statistical method is helpful. The phonostatistic method proposed by Grimes and Agard (1959) was applied to the data.[4] It is based on the concept of rank of stricture. Grimes and Agard distinguish sounds on the basis of six parameters. Correspondence sets are used and the degree of difference between two languages calculated according to the formula

$$\frac{m \times 1 + m \times 2 + m \times 3 + \ldots m \times n}{s} = N$$

In this formula m is the number of sets which show 1, 2, 3...n degrees of difference. The sum of these is divided by the total number of sets compared, s, to give the mean degrees of difference, N.

Doing this with the Kamasau data resulted in the information included in Figure 6. Thirty-five sets were used in all the data except Paruwa for which there were nineteen.

Figure 6
Phonostatistical Differences in Kamasau

Pr							
.11	Kn						
.95	.76	Sm					
.95	.77	.43	Km				
1.00	.77	.46	.00	Tr			
1.00	.77	.46	.00	.00	Wu		
1.21	1.34	1.00	1.29	1.14	1.26	Yb	
1.21	1.49	1.00	1.14	1.14	1.11	.14	Wn

The lower numbers represent a closer relationship. Heavy lines mark off the three dialects of the language: Paruwa-Kenyari, Kamasau-Tring-Wau, and Yibab-Wandomi. The dotted line indicates the phonological relationship between Kamasau-Tring-Wau and Samap.

Samap has very low scores with the Kamasau-Tring-Wau dialect. This would reflect their close historical relationship. The people from Samap say that their ancestral home is Wau. They then went to the coast before World War II. They said that they left Wau because of intra-group fighting. But at present they seem to identify with people from Wau and be on friendly terms.

The people from Samap consider people from the nearby village of Kabak (five houses) to be half-caste. Before the people of Kabak can remember, two women from Terebu came and married in Kabak. Now women continue to come from Terebu, though Kabak women do not go to Terebu, and so the influence from Terebu language continues. Their present lexicostatistical classification as a separate language from Kamasau would seem to be due to heavy borrowing. In the few years since the war the phonological system has not changed very much.

The three dialects of Kamasau were separated prior to World War II so that their phonological systems seem to have diverged considerably. However, they probably did not have as intensive outside contact as did Samap and therefore retained their historically cognate forms. This would seem to be a feasible explanation for the discrepancy between the lexicostatistics and the phonostatistics.

3. ORTHOGRAPHY

A major value in doing a dialect survey is to determine at an early stage what the differences are in the dialects which will be using one orthography. In a language with only 800 speakers, this is of utmost importance in constructing materials which will be acceptable to all the readers involved. By being able to test the acceptability of several solutions at an early stage, much time can be saved when materials are produced later.

The symbolisation of the vocoids will probably have to be done on the basis of the Tring dialect, as the changes which occur in the surrounding villages do not occur with regularity, but on a variety of words with vowels changing in various directions. The major area in which testing will be needed is with the consonants. Of importance in this area is going to be the ability of the people to transfer into English, as there are an increasing number who are becoming literate in English.

The biggest problem is in the representation of /s/ and /t/, as in Kenyari these are both /h/, and in Yibab-Wandomi these are /ʂ/ and /t/.

Tr-Wu-Km	Sm	Yb-Wn	Kn	Pr
n-as *he-sits*	n-at	n-aʂ	n-ah	
wase *fire*	wate	waʂe	waha	waha
sawo *tooth*	tawo	ʂawo	hawo	hawo
swai *junction*	twai	twai	hwai	

The solution that most porbably will be adopted is to retain the symbols, s and t, teaching Yibab-Wandomi speakers that the symbol, s, represents a /ʂ/, and Kenyari speakers that they both represent /h/. For purposes of transfer to English, use of any other letters would cause confusion for Tring speakers. The people who will have the greatest difficulty will be the Kenyari speakers who will have to learn to distinguish between the symbols, s and t, or memorise the spelling when they write. These speakers would already be familiar with the phonemes /s/ and /t/, from their knowledge of spoken Pidgin. So this would be helpful in their acceptance of the symbols, s and t.

Because /h/ occurs in the Kenyari dialect, this symbol could not be used to symbolise the velar fricative. However, because of the fricative quality, the symbol, gh, was chosen. This occurs in very few words in English. When shown to one speaker he seemed very happy at

this choice, as he recognised that the symbol, h, indicated that the *'wind'* was coming out on that sound.

