

THE MURUTIC LANGUAGE FAMILY

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0. INTRODUCTION

This paper will discuss the Murutic languages of Sabah and Kalimantan as tentatively classified by Smith (in this volume). It will present the results of the dialect intelligibility testing by the Summer Institute of Linguistics (SIL) and compare these to Smith's lexicostatistical analysis. The aim of the paper is to present a reclassification of the Murutic languages of Sabah and Kalimantan using the dual parameters of lexicostatistics and intelligibility testing.

Other factors brought to bear on the final classification are previous arrangements of the Murutic languages and peoples by several earlier researchers. In addition, the results of intelligibility testing of the national language (Bahasa Malaysia) by the Murut of Sabah are included.

0.1 Location

The languages of the Murutic family are spoken over the south-western portion of the state of Sabah, including the administrative districts of Keningau, Tenom, Sipitang and Pensiangan and extending south into Indonesian Borneo. There are also scattered populations in Beaufort, Tawau and Kinabatangan districts (Figure 1).

0.2 Historical origins

Some have suggested that the Murutic-type people arrived in Sabah as a first wave of migration by a landbridge from mainland South-east Asia, followed by a second wave of Dusunic-type people who pushed them further inland. Others, who notice Chinese-like characteristics in the modern Kadazan, suggest that the migration is much more recent, coming more directly from China. It is probably safe to say that however men first arrived in Sabah, the present Murut and Kadazan/Dusun population represent the direct descendants of those first inhabitants and that there were no other aboriginal people (Rutter 1929; Lee 1965; Chatfield 1972).

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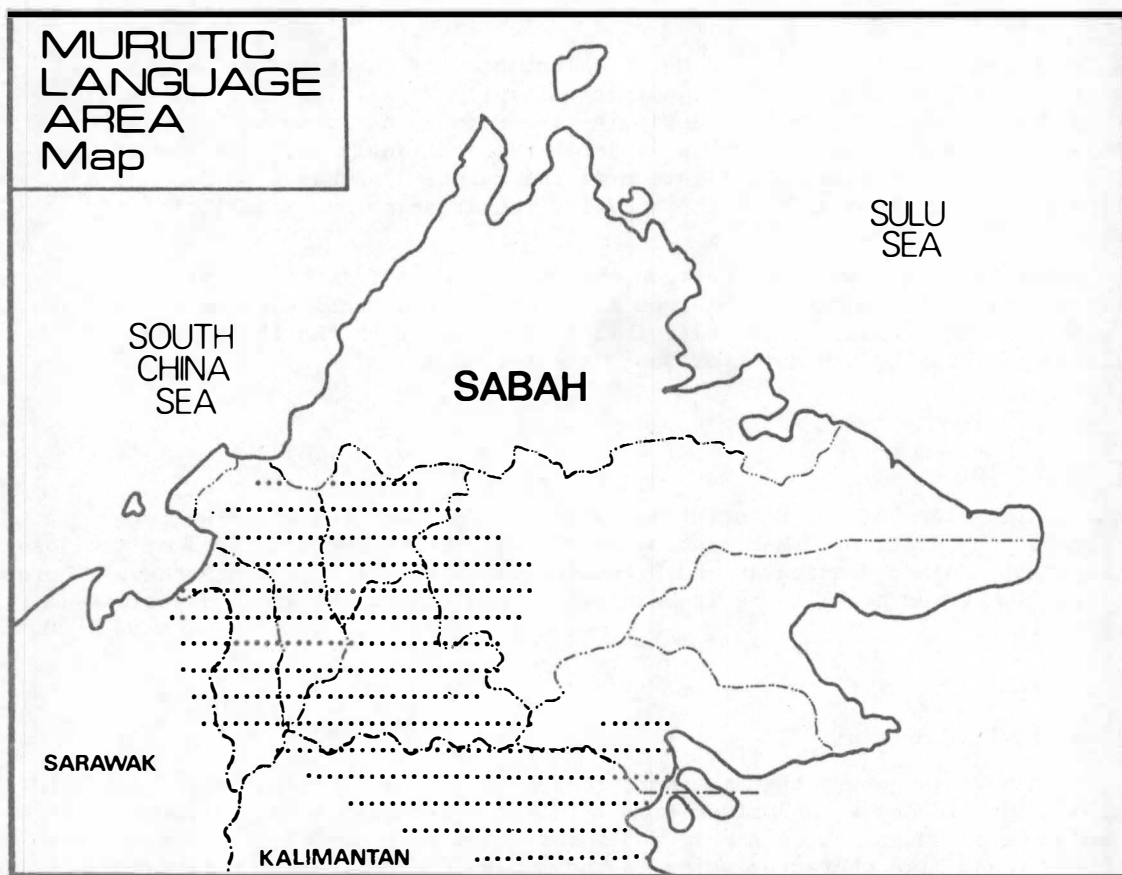


Figure 1: Murutic language area of Sabah, Sarawak and Kalimantan

On the other hand, even to the early researchers it seemed quite apparent that there was a closer relationship between the Murutic and Dusunic peoples of Sabah and some of the nearby groups in the Philippines, Taiwan and mainland South-east Asia (Hose and McDougall 1912; Rutter 1929; Prentice 1970).

The Murut of Sabah also seem to share some cultural affinity with the Lundayeh of Kalimantan and Sarawak (also called 'Murut'), but linguistically they are very distant (→ Lundayeh; LeBar 1972:153). It is probable that the Lundayeh arrived in a totally different migration from that of the Murutic people.

0.3 Population

The total population of Murutic people of Sabah, including the non-indigenous Muruts such as Kolod, but excluding such groups as Lundayeh, Kuijau and Tidong, is estimated to be 36,000 to 38,000 as of 1980.¹ The breakdown according to language designation is as follows:

GANAN	1000-1200
KENINGAU MURUT	4000-5000
BAUKAN	1500-1800
TIMUGON	6000-7000
BEAUFORT MURUT	1200-1700
PALUAN	5500-6500
SUMAMBU/TAGAL	13000-14000
SELUNGAI MURUT	600-800
KALABAKAN MURUT	450-600
SERUDUNG MURUT	350-450
Other (SEMBAKUNG, INDONESIAN MURUT, KOLOD)	2800-3800

A topic of considerable discussion by some researchers has been the sharp decline and gradual rise of the Murut population in recent history (Ride 1934; Copeland 1935; Shircore 1937; Clarke 1951; Landgraf 1956; Regester 1956; Polunin 1959; Jones 1966, 1967; Crain 1972). Some attribute this to disease, others to culture change and some simply to varying classifications in census taking. It may actually be due to a combination of factors, and has probably affected different ethnic groups at different times, not only the Murut (Appell 1968; Prentice 1972).

0.4 Ethnonyms

The ethnonym 'Murut' (also 'Maroot', 'Marut', 'Meroot', 'Merut', 'Mooroot', 'Moorut', 'Morut', 'Mulut', 'Murat', 'Murút') is applied generically to all languages under discussion in this paper. Literally the term means *hill people*.² Several of the language groups still retain their individual autonyms in common usage, but most apply the more generic term at first when speaking of themselves. When it was possible to discover the autonym it has been used in classifying the language. This presented problems when two villages using different autonyms were found to be linguistically similar. Thus it was often necessary to identify the group by the name of a prominent river or village. In the few cases where a specific autonym was used, it was common for only some in the group to use it (cf. Prentice 1970:370ff).

The misapplication of the term 'Murut' to two very distinct language groups in Sabah and Sarawak has presented great confusion and misunderstanding. Prentice (1971, 1972) has a full discussion of the problems arising from the ethnonyms 'Murut' and 'Tagal' being applied to the Lundayeh of Sarawak (sometimes called Sarawak Murut, Southern Murut or Kelabitic Murut) and to the Murut of Sabah (sometimes called Sabah Murut, Northern Murut or Ida'an Murut).

One suggestion not mentioned by Prentice as to how two such diverse groups came to be referred to by the same name is that the Sarawak Murut were originally called orang murud *people of Murud* after Mt Murud. On the other hand, the Sabah Murut were referred to simply as 'Murut' by outside groups. Eventually the terms became confused and today both are referred to as Murut.³

0.5 Literature

Among the indigenous languages of Sabah, the Murutic languages in general and the Timugon language in particular have received a fair amount of attention, due mainly to the articles and monograph by D.J. Prentice. His work within Murut consists chiefly of a phonology and grammar of Timugon Murut (1971) and numerous other articles relating to various aspects of the language (1965, 1969, 1972, 1981). In his monograph just mentioned he extended his analysis of Timugon by presenting an outline of phonology and morphology of several other Murutic languages. Prentice (1970) also wrote a very important and useful lexicostatistical study which details his classification of the languages of Sabah based on his own wordlists and those gleaned from other literature.

A brief discussion of one aspect of Murut orthography is found in Lees (1966). Clayre (1970) dealt with focus in several East Malaysian languages including the Murutic languages Tagal and Timugon.

Cohen (1981) discussed the relations between 25 wordlists from Keningau District consisting of 80 lexical items each. Of these 25 lists, 14 are considered Murutic in the present paper. His discussion illustrates the difficulty in classifying some of the languages of northern Keningau District as either Murutic or Dusunic.

Several wordlists and vocabularies from Murutic languages have been previously published and are found in Baboneau (1922), Rutter (1929), Keith (1936), Bolang and Harrisson (1949) and the *English-Murut phrase book* (1964). A fuller bibliography, including some non-linguistic material is found in Prentice (1970) and in the bibliography at the end of this book.

1. LEXICOSTATISTICAL CLASSIFICATION

1.1 Smith's classification

The tentative classification of the Murutic languages of Sabah by Smith (in this volume) was based on 36 wordlists collected by linguistic researchers of the Summer Institute of Linguistics (SIL). This first lexicostatistical phase of the survey of Sabah languages by SIL was followed by a second phase of intelligibility testing based partly on the list of points to be clarified found in Smith's summary.

On the basis of relations of 45-60 percent of shared cognates (PSC) with other language families, Smith classified the Murutic family as one of the four

members of the Bornean stock, the others being the Tidong family, the Paitanic family and the Dusunic family. Figure 2 shows the relations between them using representative samples.

TIDONG Family	TIDONG (Lidung LS)		
MURUTIC Family	54	TIMUGON (Entabuan TM)	
PAITANIC Family	46	46	MAKIANG (Diwara KN)
DUSUNIC Family	45	47	54 DUSUN (Bongkud RU)

Figure 2: PSC relations between representative samples of the four divisions of the Bornean stock (adapted from Smith, in this volume)

The Murutic family was analysed as comprising 15 languages having relations of 52-82 PSC (Figure 3). Seven of these, represented by samples having relations of only 52-75 PSC, were sufficiently different from the others to be separated at the subfamily level. These included Gana, Apin-Apin Kuijau, Tagal, Kalabakan Murut, Kolod, Sembakung Murut and Serudung Murut. Only Tagal was represented by more than one wordlist.

Figure 4 shows nine Tagal wordlists compared with each other and ranging 70-89 PSC. It was found convenient to separate the wordlists into two dialects consisting of Tagal 'A' having relations of 82-89 PSC and Tagal 'B' having relations of 73-85 PSC but having relations between dialects of only 72-82 PSC.⁴

The remaining eight Murutic languages showed greater affinity with one another than to the other seven by having PSC relations of 75-80 with at least one other member in the group. These were classed together under one subfamily called Central Murut. These eight languages, represented by 21 wordlists, included Dusun-Murut, Nabay, Baukan, Timugon, Beaufort Murut, Sook Murut, Takapan⁵ and Paluan.⁶ Figure 5 shows the PSC relations between representative samples of the Central Murut subfamily. No dialect divisions within these languages were noted by Smith.

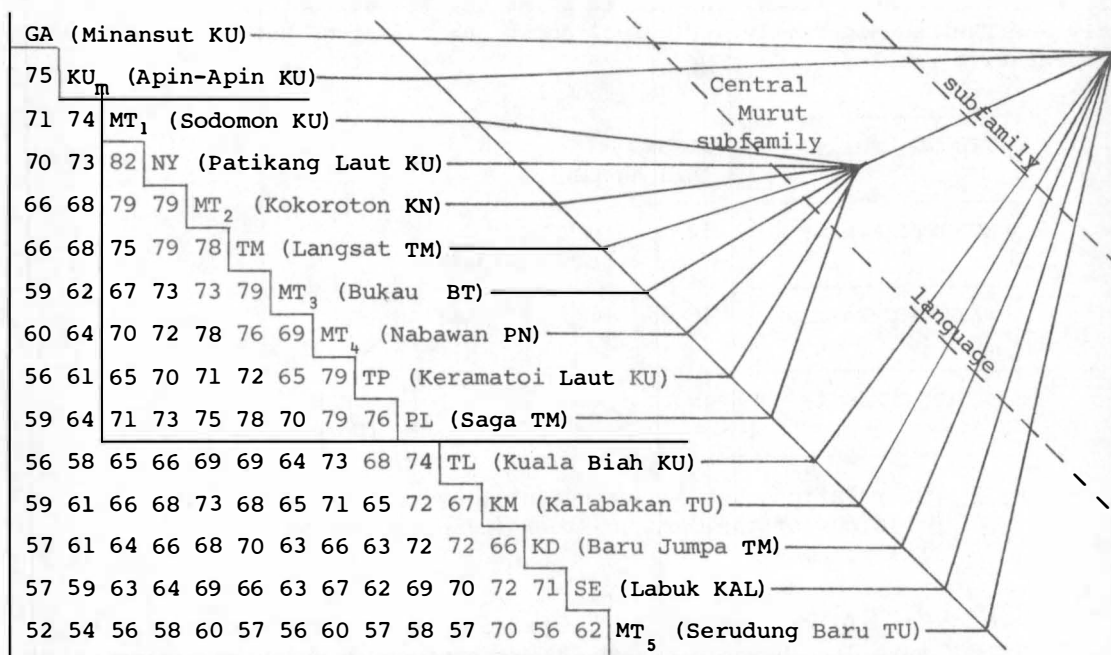


Figure 3: PSC relations of representative dialects of 15 Murutic languages. (from Smith, in this volume) (GA = Gana; KU_m = Apin-Apin Kuijau (subscript_m designates this Murutic language in contrast to KU which designates the Dusunic Kuijau language); MT_1 = 'Murut' representing Dusun-Murut; NY = Nabay; MT_2 = 'Murut' representing Baukan; TM = Timugon; MT_3 = 'Murut' representing Beaufort Murut; MT_4 = 'Murut' representing Sook Murut; TP = Takapan; PL = Paluan; TL = Tagal; KM = Kalabakan Murut; KD = Kolod; SE = Sembakung Murut; MT_5 = 'Murut' representing Serudung Murut.)

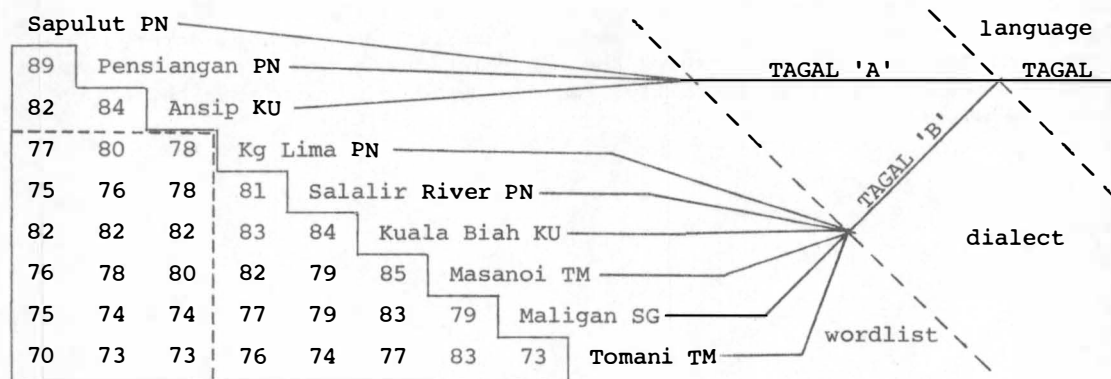


Figure 4: PSC relations of nine samples of the Tagal language representing two dialects (adapted from Smith, in this volume)

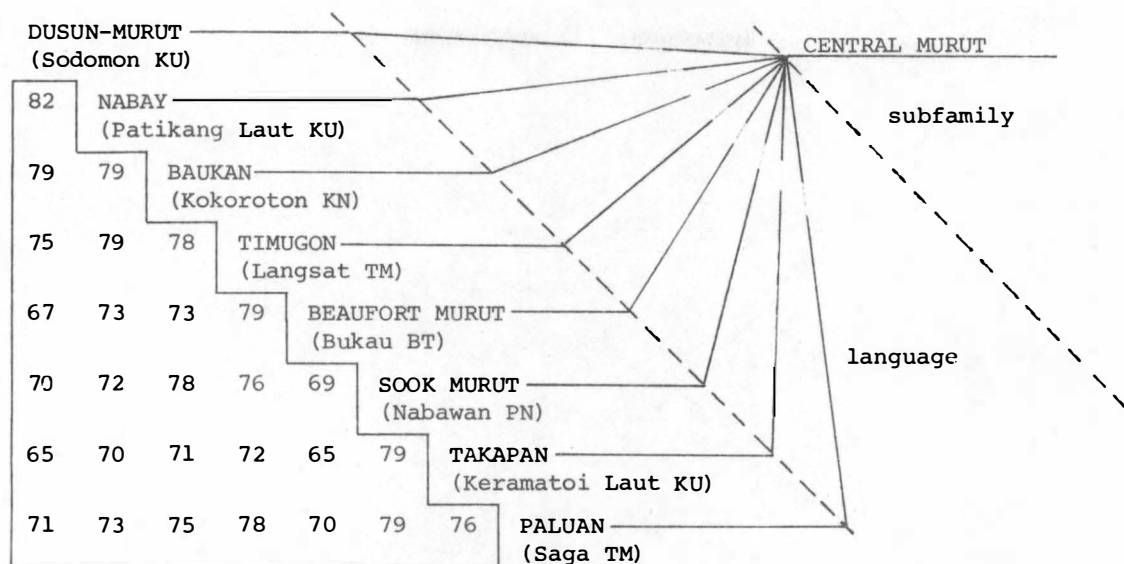


Figure 5: PSC relations of representative samples of eight Murutic languages of the Central Murut subfamily (adapted from Smith, in this volume)

1.2 Revised lexicostatistical classification

During the second phase of the survey it was convenient to check most of the Murutic wordlists and to add several new ones.⁷ The revised lexicostatistical relations presented here take better account of 'synonyms' than the earlier comparisons. Other corrections were also incorporated at this time. Since both Smith's figures and those based on the verified wordlists are cited here and throughout the paper the revised PSC figures are always marked with an asterisk.

The effect these revised figures had on the classification was to raise the PSC relations in all but a few cases. Many of Smith's 'languages' would be described on the 'dialect' level. However, the overall shape of the lexicostatistical classification is only slightly altered.

Figure 6 presents the reclassification which would result if these revised PSC relations were the sole basis for classification.

Figure 7 displays the relationships of 11 villages reclassified as dialect groups of the Central Murut language.

Figure 8 shows the revised PSC relations of five wordlists reclassified as belonging to the Paluan language.

Figure 9 shows the resulting classification based on revised PSC relations of 11 villages which were identified as belonging to the Sumambu/Tagal group.

The initial plan of the intelligibility testing and the discussion of the results in Section 3 centre around Smith's analysis. But the revised lexicostatistical classification is offered here as a further verification of the previous study by Smith and as additional input into the Murutic classification proposed in Section 4, where each dialect/language is discussed in detail. The classification in Section 4 does not necessarily correspond with the classification displayed in Figures 6-9.

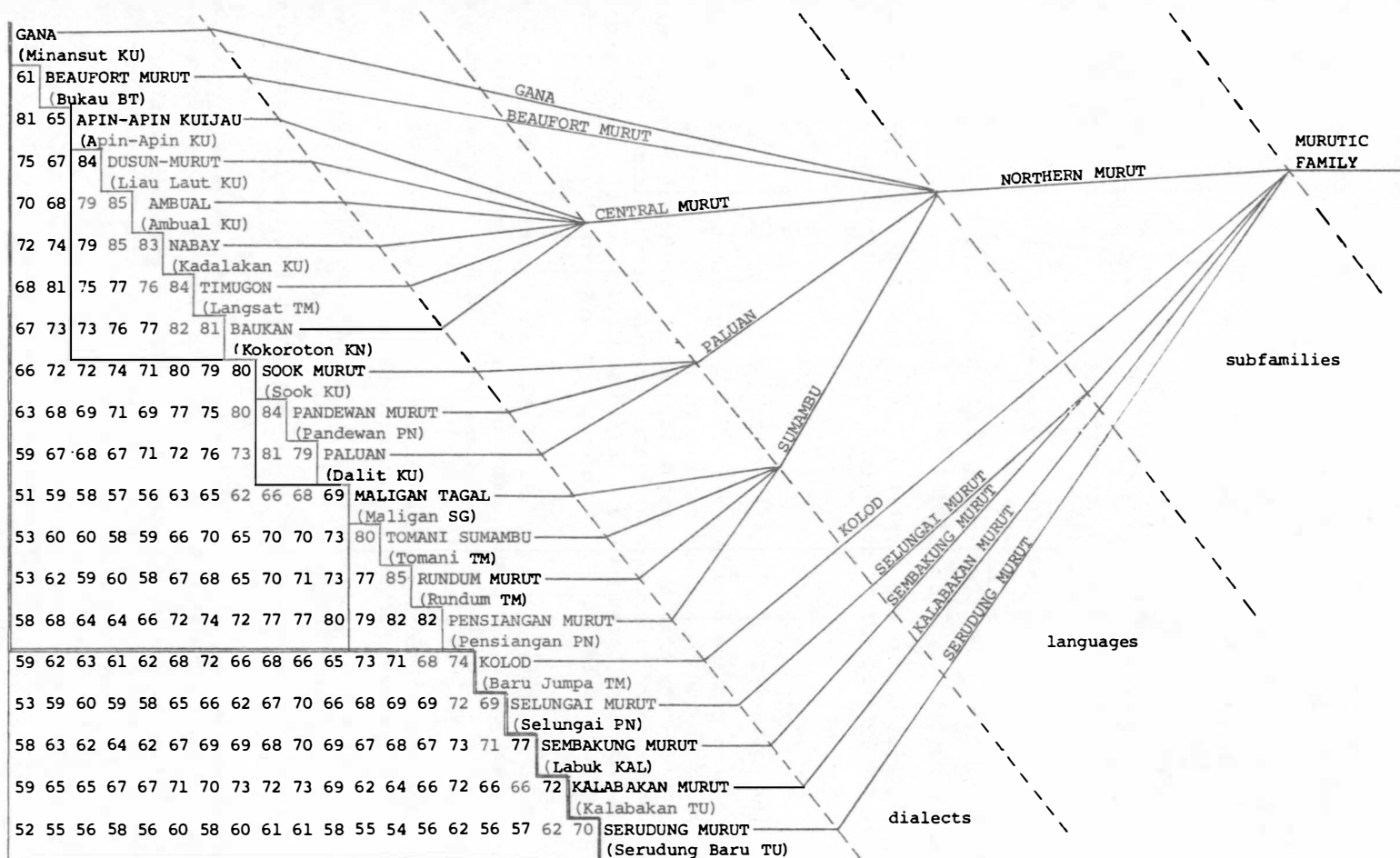


Figure 6: Revised PSC relations between 20 Murutic dialects.

Reclassification based on revised PSC relations.

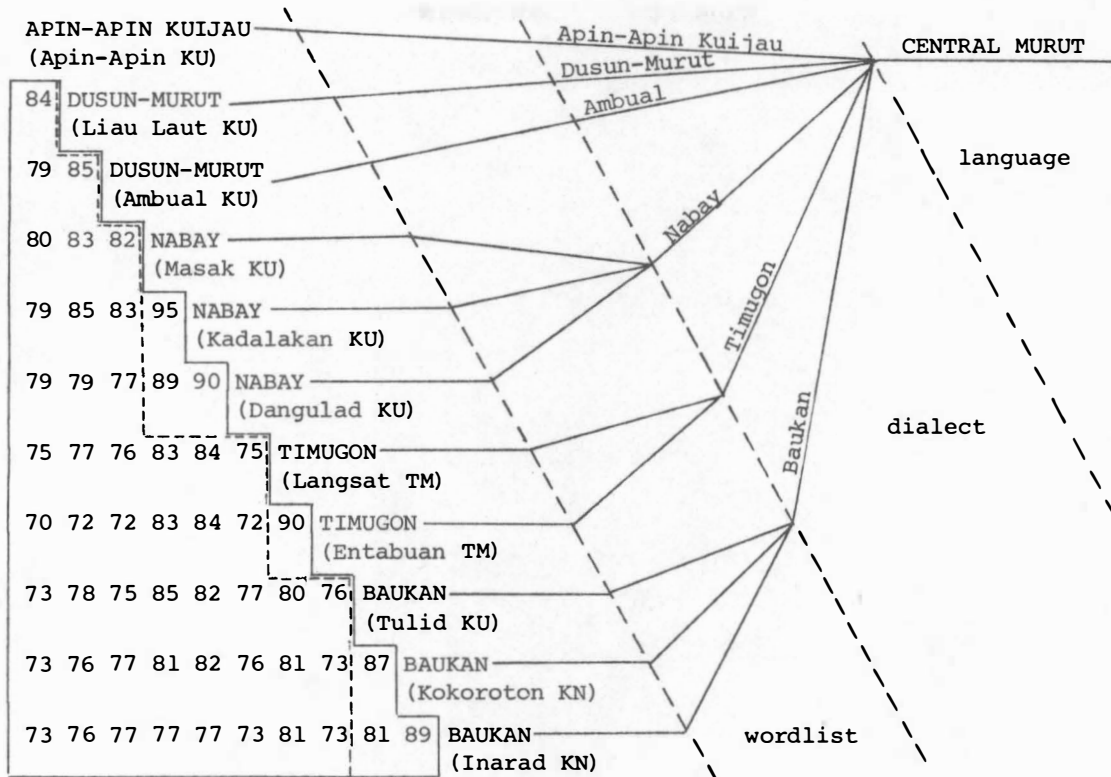


Figure 7: Revised PSC relations of six Central Murut dialects

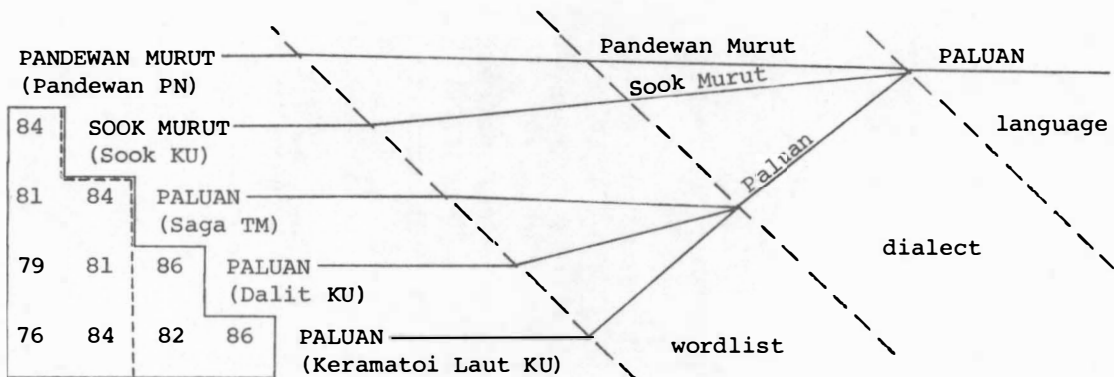


Figure 8: Revised PSC relations and classification of five Paluan wordlists representing three dialects

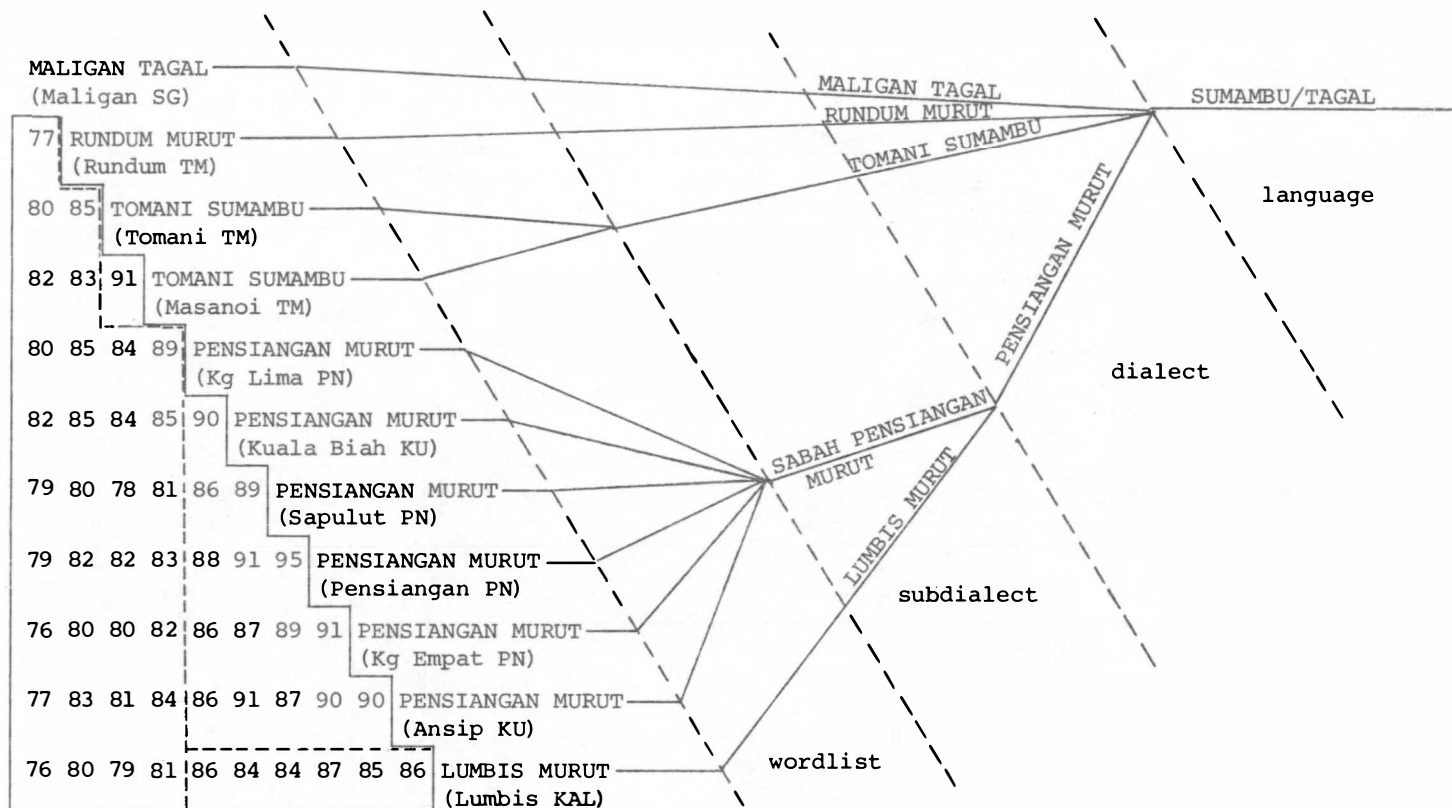


Figure 9: Revised PSC relations and classification of 11 Sumambu/Tagal samples representing four dialects

2. TESTING PROCEDURES

2.1 Purpose of intelligibility testing

The purpose of the intelligibility testing among Murutic languages was to clarify some of the distinctions made by Smith in his lexicostatistical classification. Since intelligibility testing is not precise enough to determine subfamily or subdialect divisions, this testing was limited in purpose to clarifying the language and dialect divisions.