Another major problem area is the voiced, voiceless and prenasalised stops. In all dialects these series of stops are definitely in contrast. However, there is some overlap between the dialects, with a much higher percentage of voiced and prenasalised stops in Yibab, Wandomi and Samap villages.

Tr	Km	Sm	Yb-Wn	Kn	Pr
ꝑu *pig*	ꝑu	mbar	mbar	ꝑu	ꝑu
ipikyi *rat*	mbiriki	-	ɨmbiritši	ipi	-
ꝑuwo *betel.nut*	ꝑuwo	buwo	buwo	ꝑuwo	-
ꝑ-o *we-go*	ꝑ-o	b-o	b-o	ꝑ-o	-
k-o *I-go*	k-o	g-o	g-o	k-o	-
k-ati *I-die*	k-ati	-	g-ati	k-ati	-

Since only three villages voice many of the stops, it seems that those speakers will have to make some adjustment to reading voiceless stops in part of the literature. However the verb prefixes will need special testing, since Yibab-Wandomi and Samap voice all first person singular and plural stops, whereas Tring and the other villages voice only those stops where there is a voiced stop in the verb root. Suggested orthography is to use the symbols, k and g, corresponding to the Tring phonemes /k/ and /g/. But to make a separate set of initial primers for Yibab and Wandomi seems to be best so that as the people are learning to read they will have a phonemic alphabet to begin with. This would be necessary as most of the intransitive and most common verbs use /k/, e.g., *'eat'*, *'go'* and *'carry'*. The other alternative would be to see if the people, women especially, are familiar enough with the Tring dialect to recognise that the symbol, k, represents the way that the people in Tring say these words. As it appears that the phoneme /k/ is actually the underlying form, and the people in these villages have just generalised the rule to voice all the verb prefixes, it seems best to stick with the representation k.

The sequence /ky/ occurs initially in some first person singular verbs. Some examples of changes in various villages are:

Tr-Wu	Km	Sm	Yb-Wn	Kn
k-ye-o *I-give-you*	k-e-o	g-ya-o	dž-e-o	tš-e-o
k-ye?	k-e?	-	dž-e?	tš-e?
I-put				
k-yes	k-es	-	dž-eɬ	tš-eh
I-get.up				
k-yewo	kewo	-	džawo	-
I-go.up				

Because of the constancy of the change to /dž/ in Yibab-Wandomi the sequence /ky/ could be taught to the people as the unit phoneme /dž/, along with an explanation that people in Tring say it [ky]. The sequence /ky/ is realised as [tš] in Kenyari, and as [k] in Kamasau so adjustments in primers could be made here as well. It would be best to leave this sequence to be taught later in the primer series, until new readers have become somewhat more fluent.

There are some words in Tring, which we suspect, but do not always hear, actually have a /gy/ or /ŋgy/ sequence in them. These sequences always precede an /i/, and have sometimes been heard by us in Tring as [dž] and [ndž]. These words are:

Tr-Wu	Km	Sm	Yb-Wn	Kn
seg(y)i/sedži	segi	-	ɡini	hagi
no				
tomiŋg(y)i/tomindži	domiŋgi	mutomi	tem	pomi?i
star				
dag(y)i/dadži	dagi	dagi	dwadži	dwagi
cassowary				
?oŋg(y)i	?oŋgi	-	?oŋgi	?ondži
spoon				
teŋg(y)i/tendži	teŋgi	-	-	merendži
two (class 3)				

Therefore, since it might make it easier for people from the other villages to be given a clue that they should pronounce the Tring sequence /gy/ as [dž] it might be best to write the symbol, y, in for now. For example ['dagi] would be written dagyi. Then, if people object it would be easy to remove it. Alternately, speakers from Kenyari, Yibab, and Wandomi might be tested to see what their reaction would be to how they would spell these words, after they have already learned to spell some words with /ky/ sequences in them. This might be the better alternative. The sequences /ky/ and /gy/ would not be a problem when

it came to transferring to English, as in the Kamasau language they only occur word initially and medially, and in English they occur word finally.