At the end of the first phase of the survey, Apin-Apin Kuijau was specified as needing further clarification to determine its true relation with the Dusunic Kuijau language and the other Murutic languages.

The level of intelligibility between the two Tagal dialects as classified by Smith also needed clarification, since the PSC relation of 70 between the two most remote wordlists is lower than normally expected for mutual intelligibility. The dialect division, or divisions, needed to be more clearly defined. In addition, it was expected that the testing would help to determine which dialect was most widely understood.

Finally, Smith mentioned the need to determine intelligibility among the languages of the Central Murut subfamily. Were they all distinct languages or could some be considered dialects of the same language? Which would be considered central, and which are 'fringe' languages? These are some of the questions the dialect intelligibility testing sought to answer.

Before beginning the testing phase of the Murut survey it was considered advisable to include languages and test points other than those mentioned by Smith. Some of these included testing at Kalabakan TU and Serudung Baru TU both to determine their level of mutual intelligibility and their level of intelligibility of other Murutic languages and the Tidong language. Motivation for the latter purpose came mostly from growing suspicion that these villages could, in fact, be more closely related to the Tidong language than to the Murutic languages (Prentice 1970; Sather 1972).

In addition, some Central Murut reference tapes were used for testing other Murutic subfamilies: Gana, Apin-Apin Kuijau, Kalabakan Murut, Serudung Murut and Tagal. Tagal reference tapes were also used in these as well as in all Central Murut languages. This testing was done in order to determine the mutual intelligibility within the whole Murutic family.

The addition of new data not included in Smith made additional testing necessary since the relative lexical position of the new samples was not known.⁸

2.2 Test points and test sets

The intelligibility testing phase of the survey of the Murutic languages was conducted between the months of December 1980 and June 1981. Six members of the Summer Institute of Linguistics were involved at various times, the writer of this paper being involved in each test. Twenty-nine⁹ tests were done in Murutic language family villages as well as several with the other language families.

It was decided to do intelligibility testing in at least two villages within each language including one from each dialect. This was accomplished in every case except Apin-Apin Kuijau, Kalabakan Murut, Serudung Murut, Takapan

and Beaufort Murut. In all but the last case only one village could be located.¹⁰ Figure 10 gives an overall picture of the Murutic testing by test point showing the languages of each reference tape used in the test set.¹¹

Kolod and Sembakung Murut were excluded from the testing since their cultural and linguistic centres were considered to lie outside the political boundary of Sabah.

Each test set for the Murutic test points consisted of a hometown tape, four or five reference tapes and the national language tape. For those test points for which no hometown tape was available, such as those villages not previously visited, an appropriate substitution was made. It is still considered a reference tape for purposes of intelligibility scores, but may reflect a slightly higher score than expected. Test sets, which included not only Murutic, but also Dusunic reference tapes, were prepared for the Gana and Apin-Apin Kuijau languages, since one of the things under investigation was whether or not these languages had been properly placed in the Murutic rather than the Dusunic family. A Tidong reference tape was included in the Serudung Murut test set to check the possibility of a better understanding of Tidong than Murutic languages.

For most other tests, a standard Murut test set was prepared including a reference tape from each of the following languages: Tagal, Timugon, Baukan and Nabay. It was expected that one of these languages would be more widely understood than the others. In a few cases this was not followed, however. At some of the previously unclassified test points and Tagal test points enough data was already available to project an intelligibility level for the whole group.

2.3 Problems involved

Figure 11 gives an assessment of the reference tapes used in the Murut testing, first as to technical aspects such as tape quality and then as to the content of the story itself. The value of this rating will be seen as it is used to explain some of the more unexpected results in the following section.

REFERENCE TAPES TEST POINTS	KADAZAN/DUSUN	KUIJAU	GANA	APIN-APIN KUIJAU	NABAY	BAUKAN	TIMUGON	BEAUFORT MURUT	SOOK MURUT	TAKAPAN	PALUAN	TAGAL 'A'	TAGAL 'B'	KALABAKAN MURUT	SERUDUNG MURUT	TIDONG
1. KUIJAU Senagang KU			1 x													
2. GANA Minansut KU *Kuangoh KU	4 xx xx	1 x		2 x x	2 x x							1 x				
3. APIN-APIN KUIJAU Apin-Apin KU		1 x			1 x	1 x	1 x					1 x				
4. DUSUN-MURUT Ambual KU Liau Laut KU					2 x x	2 x x	2 x x					2 x x				
5. NABAY Dangulad KU Masak KU					2 x x	2 x x	2 x x					2 x x				
6. BAUKAN Inarad KN Tulid KU					2 x x	4 xx xx	2 x x					2 x x				
7. TIMUGON Entabuan TM Langsat TM					2 x x	2 x x	1 x x	1 x				2 x x	1 x			
8. BEAUFORT MURUT Bukau BT					1 x x	1 x x	1 x x					1 x				
9. SOOK MURUT Sook KU *Pandewan PN					1 x x	2 x x	1 x x		1 x x	2 x x		1 x x	1 x			
10. TAKAPAN Keramatoi KU *Dalit KU					1 x x	2 x x	1 x x		1 x x	1 x x	1 x x	2 x x				
11. PALUAN Saga TM					1 x	1 x	1 x					1 x	1 x			
12. TAGAL 'A' *Kg Empat PN Pensiangan PN Sapulut PN					1 x		1 x			2 x x		4 xx x x	5 xx xx x			
13. TAGAL 'B' Kg Lima PN Kuala Biah KU Maligan SG Tomani TM					3 x x x	2 x x x	4 x x x			1 x		4 x x x	3 x x x			
14. KALABAKAN MURUT Kalabakan TU					1 x	1 x						1 x			1 x	
15. SERUDUNG MURUT Serudung Baru TU					1 x	1 x						1 x		1 x		1 x
16. PREVIOUSLY UNCL. *Selungai PN										1 x		1 x	2 xx			
17. TIDONG Indarasabak TU						1 x									1 x	
18. LUNDAYEH Kawang SG Mendolong SG												2 x x				

* Previously unclassified; new data

Numbers in the boxes indicate the number of times a certain language was tested in a given village. The x in the boxes indicates reference tapes used in each test point.

Note: 'Mini-tests' were carried out at Masanoi TM (for Ansip KU, Kg Lima PN); Kg Lima PN (Lumbis KAL); Rundum TM (Ansip KU, Kg Lima PN, Sapulut PN) and Pensiangan PN (Lumbis KAL), but the corpus is too small and select to be considered on the same level as those listed above. They are mentioned in the discussion where relevant.

Figure 10: Test sets used at each test point having Murutic reference tapes

REFERENCE TAPE	TAPE AND SPEECH QUALITY	STORY CONTENT	RATING
Ansip KU	Good	One hard-to-translate question	8
Apin-Apin KU	Not clear	Two hard questions; reduced to eight questions	8
Bukau BT	Good	Short statements	7
Bundu Tuhan RU	Good	Simple; uses Malay	6
Bunduon PG	Good	Good; substantial content	10
Dangulad KU	Not clear	Fair	7
Entabuan TM	Good, but slow speech	Fair; two weak questions	7
Inarad KN	Good	One redundant question; reduced to nine questions	8
Kadalakan KU	Good	Two redundant questions	7
Kalabakan TU	Good	Simple and short	6
Kg Lima PN	Good, but fast speech	Very good	9
Keramatoi Laut KU	Good	Good	8
Kokoroton KN	Good	Good	10
Langsat TM	Good	Fair; somewhat simple	7
Lidung LS	Good	Uses Malay; reduced to nine questions	8
Minansut KU	Good	Good	8
Pensiangan PN	Good	Very good	10
Rundum TM	Good	Good	9
Sapulut PN	Good	Good; one tricky question	9
Serudung Baru TU	Good	Simple and short	7
Sook KU	Good	Fair; one weak question	7
Tulid KU	Good	Very good; one weak question	9
Tuntumulod KU	Good	Good	9

Figure 11: Rating of the reference tapes used in the Murut testing on a scale of 1 to 10, 1 being very poor and 10 being very good

3. TEST RESULTS

The results of dialect intelligibility testing at 29 Murutic test points are discussed in this section and compared to Smith's classification of Murutic languages. Maps showing the location of the test points and reference points and the approximate language/dialect boundaries as delimited in this paper are found in Section 4. The sociological data for each test point is found in Section 5. The nomenclature of both the linguistic designations and the PSC relations found in this section follow Smith (in this volume).

3.1 Gana language

Intelligibility testing was done in two Gana villages, Minansut KU and Kuangoh KU. Reference tapes from Murutic languages included Gana, Apin-Apin Kuijau, Tagal and Nabay. The Dusunic languages tested were Kuijau and Kadazan/Dusun.

Figure 12 displays the results of intelligibility testing for the two Gana test points. As can be seen from this chart, the test results on Apin-Apin Kuijau, Tagal and Kadazan/Dusun from Bunduon PG are quite consistent with their respective PSC relations. However, the results on Nabay, Kuijau and Kadazan/Dusun from Bundu Tuhan RU are significantly higher than their respective PSC relations.

REFERENCE TAPES TEST POINTS	MURUTIC			DUSUNIC		
	APIN-APIN KUIJAU (Apin-Apin KU)	TAGAL (Ansip KU)	NABAY (Kadalakan KU)	KUIJAU (Tuntumulod KU)	KADAZAN/DUSUN (Bunduon PG)	KADAZAN/DUSUN (Bundu Tuhan RU)
GANNA (Minansut KU)	73 (75)	64 (57)	92 (68)	-- (64)	74 (63)	88 (58)
(Kuangoh KU)	71	--	91	99	67	91

Figure 12: Gana intelligibility of three Murutic and three Dusunic reference tapes. (Scores are given as percentages. PSC relations are given in parentheses.)

In the case of Nabay, the geographical proximity of the Gana and Nabay language areas as well as the redundancy of the Nabay story from Kadalakan KU (Figure 11) likely contribute to the high intelligibility testing results. Nabay intelligibility of Gana was not tested.

The Dusunic language tape representing the Kuijau language, from Tuntumulod KU was also well understood by Gana speakers at Kuangoh KU (99%). Since the Gana and Kuijau language areas are also in close proximity to each other, it is likely that this high level of intelligibility is due to language learning. Kuijau speakers from Senagang KU were also tested for their ability to understand Gana and averaged 82% intelligibility, indicating that this apparent language learning goes in both directions (→ Kuijau).

The very high intelligibility testing results shown by Gana speakers on the Bundu Tuhan RU story (88% and 91%) can only be explained by the low rating of the Bundu Tuhan RU story (Figure 11).

In Figure 13 the Gana data is averaged and displayed according to geography. The results of the Bundu Tuhan RU reference tape are not included. The chart does not finally indicate whether Gana is more Murutic than Dusunic - in fact, it might best be thought of as a borderline language, but it can be said that intelligibility is highest with those languages in its immediate vicinity. Tagal, as spoken in Pensiangan District, is the most remote of the languages tested; Kadazan/Dusun, as spoken in Penampang District, ranks second, followed closely by Apin-Apin Kuijau. The two Keningau languages of Nabay and Kuijau, neither of which has high PSC relations with Gana villages, are most highly intelligible to Gana speakers.

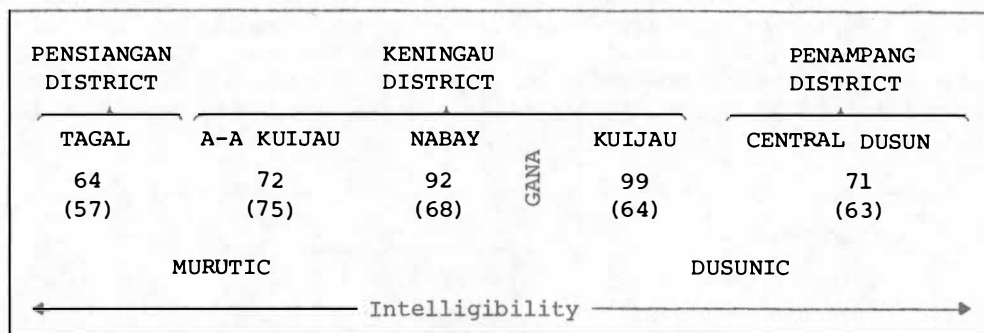


Figure 13: Gana intelligibility of three Murutic reference tapes and two Dusunic reference tapes by geography. (Intelligibility scores are given as percentages. PSC relations are given in parentheses.)

Intelligibility testing showed that Gana has both high and low intelligibility of some Murutic and some Dusunic groups, and that geography more than linguistic affiliation seems to affect its level of intelligibility.

3.2 Apin-Apin Kuijau language

Apin-Apin Kuijau is the name given to that language spoken by about one-fourth of the population of the village of Apin-Apin KU. From the information received, there are no other villages which speak exactly like this linguistic community. Reference tapes from four Murutic languages, including Tagal, Timugon, Baukan and Nabay, and one Dusunic reference tape from the Kuijau language were tested there.

Figure 14 displays the results of intelligibility testing for the single Apin-Apin Kuijau test point. The intelligibility testing results on all of the tapes except for the Baukan language tape from Kokoroton KN, are significantly higher than the respective PSC relations. In the case of the Tagal, Timugon and Nabay tests, since no cross-testing was done, one can only conjecture as to the reasons for the apparent discrepancies. It seems likely that because of the variety of languages spoken in Keningau District and even around the area of the village of Apin-Apin KU, that Apin-Apin Kuijau speakers have had opportunity to learn these Murutic languages. The much lower score on the Kokoroton KN tape is still understandable since that language area is quite remote from the others.

The high intelligibility testing results on the Dusunic Kuijau tape can also be explained by language learning on the part of Apin-Apin Kuijau speakers. This is substantiated by the results of cross-testing Dusunic Kuijau speakers' understanding of Apin-Apin Kuijau. The results of that cross-testing are displayed in Figure 15. The results ranged 66-72% intelligibility compared to a range of 64-70 PSC. These low scores show that intelligibility between the two is not mutual which in turn favors language learning as the cause of the extremely high score attained by Apin-Apin Kuijau speakers of the Dusunic Kuijau tape.

REFERENCE TAPES TEST POINTS	MURUTIC				DUSUNIC
	TAGAL (Ansip KU)	TIMUGON (Entabuan TM)	BAUKAN (Kokoroton KN)	NABAY (Kadalakan KU)	KUIJAU (Tuntumulod KU)
APIN-APIN KUIJAU (Apin-Apin KU)	91 (60)	79 (63)	47 (68)	98 (70)	94 (67)

Figure 14: Apin-Apin Kuijau intelligibility of four Murutic reference tapes and one Dusunic reference tape. (Scores are given as percentages. PSC relations are given in parentheses.)

REFERENCE TAPE TEST POINTS	APIN-APIN KUIJAU (Apin-Apin KU)
KUIJAU (Dusunic) (Tuntumulod KU)	66 (67)
(Sungoi KU)	70 (70)
(Liau Darat KU)	70 (69)
(Senagang KU)	69 (68)
(Linsosod KU)	72 (64)

Figure 15: Gana and Kuijau intelligibility of the Apin-Apin Kuijau reference tape. (Scores are given as percentages. PSC relations are given in parentheses.)

3.3 Dusun-Murut language

The villages of Ambual KU and Liau Laut KU were chosen to represent the Dusun-Murut language for the intelligibility testing. The standard Murut test set used included Tagal, Timugon, Baukan and Nabay reference tapes. Figure 16 displays the results of intelligibility testing for both Dusun-Murut test points.