Glottal stop is phonemic in all dialects, although it is often deleted word finally in Yibab and Wandomi, and sometimes in Kamasau and Samap. There are a few examples of its being changed to other consonants in Yibab-Wandomi, as discussed in Section 2.2. Also, in some words we sometimes are aware of the glottal stop and at other times do not hear it. So some of our words will need to be sorted out by the people themselves. But because some of the villages delete the glottal stop or change it into another consonant in some positions, we favour symbolisation by an apostrophe, rather than 'on the line' symbolisation by either of the symbols, q or c, which would later cause troubles in transfer to English. Those speakers who do not have the glottal stop in their dialect would then find it easier to ignore it.

NOTES

1. Samap village has been referred to by D.C. Laycock as the Elepi language. He states that "Elepi is closely related to Kamasau but seems to be more than just a dialect. However, it must have been a dialect of Kamasau in the not too distant past" (1973:16). Our findings presented in this paper concurred with Laycock that Samap (Elepi) is closely related to the Kamasau language.

2. This model has been applied to lexicostatistics by Arden Sanders (1977).

3. The Paruwa data was collected during a 1977 survey of two weeks in the area. The list taken was only 52 items but of these there were 44 words in common with the 1978 survey. This was adequate to determine the phonological similarity to Kenyari, as compared to other Kamasau language villages.

4. The methodology proposed by Grimes and Agard was reviewed, along with others, by Gary Simons (1977a).

APPENDIX

The items used in scoring cognates for this study are as listed below. All the data are phonetically transcribed.

	'hair' (1)	*'head'* (2)	*'mouth'* (3)
Tr	yu	ŋawo	mɨm
Wu	yu	ŋawo	mɨm
Km	yu	ŋawo	mɨm
Yb	yu	ŋawo	kwowi
Wn	yu	ŋawo	kowi
Kn	yu	ŋawu	mɨm
Pr	yu	ŋau	mɨm
Sm	---	yu iɮ	tigir

	'nose' (4)	*'eye'* (5)	*'neck/nape'* (6)
Tr	kɨme	rar	sumbut
Wu	kɨme	rar	sumbut
Km	kɨme	rar	minteŋk
Yb	kɨme	rar	numbut
Wn	kɨme	rar	numbut
Kn	kɨme	ra?	rohu
Pr	kɨmʌ	ra?	---
Sm	kɨme	rar	tumbut

	'throat' (7)	*'belly'* (8)	*'skin'* (9)
Tr	gɨbe	?umbo	tšoŋgo
Wu	---	umbo	tšoŋgo
Km	---	umbo	tšoŋgo
Yb	---	?umbo	tšaŋgo
Wn	gɨbe	umbo	---
Kn	gɨbe	?umbo	tšaŋgwo
Pr	gɨbe	umbo	tsaŋgwʌ
Sm	gɨbe	yaŋ	džogo

	'man' (10)	*'woman'* (11)	*'bird'* (12)
Tr	ʔwaiyi	ñumbweg	wapi
Wu	ʔwaiyi	ñumbweg	wapi
Km	ʔwaiyi	ñumbweg	wapi
Yb	ʔwaiyi	ñumbweg	wapi
Wn	ʔwaiyi	ñubweg	wapi
Kn	ʔwaiyi	ñumbweg	wapi
Pr	waiyi	ñimbweg	wapi
Sm	ʔwaiyi	nuñumbu	ñiñ

	'dog' (13)	*'mankind'* (14)	*'he sits'* (15)
Tr	ñombwi	wuti	nas
Wu	ñombwi	wuti	nas
Km	ñombwi	wuti	nas
Yb	ʔeʈ	wutši	naʈ
Wn	yet	wutši	naʈ
Kn	ñombwi	---	nah
Pr	ñombwi	---	---
Sm	ñamp	---	nat

	'they bite' (16)	*'he stands'* (17)	*'path'* (18)
Tr	riri	yenu	ŋɨm
Wu	ritš	yenu	ŋɨm
Km	rit	yenu	ŋɨm
Yb	ritš	yenu	mañe
Wn	ritš	yenu	mañe
Kn	---	yenu	mañeriŋk
Pr	---	---	myeriŋk
Sm	ritš	---	ŋɨm

	'stone' (19)	*'big'* (20)	*'small'* (21)
Tr	wet	yumbwi	wokwandi
Wu	wet	yimbwi	wokwandi
Km	wet	yumbwi	wodžidžu
Yb	weʈ	ʔɨmbede	kwandiwo
Wn	weʈ	umbete	kwandi
Kn	weh	yumbwi	kwotšihwo
Pr	wa	yumbwi	kwandži
Sm	---	yutuwaʔ	imbara

	'fire' (22)	*'smoke'* (23)	*'ashes'* (24)
Tr	wase	wasebo	ʔñaƥ
Wu	wase	waseso?i	ʔñaƥ
Km	wase	suwo?i	ñaƥ
Yb	waʈe	ʈigaiyi	kiñaƥ
Wn	waʈe	gaiyi	kiñaƥ
Kn	waha	hubo	ʔñaƥ
Pr	waha	obo	---
Sm	wate	ya?o	ñaƥ

	'ear' (25)	*'tongue'* (26)	*'tooth'* (27)
Tr	aŋge	mindžu	sawo
Wu	aŋga	mindžu	sawo
Km	aŋge	mindžu	sawo
Yb	maŋge	mindžu	ʈawo
Wn	maŋge	mindžu	ʈawo
Kn	aŋge	ŋari	hawo
Pr	aŋgʌ	ŋari	hawo
Sm	ma?aŋk	mindžu	tawo

	'breast' (28)	*'hand'* (29)	*'sun'* (30)
Tr	miñ	suram	ŋiñ
Wu	miñ	timi	ŋiñ
Km	miñ	suram	bogi
Yb	miñ	ʈuram	ŋiñ
Wn	miñ	ʈuram	ɡiñ
Kn	miñ	huram	ŋiñ
Pr	mɬñ	hiŋapɬ	ŋeni
Sm	miñ	turambi	bwog

	'moon' (31)	*'star'* (32)	*'cloud'* (33)
Tr	ireo	tomiŋgi	ŋiñ tu
Wu	ɡaŋgu	tomiŋgi	ŋeri
Km	miŋg	domiŋgi	ŋiñ
Yb	ɡaŋgu	tem	ŋiñ
Wn	ɡaŋgu	tem	ŋiñ
Kn	ireo	pomi?i	ŋiñ hu
Pr	ieu	---	ŋiñ hu
Sm	naŋgu	mutami	ŋeri

	'lightning' (34)	*'water'* (35)	*'tree'* (36)
Tr	ꝑris	wiye	ñumo
Wu	ꝑris	wiye	ñumo
Km	ꝑris	wiye	ñumo
Yb	prit	wiye	ñumo
Wn	priʈ	wiye	ñumo
Kn	prih	wiye	ñumo
Pr	---	wiye	ñimer
Sm	prit	wiye	yuma

	'rope' (37)	*'leaf'* (38)	*'meat'* (39)
Tr	sare	ra?e	?umo
Wu	sare	ra?e	?umo
Km	sare	ra?e	umo
Yb	ʂare	yam	mbutš
Wn	ʂare	ra	mbutš
Kn	hare	ndžau	?umo
Pr	---	mane	umo
Sm	tere	re?e	wutiŋe

	'fat' (40)	*'egg'* (41)	*'he eats'* (42)
Tr	?uye	ño?	na?
Wu	?uye	ño?	na?
Km	miñan	no	na
Yb	ñoŋg	ño	na
Wn	ñoŋg	ño	na
Kn	?uye	?uye	na?
Pr	ɡiye	wiye	na
Sm	---	---	---

	'he gives me' (43)	*'he sees me'* (44)	*'they come'* (45)
Tr	nieɡ	nu?ond	mandi
Wu	nieɡ	nu?ondž	mandi
Km	nieg	nu?ond	mandi
Yb	nieɡ	nu?ondž	mandi
Wn	nieg	nuwondž	mandi
Kn	nieg	nu?ond	mandi
Pr	---	noand	mandi
Sm	yau	nu?ondž	maŋ

	'louse' (46)	*'one'* masc (47)	*'two'* masc (48)
Tr	ɨmbiski	iri	temi
Wu	mbiski	iri	tremi
Km	mbiski	iri	temi
Yb	mbiʈ	iri	temi
Wn	mbiʈ	iri	temi
Kn	ᵽindži	iri	meremi
Pr	pindži	ri	mremi
Sm	mbite	ki	meremi