REFERENCE TAPES TEST POINTS	MURUTIC			
	TAGAL (Ansip KU)	TIMUGON (Entabuan TM)	BAUKAN (Kokoroton KN)	NABAY (Kadalakan KU)
DUSUN-MURUT (Ambual KU)	81 (61)	71 (68)	59 (76)	92 (80)
(Liau Laut KU)	63 (64)	65 (72)	59 (70)	77 (80)

Figure 16: Dusun-Murut intelligibility of four Murutic reference tapes. (Scores are given as percentages. PSC relations are given in parentheses.)

As can be seen from Figure 16, Ambual KU subjects consistently scored a higher average intelligibility than Liau Laut KU subjects on all tapes except for the Baukan tape from Kokoroton KN where both scored the same level of intelligibility. Since no intelligibility testing was done between Ambual KU and Liau Laut KU it is impossible to know whether the different levels of comprehension by these two villages is due to language learning on the part of some of the subjects tested at Ambual KU or to a greater linguistic distinction between the two villages than is indicated by the 80 PSC between them.

From these limited test results it is only possible to conclude that the two Dusun-Murut test points represent a language or languages different from Tagal of Ansip KU, Timugon of Entabuan TM and Baukan of Kokoroton KN. The test results on the Nabay reference tape are marginal. Because of that and the 80 PSC shared between each of the Dusun-Murut samples and Nabay from Kadalakan KU it is possible that Dusun-Murut is a dialect of the Nabay language. Further testing and cross-testing would need to be done in order to confirm this.

3.4 Nabay language

The two Nabay test points Dangulad KU and Masak KU were chosen to demonstrate the Nabay community's intelligibility of the standard Murut test set including one reference tape each from Tagal, Timugon, Baukan and Nabay languages. The only difference between the two test sets was the different Nabay reference tape used.

Masak KU was tested with the reference tape from the other Nabay test point, Dangulad KU. The results (84%) indicate that the two samples represent the same language but the degree of difference may also indicate a dialect distinction between the two.

Figure 17 displays the results of intelligibility testing for the Nabay test points.

REFERENCE TAPES TEST POINTS	MURUTIC				
	NABAY (Dangulad KU)	NABAY (Kadalakan KU)	TAGAL (Ansip KU)	TIMUGON (Entabuan TM)	BAUKAN (Kokoroton KN)
NABAY (Dangulad KU)	+100 (100)	89 (85)	90 (69)	80 (69)	76 (76)
(Masak KU)	84 (84)	+99 (89)	78 (67)	75 (75)	56 (78)

Figure 17: Nabay intelligibility of five Murutic reference tapes.
(Scores are given as percentages. PSC relations are given in parentheses. + indicates hometown tape.)

Figure 18 displays the results of cross-testing in Tagal, Timugon and Baukan villages to determine their understanding of Nabay.

REFERENCE TAPE TEST POINTS		NABAY (Kadalakan KU)
TAGAL	Kuala Biah KU	98 (66)
	Maligan SG	80 (60)
	Tomani TM	77 (61)
	Sapulut PN	74 (67)
TIMUGON	Entabuan TM	78 (75)
	Langsat TM	77 (79)
BAUKAN	Tulid KU	98 (78)
	Inarad KN	74 (75)

Figure 18: Tagal, Timugon and Baukan understanding of Nabay.
(Scores are given as percentages. PSC relations are given in parentheses.)

The results of Nabay-Tagal testing are quite high in both directions when compared to respective PSC relations. The fact of the dominance of these two languages throughout the Murut language area may help to explain the higher intelligibility scores than would have been expected based on the PSC figures alone.

The Nabay-Timugon and Nabay-Baukan test results are quite in line with the respective PSC relations except for the very high 98% scored by Baukan subjects from Tulid KU on the Nabay test tape. This one high score cannot be adequately explained with the present data. Disregarding that one high score then, intelligibility testing confirms the lexicostatistical classification of Nabay as a distinct language from Baukan and Timugon.

3.5 Baukan test points¹²

The two Baukan test points chosen for intelligibility testing included Tulid KU and Inarad KN, representing both extremes of the language group as delimited by Smith (in this volume). In addition to the standard Murut test set, including a Tagal, Timugon, Baukan and Nabay reference tape, a second Baukan reference tape was included in the test set. Therefore, including the hometown tape, three Baukan tapes were tested at each test point.

Figure 19 shows the results of intelligibility testing at the two Baukan test points.

REFERENCE TAPES TEST POINTS	MURUTIC					
	BAUKAN (Inarad KN)	BAUKAN (Kokoroton KN)	BAUKAN (Tulid KU)	TAGAL (Ansip KU)	TIMUGON (Entabuan TM)	NABAY (Kadalakan KU)
BAUKAN (Inarad KN)	+100 (100)	80 (89)	75 (79)	74 (71)	72 (71)	74 (75)
(Tulid KU)	99 (79)	97 (85)	+100 (100)	86 (68)	74 (73)	98 (78)

Figure 19: Baukan intelligibility of six Murutic reference tapes.
(Scores are given as percentages. PSC relations are given in parentheses. + indicates hometown tape.)

The mutual intelligibility testing within Baukan showed that in spite of a high PSC relation in the case of Inarad KN and Kokoroton KN, high intelligibility was not demonstrated and also that Tulid KU consistently showed notably higher intelligibility of the other dialects than Inarad KN did.

Inarad KN showed a marginal 80% intelligibility on the Kokoroton KN tape. Hurlbut and Pekkanen (to appear) recorded only 75% intelligibility of the same

Kokoroton KN reference tape by Inarad KN subjects while Kokoroton KN subjects averaged only 71% on the Inarad KN reference tape. This lack of mutual intelligibility, despite the high PSC, necessitates a dialect distinction between the language spoken in Kokoroton KN and that spoken in Inarad KN.

On the Tulid KU reference tape, Inarad KN registered only 75% intelligibility. However Tulid KU demonstrated near perfect comprehension (99%) on the Inarad KN reference tape. Given a revised PSC relation of *81 the results of the intelligibility testing indicate that a dialect level division should be made separating the two samples. But with intelligibility shown in only one direction a language level distinction is too extreme without further evidence.¹³

Tulid KU subjects also showed 97% intelligibility of the Kokoroton KN reference tape. The Baukan intelligibility scores reverse the interrelation indicated by the PSC scores of samples by linking Kokoroton KN closer to Tulid KU than to Inarad KN. However, since Tulid KU showed equally high intelligibility of the Inarad KN reference tape, a Kokoroton KN test of a Tulid KN story is needed to confirm this. Tentatively, Kokoroton KN and Tulid KU can be grouped together as members of a single dialect.¹⁴

In Figure 19 results of Tagal, Timugon and Nabay testing at Baukan villages can also be seen. Cross-testing results of these languages are shown in Figure 20. All of these scores are either quite consistent with their respective PSC relations or much lower than respective PSC figures, confirming the lexico-statistical classification of Baukan as a separate language from Tagal, Timugon and Nabay. The two aberrant scores at Tulid KU on the Tagal reference tape from Ansip KU (86% intelligibility compared with 68 PSC) and on the Nabay reference tape from Kadalakan KU (98% intelligibility compared with 78 PSC) are likely due to contact with Tagal and Nabay speakers in the Keningau area.

REFERENCE TAPE		BAUKAN
TEST POINTS		
TAGAL	Kuala Biah KU	72-K (69)
	Tomani TM	61-T (63)
TIMUGON	Entabuan TM	63-T (73)
	Langsat TM	46-T (75)
NABAY	Dangulad KU	76-K (76)
	Masak KU	56-K (78)

Figure 20: Cross-testing results of Tagal, Timugon and Nabay villages with a Baukan language reference tape. (Scores are given as percentages. PSC relations are given in parentheses. -K indicates the Baukan reference tape from Kokoroton KN was used and -T indicates the Baukan reference tape from Tulid KU was used in the testing.)

3.6 Timugon test points

The two Timugon test points Entabuan TM and Langsat TM were classified by Smith as representing a single dialect. The test sets included reference tapes from Timugon, Tagal, Sook Murut, Beaufort Murut, Baukan and Nabay.

Figure 21 shows the results of testing at the two Timugon test points.

REFERENCE TAPES TEST POINTS	MURUTIC						
	TIMUGON (Langsat TM)	TAGAL 'A' (Sapulut PN)	TAGAL 'B' (Kg Lima PN)	SOOK MURUT (Sook KU)	BEAUFORT MURUT (Bukau BT)	BAUKAN (Tulid KU)	NABAY (Kadalakan KU)
TIMUGON (Entabuan TM)	85 (85)	47 (68)			80 (77)	63 (73)	78 (75)
(Langsat TM)	+97 (100)	58 (71)	43 (66)	71 (74)		46 (75)	77 (79)

Figure 21: Timugon intelligibility of seven Murutic reference tapes.
(Scores are given as percentages. PSC relations are given in parentheses. + indicates hometown tape.)

Figure 22 shows the results of cross-testing the same language groups with a Timugon reference tape.

In the Timugon-Tagal testing all of the test results are consistent with or significantly lower than respective PSC relations except in the case of the high understanding of the Timugon story by Tagal test subjects at Kuala Biah KU (88%). This one aberrant score is likely due to language learning so that the distinctiveness between the Timugon and Tagal languages is still maintained.

Timugon-Sook Murut/Takapan/Paluan testing also showed one very high score (90% scored at Sook KU) while all of the other scores are again consistent with PSC relations (→ Section 3.8). The language distinction between Timugon and Sook Murut is still maintained on the basis of the other more consistent scores.

Timugon-Beaufort, Timugon-Nabay (→ Section 3.4) and Timugon-Baukan (→ Section 3.5) test results are quite consistent with respective PSC relations so that the classification of these three languages as being distinct from Timugon is maintained.

REFERENCE TAPE TEST POINTS		TIMUGON (Entabuan TM)
TAGAL	Kuala Biah KU	88 (68)
	Tomani TM	76 (65)
	Pensiangan PN	71 (67)
	Kg Lima PN	67 (67)
	Maligan SG	65 (61)
SOOK MURUT	Sook KU	90 (71)
	Pandewan PN	73 (--)
BEAUFORT MURUT	Bukau BT	74 (77)
BAUKAN	Tulid KU	74 (73)
	Inarad KN	72 (71)
NABAY	Dangulad KU	80 (69)
	Masak KU	75 (75)

Figure 22: Cross-testing results in Tagal, Sook Murut, Beaufort Murut, Baukan and Nabay villages with a Timugon reference tape. (Scores are given as percentages. PSC relations are given in parentheses.)

3.7 Beaufort Murut test point

Bukau BT was the single test point chosen for dialect intelligibility testing in the Beaufort Murut language. The standard Murut test set, including reference tapes from Tagal, Timugon, Baukan and Nabay was used.

Figure 23 displays the results of the intelligibility testing conducted at Bukau BT.

REFERENCE TAPES TEST POINT	MURUTIC			
	TAGAL (Ansip KU)	TIMUGON (Entabuan TM)	BAUKAN (Kokoroton KN)	NABAY (Kadalakan KU)
BEAUFORT MURUT (Bukau BT)	82 (64)	74 (77)	51 (73)	87 (72)

Figure 23: Beaufort Murut intelligibility of four Murutic reference tapes. (Scores are given as percentages. PSC relations are given in parentheses.)

While Beaufort Murut has low PSC relations with Tagal and Nabay (64 and 72 respectively), Bukau BT test subjects showed dialect-level intelligibility of those two languages. Since cross-testing was not done in either case, it is not known whether this is due to language learning on the part of Bukau BT test subjects or to a closer relationship between the languages than the PSC relations indicate. Because of this, Beaufort Murut will still be considered a separate language from Nabay and Tagal.

Results of testing Beaufort Murut with Timugon (→ Section 3.6) and with Baukan are consistent with or lower than their respective PSC figures so that language distinctions between the three are maintained.

3.8 Sook Murut, Takapan and Paluan language

Based on the additional data gathered after Smith's classification (→ Section 1, note 6) and the results of intelligibility testing, the discussions of Sook Murut, Takapan and Paluan will be handled under a single heading.

Testing of the Sook Murut language was done in two villages. Pandewan PN had not previously been visited, but Sook KU had been included in Smith's data. Two tests were conducted in the Takapan language group, the first at Dalit KU, and the second at Keramatoi KU (→ Section 2, note 10). The Paluan language was represented by a single test at Saga TM.

The standard Murut test set, including a reference tape from Tagal, Timugon, Baukan and Nabay, was used in most cases with the addition of a Sook Murut, Takapan or Paluan tape.

Figure 24 displays the results of intelligibility testing for Sook Murut, Takapan and Paluan test points. Revised PSC relations (Figure 8) and high intelligibility scores in the few cases tested within Sook Murut, Takapan and Paluan are evidence for reclassifying these languages as dialects of a single language. Further cross-testing is needed to determine if these dialects are mutually intelligible or if the high scores are a result of language learning.

REFERENCE TAPES TEST POINTS	PALUAN (Saga TM)	TAKAPAN (Keramatoi Laut KU)	SOOK MURUT (Sook KU)	TIMUGON (Entabuan TM)	BAUKAN (Kokoroton KN)	BAUKAN (Tulid KU)	NABAY (Kadalakan KU)	TAGAL 'A' (Ansip KU)	TAGAL 'B' (Kg Lima PN)
PALUAN (Saga TM)	+97 (--)			74 (70)		76 (68)	89 (66)	93 (79)	75 (78)
TAKAPAN (Keramatoi KU)		+100 (--)		87 (69)	78 (71)		96 (71)	96 (73)	
(*Dalit KU)	100 (80)	+100 (83)			76			96	
SOOK MURUT (Sook KU)		96 (79)	+100 (--)	90 (74)	85 (75)		98 (75)	96 (72)	(67)
(*Pandewan PN)		80	+90	73		65			57

Figure 24: Takapan, Paluan and Sook Murut intelligibility of various Murutic language tapes. (Scores are given as percentages. PSC relations are in parentheses. * indicates previously unclassified; new data. + indicates tape used as hometown tape in given test set.)

The Timugon reference tape from Entabuan TM was included in the Sook Murut test sets Sook KU and Pandewan PN, the Takapan test set Keramatoi KU and the Paluan test set Saga TM. The PSC relations range 69-71. Intelligibility scores ranged 73-90%. The highest was recorded at Sook KU and the lowest at Pandewan PN. It is interesting to note that both of these had been grouped as Sook Murut. Pandewan PN represents one geographical extreme of the Sook Murut/Takapan/Paluan group and Saga TM represents the other, and both of these have intelligibility scores consistent with their PSC relations.

A Sook Murut reference tape from Sook KU was included in the Timugon test set at Langsat TM (+ Section 3.6). Subjects there averaged 71% which together with a 74 PSC relation distinguishes them as separate languages. Timugon intelligibility of Takapan or Paluan was not tested, but there is no evidence to question the language distinction here.

The Baukan reference tape from Kokoroton KN was included in the Takapan test sets at Keramatoi KU and Dalit KU and in the Sook Murut test set at Sook KU. The Baukan reference tape from Tulid KU was included in the Paluan test set at Saga TM and the Sook Murut test set at Pandewan PN. No significant difference was registered either between reference tapes or language groups. Intelligibility ranged 65-85%. The PSC relations ranged 68-76. As in the case of the Timugon reference tape, the highest score was recorded at Sook KU and the lowest at Pandewan PN, both grouped as Sook Murut villages.