	'two' fem (49)	*'back'* (50)	*'backbone'* (51)
Tr	teri	dob	gori
Wu	teri	---	gori
Km	teri	dob	gori
Yb	teri	---	gori
Wn	teri	dob	gori
Kn	mereyi	dobuhi	---
Pr	---	---	---
Sm	merere	---	gori

	'leg/calf' (52)	*'bone'* (53)	*'blood'* (54)
Tr	mitu	ŋaᵽe	yaƀɨ
Wu	mitu	ŋaᵽe	yaƀɨ
Km	mitu	ŋaᵽe	yaƀɨ
Yb	miʈu	ŋaᵽe	yaƀu
Wn	rimtu	diage	wunande
Kn	mihu	ŋaᵽe	yaƀi
Pr	---	ŋape	yaƀi
Sm	buʌ	---	ŋainde

	'wing' (55)	*'fingernail'* (56)	*'tail (of dog)'* (57)
Tr	nimbre?e	su?	tumo
Wu	nimbra?a	su?	tumo
Km	nimbre?e	su?	tumo
Yb	mindara	ʈu	tumo
Wn	mindara	ʈu	ʈumo
Kn	nimbre?e	hu?	humo
Pr	---	---	---
Sm	nimbra	tu?o	tumo

	'his father' (58)	*'his mother'* (59)	*'my mother'*(60)
Tr	kiyi	kumo	moyu
Wu	kiyi	kumo	maiye
Km	kiyi	kumo	moiyu
Yb	kiyi	kumo	maiye
Wn	kiyi	kumo	maiye
Kn	nuyi	kumo	mawo
Pr	---	---	---
Sm	kiye	kerene	nen

	'my older sibling' (61)	*'name'* (62)	*'pig'* (63)
Tr	tšetše	ñamb	ꝑu
Wu	tšetš	ñamb	ꝑu
Km	tšetš	ñamb	ꝑu
Yb	džadže	ñambu	mbar
Wn	džadže	ñamb	mbar
Kn	džedže	ñamb	ꝑu
Pr	---	---	---
Sm	džedž	ñamb	mbar

	'cassowary' (64)	*'rat'* (65)	*'snake'* (66)
Tr	dagi	iꝑikyi	ɠati
Wu	dagi	iꝑikyi	ɠati
Km	dagi	mbiriki	ɠati
Yb	dwadži	ɨmbiritši	ɠati
Wn	dwadži	mbiritši	ɠati
Kn	dagwi	iꝑi	gahi
Pr	---	---	---
Sm	dagi	umb	ɠatu

	'fish' (67)	*'banana'* (68)	*'house'* (69)
Tr	umo	wane	badž
Wu	ʔumo	wane	badž
Km	umo	wane	ñoŋgo
Yb	ʔumo	wane	badž
Wn	umo	wane	badž
Kn	ʔumo	wane	badž
Pr	---	---	---
Sm	ʔuma	wana	badž

	'earth' (70)	*'sand'* (71)	*'mountain'* (72)
Tr	?ɨ	džidži	rand
Wu	?ɨ	džidži	rand
Km	ɨ	džidži	rand
Yb	?ɨ	džidži	rand
Wn	gɨ	džidži	randigɨ
Kn	?ɨ	džidži	randi
Pr	---	---	---
Sm	yita	džiŋa	paŋg

	'wind' (73)	*'night'* (74)	*'white'* (75)
Tr	ñumorigi	bur	?wemye
Wu	numorigi	bur	?wemye
Km	numorigi	bur	?wem
Yb	numorigi	bur	?wemye
Wn	numorigi	bur	?wem
Kn	numorigɨ	wuŋgi	?wemye
Pr	---	---	---
Sm	nare	wuŋga	?wemya

	'black' (76)	*'red'* (77)	*'good'* (78)
Tr	?wari	?amboye	ogi
Wu	?wari	?amboye	ogi
Km	?wari	ambo	ogi
Yb	?wariye	?amboye	---
Wn	?wariye	amboye	---
Kn	?wari	amboye	---
Pr	---	---	---
Sm	?ubya	amboya	---

	'nice' (79)	*'long'* (80)	*'short'* (81)
Tr	yuwon	dobwi	bwog
Wu	---	dobwi	bwog
Km	---	dobwi	ɓaiyi
Yb	yuwon	dobwi	bwogi
Wn	yuwon	dobwi	bog
Kn	hwan	dobwi	ɓwaha?
Pr	---	---	---
Sm	yuwon	buŋaŋ	bwog