Considering the proximity of Baukan villages to Sook KU, the relatively high intelligibility is understandable. In fact, the 85% intelligibility score together with the 75 PSC relation would allow them to be grouped as representing dialects of one language. However, Sook Murut is better grouped together with Takapan and Paluan, both on the basis of PSC relations and intelligibility scores. Takapan, Paluan and Baukan languages share PSC relations as remote as 68-76 PSC and intelligibility scores of only 76-78%. Taken altogether it is not plausible to include Sook Murut and Baukan in one language. Baukan speakers' intelligibility of Sook Murut/Takapan/Paluan still needs to be tested to more fully understand how far intelligibility extends from the point of Baukan.

The Nabay reference tape from Kadalakan KU was used at the Sook Murut test point Sook KU, the Takapan test point Keramatoi KU and the Paluan test point Saga TM. The intelligibility scores ranging 89-98% are very high compared to the relations of 66-75 PSC. The scores may be adjusted down somewhat due to the redundancy of the tape (Figure 11), but the scores still show appreciable intelligibility. Because of the low PSC relations and the lack of intelligibility results showing Nabay speakers' comprehension of Paluan, no redefinition of the classification between the two will be attempted.

Tagal 'A' and Tagal 'B' reference tapes were used at several Sook Murut, Takapan and Paluan test points. The Tagal 'A' tape from Ansip KU was included in the Sook KU, Keramatoi KU, Dalit KU and Saga TM test points. Scores ranged 93-96% compared to PSC relations of 72-79. The Tagal 'B' tape from Kg Lima PN was used in Pandewan PN and Saga TM. Intelligibility averaged 51% and 75% respectively. The PSC relations, using Sook KU to represent Pandewan PN, were 67 PSC and 78 PSC.

The Takapan reference tape from Keramatoi Laut KU was included in the Tagal 'A' test sets at Kg Empat PN and Sapulut PN (Figure 25). Intelligibility scores were only 49% and 63% respectively. The Sapulut PN sample has 72 PSC. The same tape was included in the Tagal 'B' test set at Maligan SG. Intelligibility registered there was only 59% which is comparable to the 62 PSC.

Important in this testing are the high intelligibility scores received by Sook Murut/Takapan/Paluan on Tagal 'A' stories and the lack of significant intelligibility shown on the Tagal 'B' story as well as the lack of Tagal 'A' and Tagal 'B' intelligibility of Takapan. This indicates the influence of Tagal 'A' but fails to demonstrate linguistic affinity between Tagal dialects and Sook Murut/Takapan/Paluan. No redefinition of the classification of this relationship is offered at this time, but future intelligibility testing of Tagal by Sook Murut and Paluan may show the need for it.

Using the above data, the three groups labelled in Smith as Sook Murut, Takapan and Paluan are considered to represent a single language since high intelligibility among them was shown in every case tested. The PSC relations give a fair indication of the relative intelligibility between these three dialects and any other dialect.

The Timugon and Baukan dialects are ruled out as possible members of the same language as Sook Murut, Takapan and Paluan. Tagal 'B' is also ruled out. However, Tagal 'A' seems to be understood very well, though intelligibility is not mutual in the case of Takapan. For that reason, it should not be considered a member of the same language as Sook Murut, Takapan and Paluan. The Nabay dialect may be candidate as a member of the same language group but Nabay intelligibility of Sook Murut, Takapan and Paluan has not yet been tested and is thus left as belonging to a separate language. Nabay appears to be an important dialect in the area, so language learning by the other dialects is not surprising.

3.9 Tagal test points

Seven test points were chosen for the Tagal intelligibility testing, four in Pensiangan District and one each in Keningau, Tenom and Sipitang districts. The major motivation for testing in the Tagal language was to determine intelligibility between the two dialects of Tagal as well as to investigate comprehension within each dialect. The Tagal 'A' test points included Kg Empat PN, Pensiangan PN and Sapulut PN. Tagal 'B' test points consisted of Kg Lima PN, Kuala Biah KU, Maligan SG and Tomani TM. The testing included both Tagal and non-Tagal Murutic reference tapes.

3.9.1 Intelligibility within the Tagal language

Figure 25 displays the results of the intelligibility testing within the Tagal language. The Tagal 'A' reference tape from Sapulut PN was included in the Tagal 'A' test set at Kg Empat PN. The tape from Pensiangan PN was included in the Kg Empat PN and Sapulut PN test sets. The Ansip KU reference tape was included in the Pensiangan PN test set. The results showed intelligibility of 88-93%. This is slightly higher than the 84-89 PSC relations. None of the subjects' individual scores were below 70%.

REFERENCE TAPES TEST POINTS		TAGAL 'A'			TAGAL 'B'	
		Sapulut PN	Pensiangan PN	Ansip KU	Kg Lima PN	*Rundum TM
TAGAL 'A'	*Kg Empat PN	88 (--)	91 (--)		78 (--)	79 (--)
	Sapulut PN		90 (89)		69 (77)	
	Pensiangan PN			93 (84)	80 (80)	80 (--)
TAGAL 'B'	Kg Lima PN		87 (80)			81 (--)
	Kuala Biah KU			99 (82)		
	Maligan SG		89 (74)			93 (--)
	Tomani TM	86 (70)			72 (76)	

Figure 25: Tagal 'A' and Tagal 'B' intelligibility of Tagal reference tapes. (Scores are given as percentages. PSC relations are in parentheses. * indicates previously unclassified; new data.)

The Tagal 'B' reference tape from Kg Lima PN was included in the Tagal 'B' test set at Tomani TM while the Rundum TM reference tape was used at both Kg Lima PN and Maligan SG. The four Tagal 'B' test points registered scores ranging 72-93% intelligibility compared to relations of 74-85 PSC within the dialect.

The Tagal 'B' reference tape from Kg Lima PN was included in each of the Tagal 'A' test sets, while the Rundum TM reference tape was included only in the Kg Empat PN and Pensiangan PN test sets. Intelligibility scores ranged 69-80% for Kg Lima PN and 79-80% for Rundum TM. This compares with relations between these same Tagal samples of 77-80 PSC. Since no significant difference was registered one may conclude that Tagal 'A' only marginally understands Tagal 'B' and a dialect division between the two best reflects the data.

Tagal 'B' intelligibility of Tagal 'A' reflects something different, however. The Tagal 'A' reference tape from Sapulut PN was used at the Tagal 'B' village Tomani TM; the Pensiangan PN tape was used at both Kg Lima PN and Maligan SG; and the Ansip KU tape was used at Kuala Biah KU. Intelligibility of Tagal 'A' by these four test corpora ranged 86-99%. This compares with 70-82 PSC relations for the same samples. The very high score of 99% which was registered at Kuala Biah KU using the Ansip KU tape may be due either to their proximity to one another and the fact that they are both migrant Tagal villages in a Nabay and Paluan area or that Kuala Biah's speech is actually closer to Tagal 'A'. Otherwise, the scores ranged 86-89%, still high enough to conclude that intelligibility of Tagal 'A' by Tagal 'B' villages is good, but as mentioned above, the intelligibility of Tagal 'B' by Tagal 'A' speakers is only marginal.

3.9.2 Intelligibility between Tagal and non-Tagal Murutic languages

Figure 26 displays Tagal 'A' and Tagal 'B' understanding of Takapan, Timugon, Baukan and Nabay.

Figure 27 displays the cross-testing results with these languages.

Tagal test subjects showed intelligibility testing results with the Takapan reference tape which were comparable with or lower than respective PSC relations. However, in cross-testing, Takapan test subjects showed an average intelligibility of 96%, which is much higher than their PSC relation of 73. Based on the dominance of the Tagal language in the Murutic areas of Sabah it is likely that Takapan speakers have learned the Tagal language. Since intelligibility is not mutual between Tagal and Takapan, the two are still considered separate languages.

The results of Tagal-Timugon testing are similar to or lower than respective PSC relations. One aberrant score (88% intelligibility compared with 68 PSC) was registered at Kuala Biah KU. All of the other scores confirm the classification of Tagal as a separate language from Timugon. The one high score at Kuala Biah KU could indicate language learning.

Tagal-Baukan testing in general confirms the classification of these as separate language though some language learning on the part of the Tulid KU test subjects is evidenced by the higher average score (86%) registered there.

The results of Tagal-Nabay testing appeared to be quite high in both directions compared with the PSC relations between them. However, except for the one high score of 98% by Tagal test subjects at Kuala Biah KU on the Nabay reference tape from Kadalakan KU (→ Section 3.4) and in the cross-testing, one high score

of 90% attained by Dangulad KU test subjects, all of the other scores in the Tagal-Nabay testing were either marginal or low enough to maintain the classification of the two as separate languages.

REFERENCE TAPES		TAKAPAN (Keramatol Laut KU)	TIMUGON (Entabuan TM)	BAUKAN (Kokoroton KN)	BAUKAN (Tulid KU)	NABAY (Kadalakan KU)
TEST POINTS						
TAGAL 'A'	*Kg Empat PN	49 (--)				
	Sapulut PN	63 (72)				74 (67)
	Pensiangan PN		71 (67)			
TAGAL 'B'	Kg Lima PN		67 (67)			
	Kuala Biah KU		88 (68)	72 (69)		98 (66)
	Maligan SG	59 (62)	65 (61)			80 (60)
	Tomani TM		76 (65)		61 (63)	77 (65)

Figure 26: Tagal intelligibility of five non-Tagal Murutic reference tapes. (Scores are given as percentages. PSC relations are given in parentheses. * indicates previously unclassified; new data.)

REFERENCE TAPES TEST POINTS		TAGAL 'A'	TAGAL 'B'
TAKAPAN	Keramatoi KU	96-A (73)	
	Dalit KU	96-A (--)	
TIMUGON	Langsat TM	58-S (71)	43-L (66)
	Entabuan TM	47-S (68)	
BAUKAN	Tulid KU	86-A (68)	
	Inarad KN	74-A (71)	
NABAY	Dangulad KU	90-A (69)	
	Masak KU	78-A (67)	

Figure 27: Intelligibility testing results at non-Tagal Murutic test points of Tagal reference tapes. (Test results are given as percentages. PSC relations are given in parentheses. -A indicates the Tagal 'A' reference tape from Ansip KU was used and -S indicates the Tagal 'A' reference tape from Sapulut PN was used in the testing. -L indicates the Tagal 'B' tape from Kg Lima PN was used.)

3.10 Selungai Murut test point

The Selungai PN test point had not been classified by lexicostatistics prior to intelligibility testing since no wordlist had been collected.¹⁵ The test set included one Tagal 'A' reference tape, two Tagal 'B' reference tapes and a Takapan tape.

Figure 28 displays the results of intelligibility testing for the single Selungai Murut test point. Since testing was conducted with the presupposition that this dialect was "like Sapulut Murut", the Sapulut PN reference tape was used as the hometown tape. For this reason, the results of 90% intelligibility must be held suspect and do not necessarily represent Selungai Murut speakers' comprehension of Tagal 'A'.¹⁶

The Tagal 'B' reference tapes from Kg Lima PN and Rundum TM were included in the testing with the results of 68% and 64% intelligibility respectively. This represents a substantially lower degree of intelligibility than on the Tagal 'A' tape, even if the latter is adjusted down due to its use as the hometown tape to teach procedure.

REFERENCE TAPES TEST POINT	REF	REF	REF	REF
	TAGAL 'A' (Sapulut PN)	TAGAL 'B' (Kg Lima PN)	TAGAL 'B' (Rundum TM)	TAKAPAN (Keramatoi Laut KU)
SELUNGAI MURUT (Selungai PN)	+90	68	64	58

Figure 28: Selungai Murut intelligibility of four Murutic reference tapes. (Scores are given as percentages. + indicates hometown tape.)

The final reference tape was from Keramatoi Laut KU representing Takapan. The subjects showed only 58% intelligibility, but individual scores ranged 0-100%.

The results of the limited intelligibility testing of Selungai Murut give direction for further research. It is quite evident that the Northern Murut languages such as Paluan and other Keningau and Tenom dialects are not closely related nor intelligible to the Selungai Murut community. Likewise, the Tagal 'B' dialect spoken along the Indonesian/Sabah border on the Salalir River is not intelligible to them. The Tagal 'A' dialect as spoken around Sapulut PN was the most highly intelligible, but it is probable, with further research in Indonesia, that other dialects will prove even more closely related to Selungai Murut.

Reference made to Selungai by other Murut in Pensiangan District indicated they spoke "Indonesian Murut". The Selungai subjects themselves mentioned Sembakung KAL as being similar. At the same time they also said "Pensiangan Murut" (presumably Smith's Tagal 'A') was only "a little different". This information is from male subjects who have been up and down the river system quite extensively, and consequently have a much broader comprehension of the various dialects.

3.11 Kalabakan Murut language

Intelligibility testing of Kalabakan Murut was conducted at Ulu Kalabakan TU about two miles upstream from Kalabakan TU. The test set included four Murutic reference tapes besides the hometown and national language tapes.

Figure 29 displays the results of intelligibility testing for the single Kalabakan Murut test point.

These test results show clearly that Kalabakan Murut is a distinct language from Tagal, Baukan and Nabay. It is very unlikely that testing Kalabakan Murut with any other Murutic languages would show higher intelligibility since the PSC relations of the samples that were tested show the closest lexicostatistical relationships of all the Murutic languages with which it was compared.

REFERENCE TAPES TEST POINT	SERUDUNG MURUT (Serudung Baru TU)	TAGAL (Pensiangan PN)	BAUKAN (Inarad KN)	NABAY (Kadalakan KU)
KALABAKAN MURUT (Kalabakan TU)				
Male - 5	84	32	73	49
Female - 4	33	5	18	9
Average - 9	60 (70)	20 (68)	48 (77)	31 (68)

Figure 29: Kalabakan Murut intelligibility of four Murutic reference tapes showing different averages between male and female subjects. (Scores are given as percentages. PSC relations are given in parentheses.)

The highest intelligibility that Kalabakan Murut test subjects showed was with Serudung Murut of Serudung Baru TU. While the average intelligibility was only 60%, male subjects showed 84% intelligibility. In cross-testing, Serudung Baru TU test subjects averaged 91% intelligibility of the Kalabakan Murut reference tape. This high score does not however give an accurate picture of Serudung Murut intelligibility of Kalabakan Murut since the test corpus at Serudung Baru TU was made up of only five subjects, four of whom were men. Based on this and on the distinctiveness which the test subjects at both places perceived between the two languages, Kalabakan Murut will continue to be classified as a separate language from Serudung Murut.

3.12 Serudung Murut language

Intelligibility testing was carried out in the Serudung Murut village of Serudung Baru TU. The test set consisted of four Murutic reference tapes and one Tidong tape. Figure 30 shows the results of the intelligibility testing conducted at Serudung Baru TU.

The Serudung Baru TU subject showed a high percentage of intelligibility of the Kalabakan Murut reference tape. It was concluded, however, that the 91% intelligibility score was partly due to the unbalanced ratio of male to female subjects and its limited size and that it could not be used to show the average level of intelligibility. The nine Kalabakan Murut subjects averaged only 60% intelligibility on the Serudung Baru TU reference tape, confirming the classification based on the lexical relation of 70 PSC which placed them in separate language families (→ Section 3.11).

REFERENCE TAPES TEST POINT	MURUTIC				TIDONG
	KALABAKAN MURUT (Kalabakan TU)	TAGAL (Pensiangan PN)	BAUKAN (Inarad KN)	NABAY (Kadalakan KU)	TIDONG (Lidung LS)
SERUDUNG MURUT (Serudung Baru TU)	91 (70)	14 (57)	65 (63)	39 (57)	29 (55)

Figure 30: Serudung Murut intelligibility of four Murutic reference tapes and one Tidong reference tape. (Scores are given as percentages. PSC relations are in parentheses.)

All of the other test results show clearly that Serudung Murut represents a separate language from Tagal, Baukan, Nabay and Tidong. The only cross-testing of these was at the Tidong village of Indarasabak TU. The 20% intelligibility score registered there confirms the lexical classification of these two languages as belonging to separate language families (→ Tidong).

4. PROPOSED DIALECT CLASSIFICATION

The SIL survey and dialect intelligibility testing have cleared up many questions as to grouping the Murutic people by language. However, other factors were brought to bear on the classification conclusions presented in this section. Previous classifications made by other researchers are seriously considered. Also much information was gathered from the test subjects and village headmen as testing was carried out, and this has been incorporated here.

Figure 31 identifies and displays the general location of the 21 dialects discussed in this section. Eight dialects, including Gana, Beaufort Murut, Timugon, Kolod, Selungai Murut, Sembakung Murut, Kalabakan Murut and Serudung Murut, are sufficiently different from one another and the other dialects to represent separate languages. Apin-Apin Kuijau, Dusun-Murut, Ambual and Nabay are grouped together as four dialects of the single Keningau Murut language. Baukan proper and Tenggara are two dialects of the Baukan language and Paluan proper and Pandewan are two dialects of the Paluan language. Pensiangan Murut, Salalir, Rundum Murut, Tomani Sumambu and Maligan Tagal are grouped together to form the single language Sumambu/Tagal. Figure 32 presents the classification into 12 languages of the 21 dialects distinguished in this section.

The classification of the Murutic dialects as grouped into 16 Northern Murut dialects¹⁷ and five eastern Murutic dialects has not been emphasised here since the latter is a term of convenience and it is not known whether any real linguistic features are present that would distinguish them as a whole from the Northern Murut languages, or whether they have any closer linguistic relationship to each other than to the Northern Murut dialects. The results of

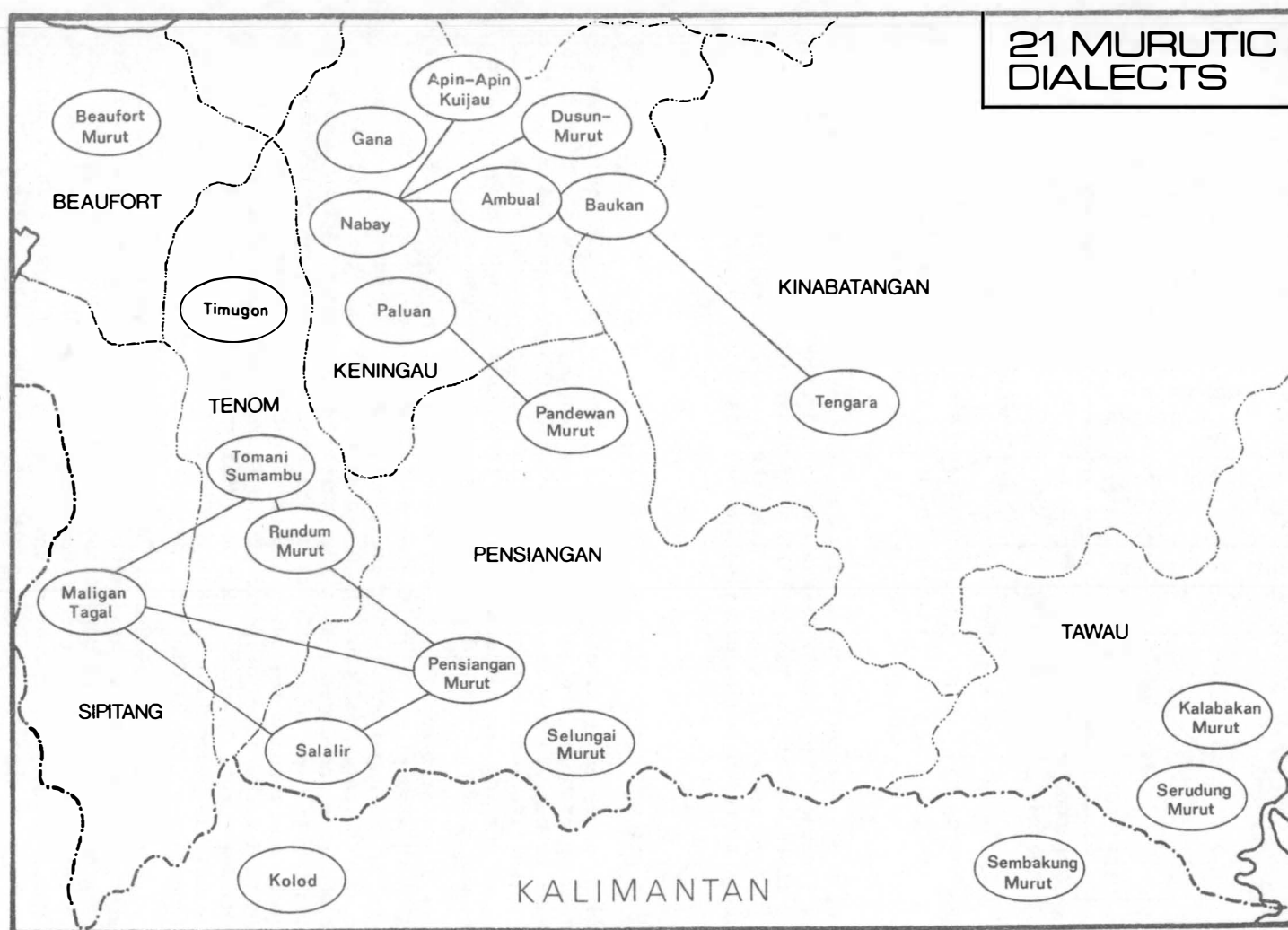


Figure 31: Identification and approximate location of 21 Murutic dialects of Sabah and Kalimantan.
(Dialects belonging to a single language are connected with a solid line.)

intelligibility testing between Northern Murut and eastern Murutic languages are found in Sections 10-12.

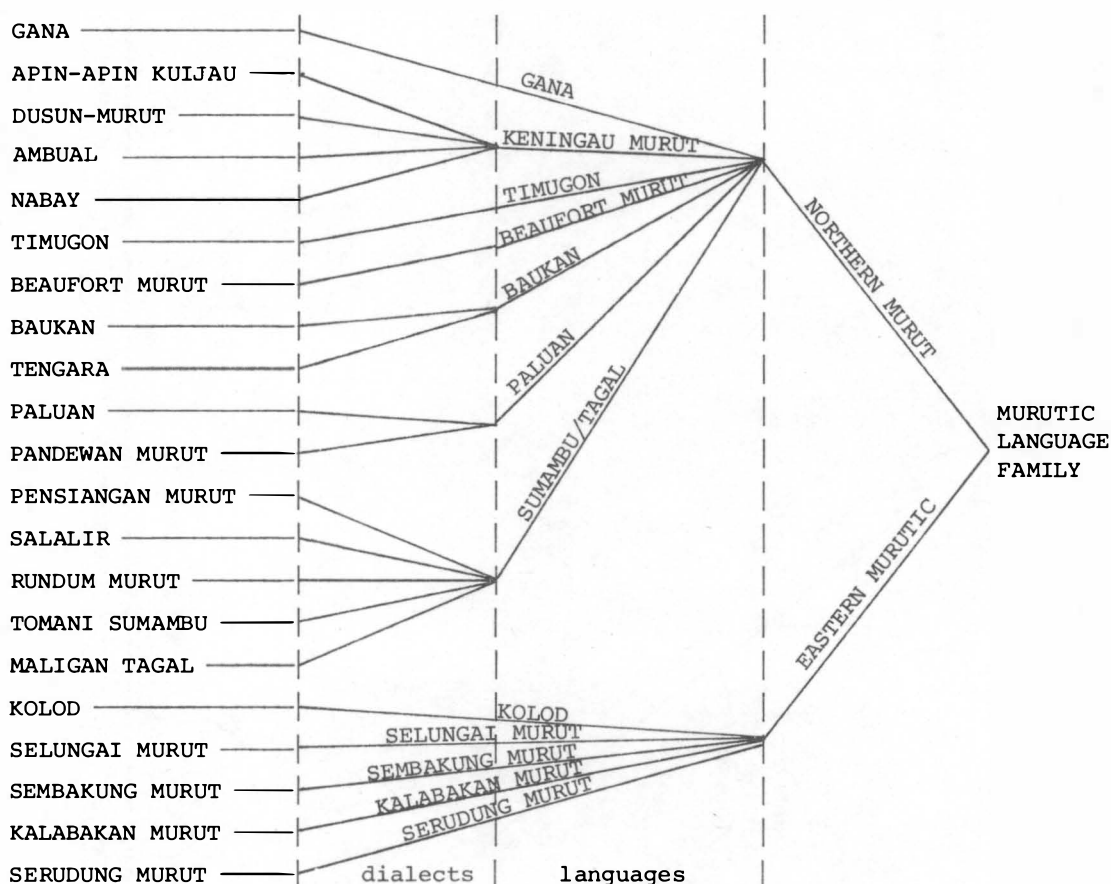


Figure 32: Classification of dialects and languages in the Murutic language family based on the combined factors of lexicostatistical analysis, intelligibility testing, previous research and information from villages tested

4.1 Gana language

This language group traditionally inhabits the valley west of the Pegalan River to the north of Keningau township. Much of the same area is now shared with Kuijau speakers (Figure 33; → Kuijau). A conservative estimate places the present population between 1000 and 1200 first-language speakers,¹⁸ although this is difficult to assess in light of the linguistic complexities around Keningau.

The ethnonym 'Gana' (also Ganaq) means *lowland* or *plain* and refers to plains-dwellers. It has been applied by Gana speakers themselves as well as by surrounding groups. Another ethnonym used by Prentice (1970) is 'Minansut' (→ Kuijau).¹⁹ Generally, it is supposed that others have simply considered them

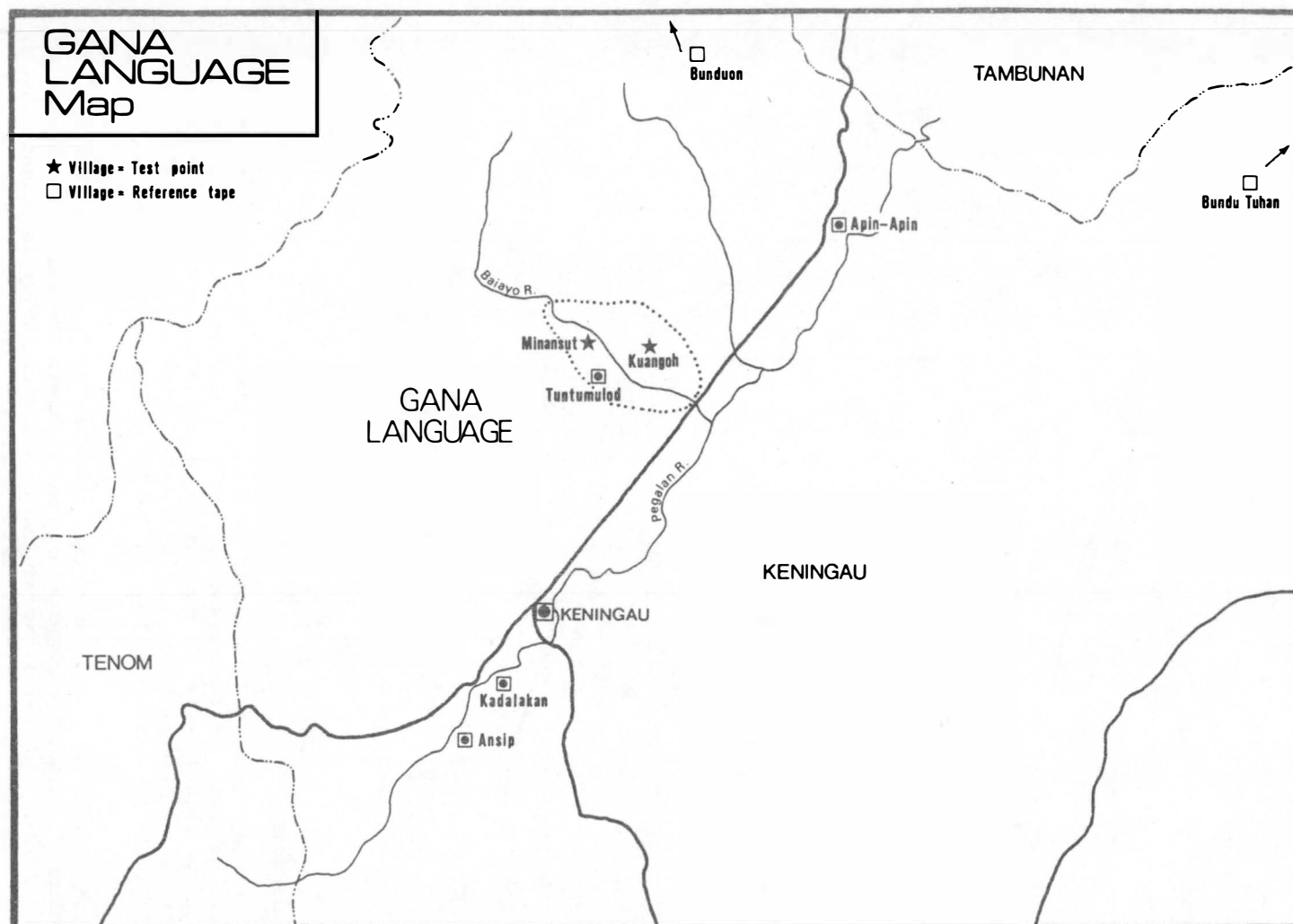


Figure 33: Gana language map showing the two test points, the sources of the six reference tapes and the general location of Gana speakers

part of the group labelled 'Keningau Murut', 'Nabay' and 'Kuijau' (and according to Prentice, 'Kuliow', 'Kuriow' and 'Keningau Dusun').

That Prentice classified 'Minansut' as a Dusun language while Smith classifies 'Gana' as "borderline" Murut emphasises the uncertainty of this classification. The practical mutual intelligibility between Gana and Kuijau (a Dusun language) speakers would argue for classifying them as one group. The distinctiveness of these two is established on a lexicostatistical basis, but widespread bilingualism is evident. The confusing mixture of languages in a limited area of Keningau District and numerous examples of bilingualism disqualify intelligibility testing as a means of clarifying classification distinctions in this case. In-depth fieldwork involving comparison of the grammatical systems of these languages as well as a thorough sociolinguistic survey of this area will be necessary to arrive at definite classification conclusions.

4.2 Keningau Murut language

This designation is used by Baboneau (1922) and Rutter (1929) and is adopted here to collectively describe several dialects in the Keningau township area, including Apin-Apin Kuijau, Dusun-Murut, Ambual and Nabay. Because of the consistent differences in test scores and the use of different ethnonyms, Ambual spoken in Ambual KU is considered here as a separate dialect from Dusun-Murut as spoken in Liau Laut KU (Section 3.3). A high degree of intelligibility of the Nabay dialect was found in the case of two dialects but the Dusun-Murut dialect did not demonstrate this. It is grouped with Keningau Murut, though, because of its close lexical relations (84-85 PSC). There is no evidence for distinguishing any of these four groups above the dialect level.

The whole language group probably numbers around 4000-5000 speakers. Figure 34 shows the general location of the four dialects of the Keningau Murut language.

Baboneau (1922) has an extensive vocabulary gleaned from "various Keningau Muruts" listing nearly 1800 items, sometimes from several dialects.²⁰ Rutter (1929) has a list of 185 items from "Keningau Murut".²¹ Prentice included a phonological and grammatical outline of Nabay with the Timugon grammar (1971: 279-282). Besides these and Cohen (1981) no other linguistic data was noted.