	'heavy' (82)	*'cold'* (83)	*'hot'* (84)
Tr	maiye	ʔuwi	suŋguwe
Wu	mai	ʔuwi	suŋgo
Km	mai	ʔuwi	suŋguwe
Yb	mai	wem	tiŋguwe
Wn	mai	wem	tiŋguwe
Kn	maih	ʔuwi	huŋduwe
Pr	---	---	---
Sm	mai	ʔusa	tiŋge

	'old (man)' (85)	*'old (house)'* (86)	*'new'* (87)
Tr	gaŋ	wuri	uruɒwi
Wu	gaŋ	ñiɒi	ʔuruɒwi
Km	gaŋ	wuriʔi	ʔuruɒwi
Yb	gaŋ	ñiɒi	tiŋeye
Wn	gaŋ	ñiɒi	tineye
Kn	merimbo	wuri	uruhwi
Pr	---	---	---
Sm	gaŋ	niɒe	ndžiʔiñe

	'many' (88)	*'what is that?'* (89)	*'who?'* (90)
Tr	ʔwan	te ɒuge	tuge
Wu	ʔwan	te ɒuge	tige
Km	ʔwan	te ɒuge	tuge
Yb	ʔwan	de buge	dige
Wn	wan	de buge	ndige
Kn	ʔwan	te ɒwe	tuge
Pr	---	---	---
Sm	ʔwan	bure	---

	'why?' (91)	*'she carries'* (92)	*'full'* (93)
Tr	ɒuge niŋk	wure	bire
Wu	ɒuge niŋk	wure	bire
Km	ɒuge niŋk	wure	bire
Yb	buge niŋk	wure	bire
Wn	buge niŋk	wure	bire
Kn	pwi ki	wuro	bire
Pr	---	---	---
Sm	bwe riŋk	wure	mbara

	'with' (94)	*'no'* (95)	*'drink'* (96)
Tr	ꝑu	segyi	ne
Wu	ꝑu	segi	na
Km	ꝑu	segi	ne
Yb	ꝑu	ɡini	na
Wn	ꝑu	ɡini	na
Kn	ꝑu	hagi	ne
Pr	---	---	---
Sm	---	garebi	da

	'he lies' (97)	*'he dies'* (98)	*'he laughs'* (99)
Tr	nase	nati	wure na?
Wu	nase	nati	wure na?
Km	nase	nati	wuru na
Yb	nate	naʈi	wur na
Wn	nate	nati	wuru na
Kn	naha	nahi	wuru na?
Pr	---	---	---
Sm	nate	gureŋ nand	wure na?

	'I' (100)	*'you'* (sg) (101)	*'he'* (102)
Tr	ŋe	nu	ni
Wu	ŋe	nu	ni
Km	ŋe	nu	ni
Yb	ŋe	nu	ni
Wn	ŋe	nu	keɡi
Kn	ŋeɓi	nu	ni
Pr	---	---	---
Sm	ŋa	ninde	ninde

	'we' (103)	*'jungle'* (104)	*'sago (cooked)'* (105)
Tr	beɡi	tšar	gos
Wu	beɡi	tšar	gos
Km	beɡi	tšar	uge
Yb	ŋebewu	džar	uge
Wn	ŋebeɡi	džar	wuge
Kn	bewi	tšar	wuge
Pr	---	---	---
Sm	ŋanuŋgu	tšar	ɡiri

	'I put' (106)	*'I give you'* (107)	*'I am happy'* (108)
Tr	kye? wuge	kyeo	tšimbai gad
Wu	kye? wuge	kyeo	tšimbai
Km	ke? wuge	keo	si?i gad
Yb	dže? wuge	džeo	tšumbai gad
Wn	dže? wuge	džeu	džimbaiya gad
Kn	tše? wuge	tšeo	yawo dare wige
Sm	gai wa	guao	wori ti

	'knife'(109)	*'I peel it'* (110)	*'bast of coconut'* (111)
Tr	gebitš	ño? gidi?	tšwagi
Wu	gebis	ño? gad	tšwagi
Km	tšo?i	soro gad	tšagi
Yb	gebitš	ño gidi	džwagi
Wn	gebitš	ño gidi	džowagi
Kn	mame	ño? gad	tšagi
Sm	gebitš	džogo gad	tšwaŋge