4.2.1 Apin-Apin Kuijau dialect

In light of the revised PSC relations which show Apin-Apin KU lexically more closely related to Dusun-Murut and Nabay samples (Figure 6), this language group is included in the Keningau Murut language. Apin-Apin KU is situated on the river known by the same name, a western tributary of the Pegalan River. It lies at the foothills of the Crocker Range to the west and the Wittti Range further east, about 12 miles north-east of Keningau KU (Figure 34). About one-fourth of the population speaks this dialect, the rest are mostly Dusun or Kuijau speakers. Their present population is estimated to be about 200 and may be restricted to a clan unit.²²

Very little is known about the actual origin of this language group. Although Smith classified it as Murutic lexicostatistically, he hypothesised that its historical roots are Dusunic. If so, prolonged contact of Tambunan Dusuns with Keningau Muruts may have introduced language change or assimilation

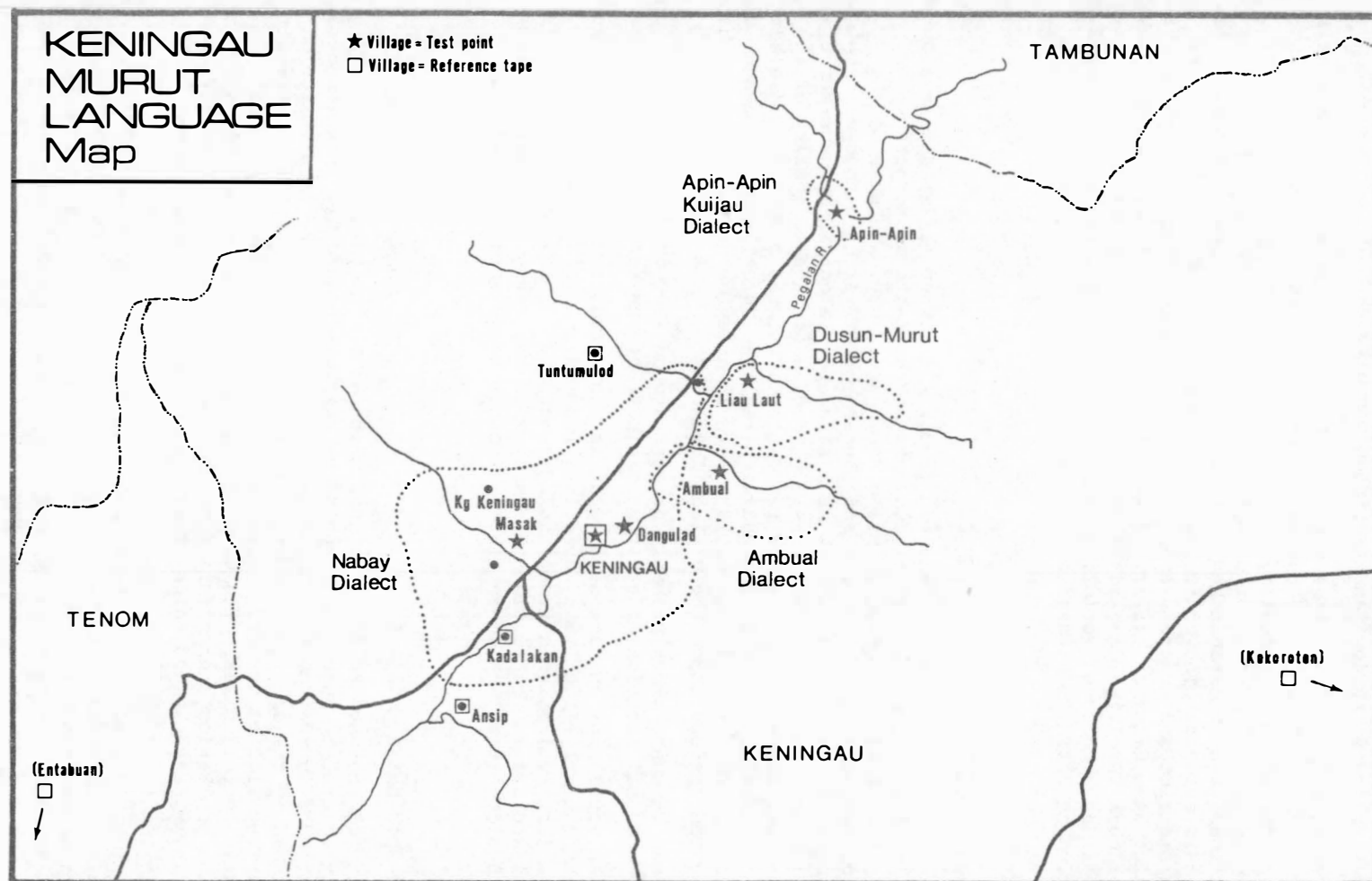


Figure 34: Keningau Murut language map showing test points, the sources of reference tapes used in testing and the general locations of the four Keningau Murut dialects

sufficient that they are now considered more Murutic than Dusunic (Smith, in this volume). On the other hand, its roots may be Murutic with the influence for change coming from the Dusunic groups.²³

In the data collected for this survey the subjects themselves variously called their language 'Dusun', 'Murut', 'Sinimbitan', 'Koroyau', 'Kadazan', 'Kuijau' and 'Kadazan-Murut'. Obviously the speakers perceive their language as an aberrant form of either Dusun to the north or Murut to the south. The term 'Kuijau' is probably used to refer to any 'mixed' or less well defined language such as Gana, Kuijau, Dusun-Murut and the Apin-Apin Kuijau dialect. There does not seem to be a common autonym in use.

Apin-Apin Kuijau speakers' breadth of bilingualism is evidenced in the significant intelligibility results shown not only of Nabay but of Tagal and Kuijau as well.

The relationship of Apin-Apin Kuijau to Dusun on one hand and Murut on the other, together with Gana, Kuijau and Dusun-Murut, form the crux of one of Cohen's (1981) major theses. Other than that there is no clear reference to this language group in the literature already published, except possibly in Ride's (1934) chart as adapted in Appell (1968:269).

4.2.2 Dusun-Murut dialect

The Dusun-Murut dialect group of Keningau Murut inhabits the Pegalan Valley east of the river and north-east of Keningau township between the Mailo and Ambual tributaries. It is closely related to the Ambual dialect spoken just south along the Pegalan River. Liau Laut KU and Sodomon KU represent this group.²⁴

Dusun-Murut probably has its roots in a common language with Nabay and Ambual, but its origin is uncertain. Their extended contact with Tambunan Dusuns who have penetrated the area for the past 50 years may have inhibited their intelligibility of Nabay and may be influencing them away from the main Keningau Murut speech forms.

The population of this language group is estimated to be less than 1000 people. Admittedly, this group is not easily delimited linguistically due to the gradual merging with Ambual and Nabay villages, and the actual population may be considerably less and very local.

Other than Cohen (1981) no other published materials have been found which specifically isolate this group from the other Keningau Murut groups. They themselves used terms such as 'Dusun', 'Dusun-Murut', 'Kuijau' and 'Murut', none serving as a real autonym.

It has been suggested (Section 3.3) that Dusun-Murut could be a dialect of a separate 'Nabay' language, but until further testing is conducted to determine whether this group shows intelligibility of Ambual and Apin-Apin Kuijau or whether those dialects and Nabay can understand Dusun-Murut it must be considered a closely related dialect with the other Keningau Murut dialects.

4.2.3 Ambual dialect

The Ambual dialect of Keningau Murut is spoken along the Ambual tributary of the Pegalan River and south possibly as far as Tuarid Taud KU. It shares a very close relation with Dusun-Murut to the north and Nabay to the south and west of the Pegalan. Nothing definite is known of the origins of the Ambual community but it is probable that they share historical roots with the Nabay and Dusun-Murut community.

Their present population is estimated to be between 1000 and 1200 if Tuarid Taud KU is considered part of this group. But it is possible that that village belongs better with Nabay villages as Smith so classified it and thus the Ambual speakers would number less than 500.

The ethnonym 'Tambual' was applied by Dusun-Murut speakers. Residents of Ambual KU simply called themselves and their language 'Murut' or 'Murut Ambual'.

Lexically this dialect is most closely related to Dusun-Murut, but it is also closely related to Nabay and has demonstrated high intelligibility of that dialect.

As far as is known, this group has never been isolated in the literature except by Cohen (1981). He referred to the language as Ambual and grouped it with Nabay and Baukan villages as 'Northern Murut' in his very local study of Keningau District.

4.2.4 Nabay dialect

The Nabay dialect of Keningau Murut is spoken along the Pegalan River valley and its west bank tributaries just south-west of the Ambual dialect area from Tuarid Taud KU to Banjar KU. Interspersed among the traditional Nabay areas are Kuijau, Tambunan Dusun and, it is said, Bajau villages.

The present population is estimated to be between 2000 and 3000, depending mostly on how the villages are actually divided between Dusun-Murut, Ambual and Nabay.²⁵

The ethnonyms recorded are 'Nabay' (also Nabai and Nebee), 'Dabay' (also Dabai and Dabi) and 'Rabay' (also Rabai). These are also used locally as auto-nyms. Prentice (1970; 1972) also suggests that some are referring to this group when they speak of Gana.

Lexically Nabay is the most central of all the Central Murut dialects which includes the dialects of Keningau Murut as well as Timugon and Baukan and shares a high percentage of lexical items with each. But Nabay speakers' average percentage of intelligibility of the stories from the latter two languages was actually lower than the PSC relations between them. Nabay was found to be a widely understood dialect throughout the Murut-speaking areas, though it does not serve as a trade language. It groups together with Apin-Apin Kuijau, Dusun-Murut and Ambual more on the basis of lexical relations and the statements by the speakers themselves than because of intelligibility testing, since only limited testing was actually conducted.

4.3 Beaufort Murut language

The Beaufort Murut language is spoken in several settlements found in Beaufort District along the Padas River from Saliwangan BT south-east of Beaufort township to Malalugus BT just west of Beaufort BT. Another group of villages is located about ten miles south-west of Beaufort along the Bukau River²⁶ (Figure 35).

Informants could not explain their historical origin but they do recognise a closer linguistic affinity with the Timugon Murut community than with other Murutic peoples. It is possible they moved down the Padas River from Tenom District, but not within the recent past. The areas they now inhabit are surrounded by Bisaya and Kedayan speakers.

The Beaufort Murut language is spoken by an estimated 1200 to 1,700 people. Those at Bukau BT referred to themselves as 'Sandiwar' while in Malalugus BT only the term 'Murut' was recorded. The name 'Sandiwar' (also Sandewar), means *outside* and was applied by the Murut around Jimpanga BT and Beaufort BT to those who lived outside, or above the Penotal Gorge on the Padas River, a description which better fits the Tenom Timugon. The Timugon in turn called the Jimpanga BT Muruts *ulun dabugus* or 'Dabugus', which means *people toward the sea*. This was also applied to the Bisaya and Brunei in the same area (Woolley 1962:2). Crespigny (1872) referred to one or both of the Beaufort Murut groups as 'Lower Murut' or 'Murut Padass'. They are often incorrectly referred to as 'Bisaya' by the local people, probably due to their proximity to Bisaya villages.

The Sandiwar subgroup of Beaufort Murut found along the Bukau River has been classified by Prentice (1970) as a subdialect of Timugon called 'Bukou'. The Dabugus settlements further north were labelled by Prentice as speaking the subdialect 'Bintaq'. These he grouped together with two subdialects of Tenom Timugon. Prentice further suggested that Crespigny's (1872) 'Murut Padass' wordlist was collected in the Bintaq subdialect of Beaufort Murut.²⁷ He included a brief comparison and outline of the phonology and morphology of the Beaufort Murut groups in his Timugon grammar (1971:276-279).

According to the lexical percentages both the Sandiwar and Dabugus wordlists relate closely enough to one another to be considered members of the same dialect, but may indeed represent subdialects. Mutual intelligibility between them was not checked. Both samples are slightly more remote in relation to the Timugon wordlists. This was verified by intelligibility testing with Sandiwar.

Although both Beaufort Murut groups are lexically close to Tenom Timugon (*81 PSC), they are quite far removed from other Murutic groups (*55-74 PSC), due somewhat to borrowing from the Bisaya around them. Whereas historically Beaufort Murut may have roots in the Timugon language, it is now sufficiently different lexically to be considered a distinct language.

4.4 Timugon language

The Timugon community is concentrated in their traditional area along the Padas River from Melalap TM as far south as Batu TM (Figure 36).²⁸ The most anyone could relate about their origins was that the Timugon have always inhabited this region of the Padas River valley (cf. Woolley 1962:1). The area is traditionally shared with Paluan speakers and now with migrant Dusun groups from Tambunan, Salalir groups from Pensiangan, Kolod and Lumbis people from Kalimantan, and Javanese and Banjar immigrants from other Indonesian islands.

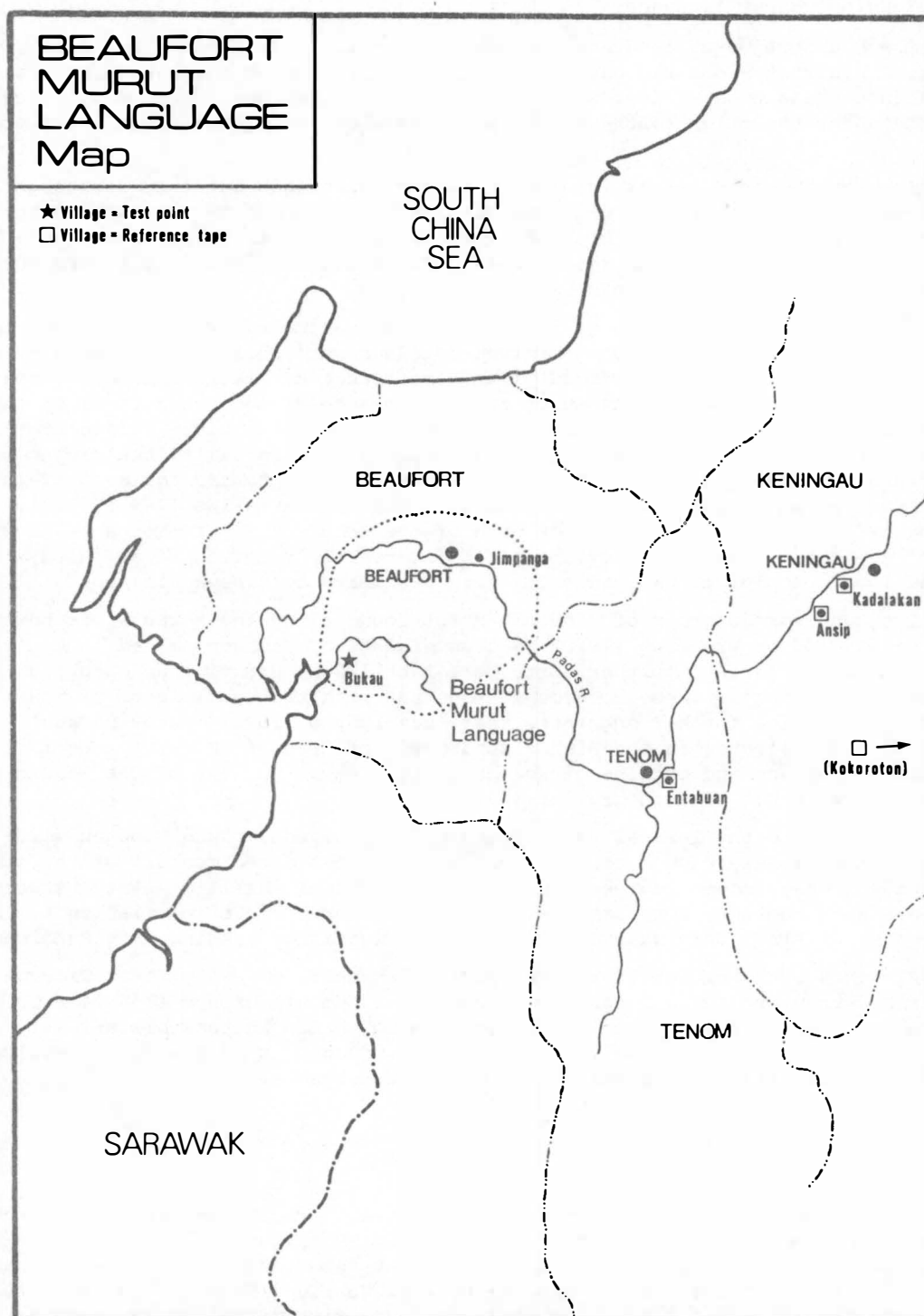


Figure 35: Beaufort Murut language map showing the test point, the source of the reference tapes used for testing and the general area where the language is spoken