	'morning' (112)	*'he gets up'* (113)	*'she goes up'* (114)
Tr	bur?ane	nyes	wiyo
Wu	bur?ane	nyes	wiyo
Km	bur?ane	nes	wiyo
Yb	bur?ane	nyeʈ	wiyo
Wn	bur?ane	nyeʈ	wiyo
Kn	yamb	nyeh	wiye?u
Sm	---	---	---

	'part/piece' (115)	*'ridge cap'* (116)	*'long way'* (117)
Tr	ɓutš	bwede	wondži
Wu	ɓutš	bwede	wondži
Km	ɓut	?wag	wondži
Yb	mbutš	byade	wondži
Wn	bidi	bwiyade	wondži
Kn	ɓuhi	bwede	wondži
Sm	mbus	?wag	wondž

	'black palm' (118)	*'shelf'* (119)	*'I die'* (120)
Tr	ndžoʔu	džari	kati
Wu	ndžoʔu	budžari	kati
Km	ndžoʔu	napiri	kati
Yb	dżewu	are	gati
Wn	ndżewu	are	gati
Kn	ndžoʔu	tšire	kahi
Sm	moti	budžari	nita

	'now' (121)	*'yesterday'* (122)	*'day before yesterday'* (123)
Tr	muʔdi	kambe	kei
Wu	muʔ	kambe	kei
Km	muʔdi	ŋambe	kei
Yb	mundi	ŋambe	kei
Wn	mo	ŋambe	kei
Kn	muhdi	kambe	kei
Sm	maʔ	ŋamba	bidže

	'tomorrow' (124)	*'day after tomorrow'* (125)	*'two days after tomorrow'* (126)
Tr	praŋgi	yamb	ɨwe
Wu	praŋgi	---	ɨwe
Km	praŋgi	yamb	ɨwe
Yb	yambugri	yamb	yambe
Wn	yambogri	yamb	yamb aiya
Kn	praŋgi	yamb	ɨwe
Sm	ñumbwand	nebidže	---

	'I carry male' (127)	*'I carry female'* (128)	*'I carry two'* (129)
Tr	keri	karaʔ	kare
Wu	keri	karaʔ	kare
Km	keri	karaʔ	kare
Yb	geri	garaʔ	gare
Wn	geri	gara	gare
Kn	keri	keri	keri
Sm	neri	neri	neri

	'sago stem' (130)	*'she hears'* (131)	*'my ancestor'* (132)
Tr	kwawu	wutuŋu	koku
Wu	kwawu	wutuŋu	koku
Km	kwawu	wutuŋu	koku
Yb	kwawu	wutuŋu	koku
Wn	kwawu	wutuŋu	koku
Kn	kwawu	wuhuŋu	koku
Sm	powi	wutu?	kwok

	'chin' (133)	*'fish hook'* (134)	*'again/back'* (135)
Tr	kowisambe	?mosuŋgo	?mune
Wu	kowisambe	?mosuŋgo	?mune
Km	kowisambe	?mosuŋgo	?mune
Yb	kowitšambe	?umoʈuŋgo	?mune
Wn	kowitšambe	?moʈuŋgo	mune
Kn	kowihambe	?mohuŋgo	?mune
Sm	get	matukwa	?mune

	'woven blind' (136)	*'food'* (137)	*'betet nut'* (138)
Tr	simi?u	mɨr	ƥuwo
Wu	simi?u	mɨr	ƥuwo
Km	simi?u	---	ƥuwo
Yb	ʈimi?u	mɨr	buwo
Wn	ʈimi?u	mɨr	buwo
Kn	himuri	nimiri	ƥuwo
Sm	wet rau	wum	buwo

	'you give me' (139)	*'speech'* (140)	*'put on head'* (141)
Tr	yeɠ	wand	mba?i
Wu	yeɠ	wand	mba?i
Km	yeɠ	wand	mba?i
Yb	yeɠ	wand	barige
Wn	yeɠ	wand	bai
Kn	yeɠ	wand	ba?i
Sm	yan	wand	mba?i

	'string bag' (142)	*'saucepan'* (143)	*'coconut'* (144)
Tr	tami	os	iye
Wu	tami	os	iye
Km	tami	os	tši
Yb	tami	ot	dži
Wn	tami	ot	dži
Kn	hami	oh	iye
Sm	tami	ot	tši

	'rotten' (145)	*'taro'* (146)	*'comb'* (147)
Tr	sɨg	yag	ʔusiŋk
Wu	tšigi	yag	ʔusiŋk
Km	sɨg	ña?	isiŋk
Yb	ʂɨg	yag	ʂiŋk
Wn	tɨg	yag	ʂiŋk
Kn	ñuʔo	yag	---
Sm	---	yau	ʔusiŋk

	'spoon' (148)	*'grass skirt'* (149)	*'fasten'* (150)
Tr	ʔoŋgi	ñiŋk	taʔ
Wu	ʔoŋgi	ñiŋk	taʔ
Km	ʔoŋgi	ñiŋk	taʔ
Yb	ʔoŋgi	ñiŋk	ta
Wn	ʔoŋgi	ñiŋk	ta
Kn	ʔondži	ñiŋk	haʔ
Sm	---	ñiŋgi	taʔ

	'leg' (151)	*'caterpillar'* (152)	*'garden'* (153)
Tr	ñiŋge	surog	wuñ
Wu	ñiŋga	surog	wuñ
Km	ñiŋge	surog	wuñ
Yb	ñiŋge	ʂurog	wuñ
Wn	maŋge	ʂurog	wuñ
Kn	ñiŋga	hurog	wuñ
Sm	ŋam	turog	wuñ

	Gnetum (species of tree) (154)	*'young woman'* (155)	*'scrape'* (156)
Tr	miñe	ambonye	gri?
Wu	miñe	ambonye	gri?
Km	miñe	ambonye	gri?
Yb	miñe	ambonye	gri
Wn	miñe	abonye	gri
Kn	miñe	ambonye	kirabi
Sm	miñuŋk	ambonya	eren

	'dump (water)' (157)	*'middle'* (158)	*'ginger plant'* (159)
Tr	gro?	miŋgi	?wabe
Wu	gro?	miŋgi	?wabe
Km	gro?	miŋgi	tšu?wam
Yb	gro	miŋgi	ñuam
Wn	gro	miŋgi	ñuwam
Kn	gro?	miŋgi	?wabe
Sm	gro?	miŋg	wiyege

	'inside' (160)	*'signal drum'* (161)	*'stick for signal drum'* (162)
Tr	wabe	wub	bɨs
Wu	wabe	wub	bɨs
Km	wabe	wub	simb
Yb	wuyi	wub	tutu
Wn	wuyi	wub	tutu
Kn	wabe	wub	bɨh
Sm	---	wob	tu

	'I need' (163)	*'earthern saucepan'* (164)	*'torch'* (165)
Tr	kreg	mwe?	soi
Wu	kreg	mwe?	soi
Km	kreg	mwe?	---
Yb	natš	mwe	---
Wn	natš	mwe	---
Kn	kreg	mwe?	hoi
Sm	nat	mwe?	---

	'fly' (166)	*'torch for light'* (167)	*'we get wet'* (168)
Tr	niŋgrai?	sinde	ƥarai?
Wu	ƥuro	sinde	ƥarai?
Km	niŋgrai?	sinde	ƥarai?
Yb	ƥrik	eñ ?wari	bra?
Wn	ƥrik	eñ ?wari	bra?
Kn	niŋgrai?	---	ƥarai?
Sm	ƥiri	wote	wari wumb

	'thorn' (169)	*'prawn'* (170)	*'thumb'* (171)
Tr	?wat	?at	tumbo?
Wu	?wat	as	tumbo?
Km	?wat	?at	tumbo
Yb	?wat	?at	tumbo
Wn	yuwo	at	tumbo
Kn	?wat	waha?	humbo?
Sm	yo?o	?at	kubo

	'junction' (172)	*'hand'* (173)	*'right (hand)'* (174)
Tr	swai	si	ŋañe/twan
Wu	swai	si	tan
Km	swai	si	twon
Yb	ʇwai	ʇi	ŋañe
Wn	ʇwai	ʇi	ŋañe
Kn	hwai	hi	ŋañe
Sm	twai	katu	man

	'left (hand)' (175)
Tr	?a?i
Wu	?aƀi
Km	teŋga?i
Yb	?a
Wn	?a
Kn	?a?a
Sm	tu?a

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