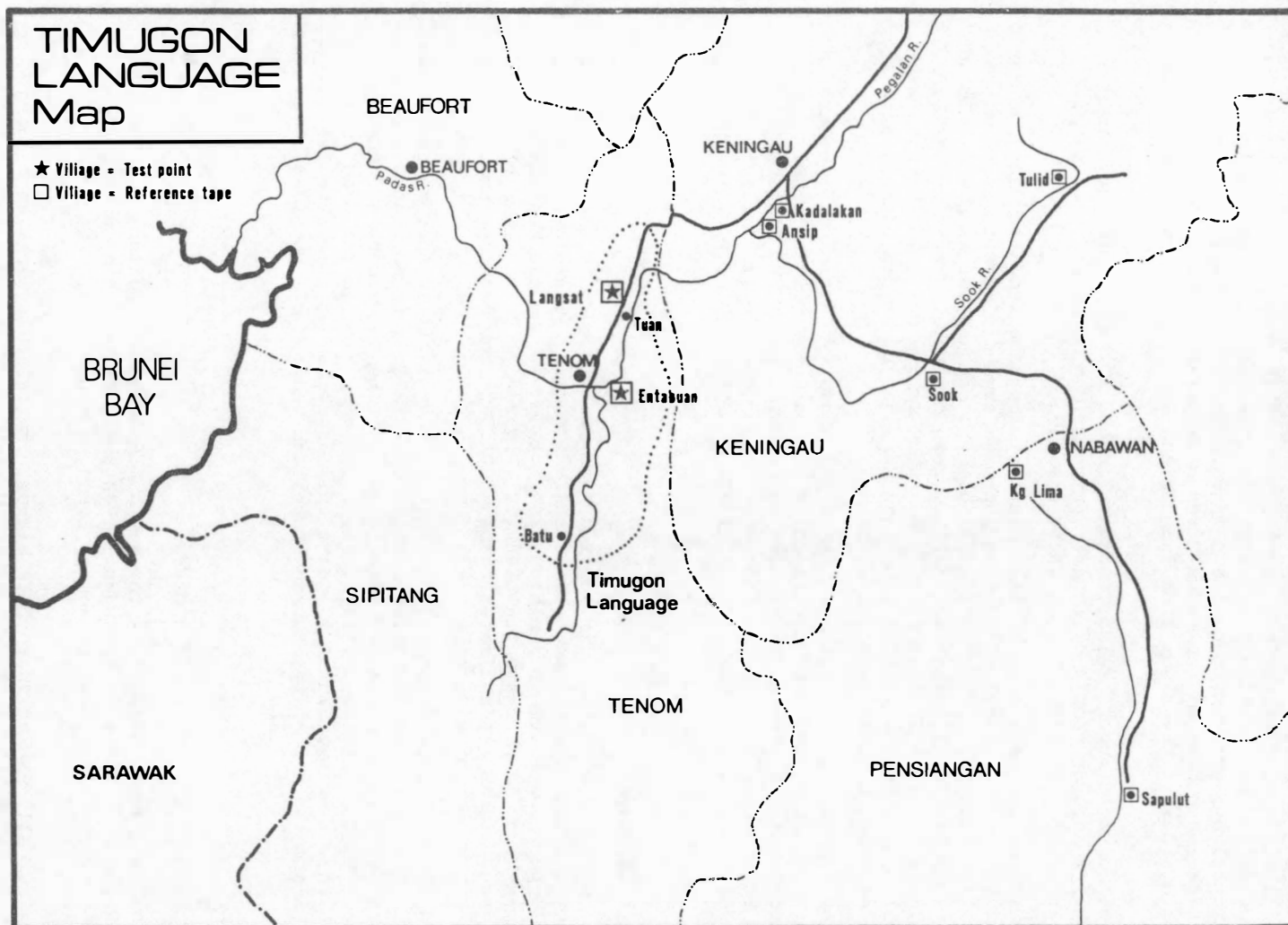


Figure 36: Timugon language map showing test points, sources of the reference tapes used in testing and the general location of the Timugon language area

The present population of this language community is estimated to be 6000 to 7000.

No dialect-level distinctions were noted in this research, but the two sub-dialects delimited by Prentice (1970:380) and also recognised by the local Timugon themselves, are very probable. This includes the 'Kapagalan' group located on the west bank of the Padas River near Melalap TM and the 'Poros' who inhabit both sides of the river from Tuan TM and Makaniton TM as far south as Batu TM.

The ethnonym 'Timugon' (also Temogun, Timogon, Timugan, Timogun, Timigun and Timugun) means *the people of the river* from timug *river* and ulun *people*. To many, this group is simply known as 'Tenom Murut'.

The Timugon language represents a distinct language from the Beaufort Murut language. Though individuals from both language communities show marginal to high intelligibility of the other's language, the communities as a whole do not demonstrate mutual intelligibility. Still, Beaufort Murut shares by far more lexical similarity with Timugon than with any other dialect. The Timugon language is also considered distinct from both Keningau Murut and Baukan, as was demonstrated through intelligibility testing.

All of Prentice's Murut studies mentioned above (→ Section 0.5) centre around this language, and more specifically around the Poros subtribe. Rutter (1929) incorporates a 'Tenom Murut' wordlist consisting of 185 items which according to Prentice is probably from the Kapagalan dialect.²⁹ Clayre (1970) uses some of Prentice's (1965) data to highlight her discussion of focus.

4.5 Baukan language

The generic term 'Baukan' is applied specifically to only one of the two dialects of the language. The other is called Tenggara. These groups are found along the upper Sook River in Keningau District and around the headwaters of the Kinabatangan River in Kinabatangan District (Figure 37). The present population of this language group is estimated to be 1500-1800, the greatest number of whom speak the Baukan proper dialect.

The dialect division must be seen as tentative until further research is conducted. The true relation between these two dialects is not known. Obvious differences exist, however, as is seen in the different lexicons and the speech intonation. Still, intelligibility varied from very high in Tulid KU to minimal and low in the other two Baukan language villages. Due to the acknowledged differences and the ambiguity, Baukan proper and Tenggara are considered separate dialects.

4.5.1 Baukan dialect

The Baukan proper dialect of the Baukan language is spoken along the upper reaches of the Sook River in Keningau.³⁰ Speakers are known by others as well as themselves as 'Baukan' (also Baokan, Bokan, Boken, Bokun, Bukun, Bokon, Ulun-no-Bokon and Ulun-no-Bokan).

Linguistically Baukan shares its highest lexical relation with Tenggara, the other dialect of the Baukan language, and Nabay. However, mutual intelligibility was slightly higher between Baukan and Tenggara than between Baukan and Nabay.

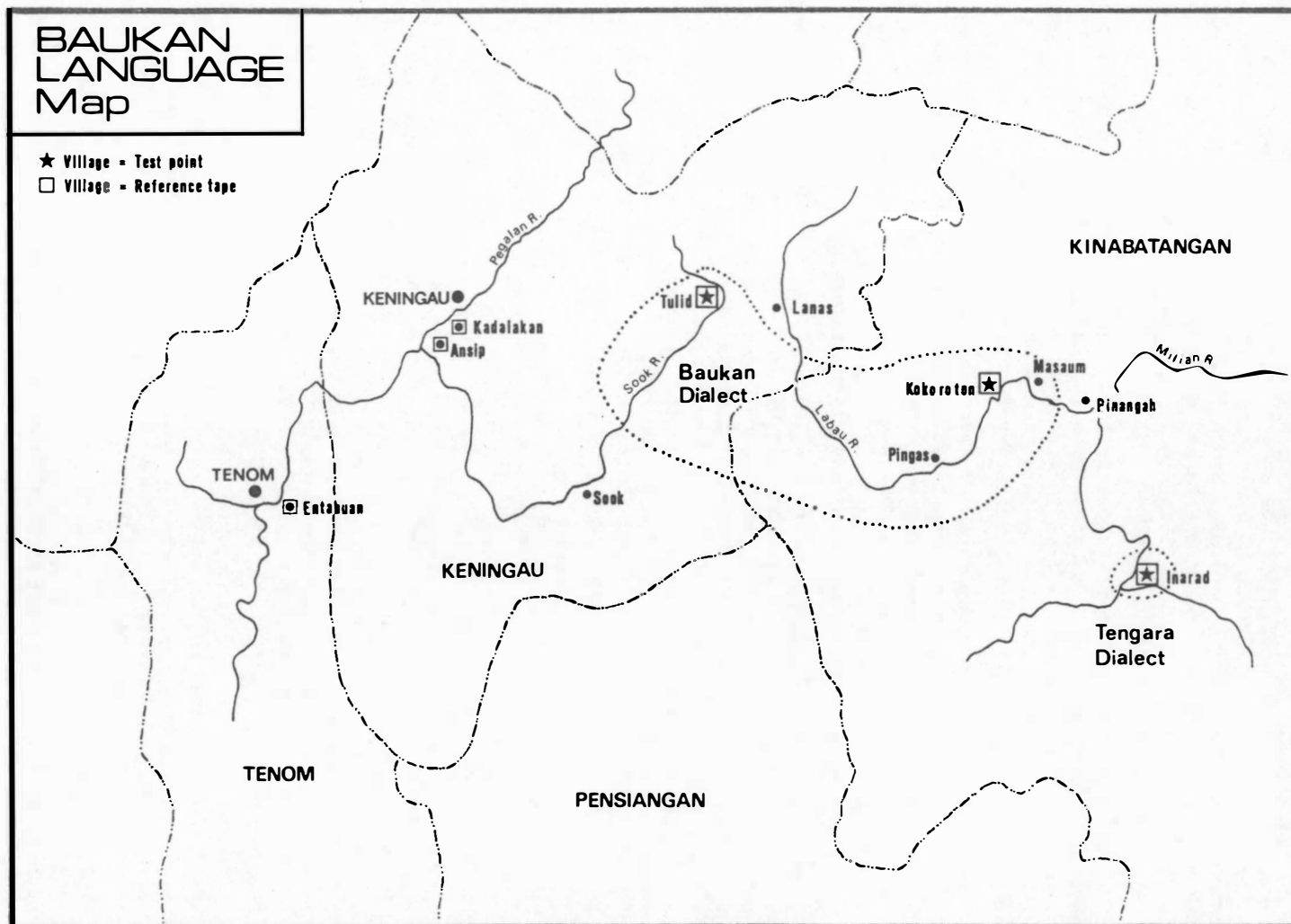


Figure 37: Baukan language map showing test points, sources of reference tapes used in testing and the general area where this language is spoken

Baukan subjects also showed high intelligibility of Tagal. But a relatively low score was recorded on the Timugon story.

Some research has been done among the Baukan groups including a wordlist of natural history collected in Pauh KU and Tiong KU (Keith 1936), along with some anthropological notes on taboo (1936) and a folktale (1936). Prentice (1971:282-285) included an outline of the Baukan dialect phonology and morphology in his Timugon grammar and Cohen (1981) included a single Baukan wordlist in his study of Keningau District dialects.

The Baukan dialect as spoken in Kokoroton KN on the Labau River is no longer found in a concentrated area, but is spoken by a few families in the upper Kinabatangan area, some of whom now live in Masaum KN.³¹ This area was included by Keith (1936) as part of the Baukan language and is included here on the basis of lexical relations and limited intelligibility testing.

The exact origin of this group is not known. However, in Kokoroton KN the SIL researchers were told they originally lived further upriver between Pingas KN and Lanas KU but were asked to move by the government 150(?) years ago. According to one tradition this group itself used to make up a very large population but most died off because of an epidemic a long time ago. It is estimated that now less than 50 speakers of this particular subdialect are left.

This community used no autonym other than 'Murut', nor did the other groups in the area know what to call them if not *orang pingas people from Pingas*. For convenience they have been referred to as 'Kinabatangan Murut', together with the Tengara Muruts. As noted above, Keith referred to Muruts in this area as 'Baukan' while others have considered them 'Tengara', though they themselves do not use this as an ethnonym. The local people generally think of the Muruts from Kokoroton KN as more closely related to the Keningau Muruts than to the Tengara of Inarad KN. Based on this and limited data the Tulid KU test point has been tentatively classified as belonging to this Baukan proper dialect (→ Section 3.5).

4.5.2 Tengara dialect

The Tengara dialect is found along the Inarad River, a tributary of the Kinabatangan/Milian River. One other village located on the Kuamut River was mentioned by several people, but it is no longer in existence (Figure 37).³² Others have called the Murut people at Kalabakan TU 'Tengara'. While several Inarad KN Murut seemed to think their language was very similar to the Tawau District Murut, SIL research showed that this is not a close relationship, nor did the Kalabakan Murut mention any connection. The two groups certainly cannot now be considered members of the same language, let alone the same dialect.

Population figures are not known, but SIL researchers were told that about 150 families lived in Inarad KN and another two or three households from Lenod KN along the Kuamut River now live in Kuamut KN. A recent estimate by the Native Chief was about 350 residents in Inarad KN and about three families in Pinangah KN besides those around Kuamut KN.

Their origins are unknown. Earlier references to this group are sketchy, but Keith (1981) gives an interesting account of one incident in their history which dates back as far as 1890 and in which she connects Tengara with the Kuamut River and Kalabakan TU Murut. The ethnonym 'Tengara' (also Tungara, Tingara, Tenggaraq, Tanggaraq, Tenggara and Tengara'), is applied to them by the Upper

Kinabatangan groups such as the Kolobuan and the Makiang. They usually refer to themselves as simply 'Murut'.

Aside from the other Baukan dialect, Tengara shares the greatest number of lexical items with the Paluan language and the Kalabakan Murut. The Tengara test subjects showed the highest intelligibility of the Kokoroton KN story, while the limited intelligibility of the other Baukan story from Tulid KU as well as stories in Nabay, Timugon and Tagal was about the same. Neither Tidong Kalabakan Murut nor Serudung Murut speakers demonstrated any significant intelligibility of Tengara.

Though the Tengara are frequently mentioned in the literature, the only linguistic data for this group is Rutter's (1929) 'Tengara' wordlist³³ and Hurlbut and Pekkanen's (to appear) study of the Upper Kinabatangan River languages (→ Section 3.5, note 12).

4.6 Paluan language

The Paluan language is spoken from the area around Tenom township east over southern Keningau District and as far south as the Talankai River in Pensiangan District. There has been movement within these boundaries recently but the general area seems to be the Paluan community's traditional habitat (Figure 38).

Intelligibility test results show high mutual intelligibility among the few villages tested, except Pandewan PN, so it was decided to consider Pandewan a separate dialect and to group the four other villages under one Paluan proper dialect (→ Section 3.8). Speakers of the Paluan language recognised a different set of villages for speakers of the dialect used at Pandewan PN. Also the intelligibility test scores were consistently lower at Pandewan PN than the other four villages. Though only two dialect-level divisions are noted in this classification, Paluan proper and Pandewan Murut, differences are also noted lexically between Dalit Murut and Sook Murut and Prentice (1970) lists the Paluan communities just east of the Tenom plain around Saga TM as a separate subdialect. Lexical differences are also recorded between the Dalit KU and Keramatoi Laut KU lists suggesting differences along each river. Thus grouping the four villages under one Paluan proper dialect must be seen as tentative until further research is conducted.

There are varying degrees of mutual intelligibility between the different Paluan areas as well as with their Sumambu/Tagal and Keningau Murut neighbours, but the two dialects discussed here are a fair representation of the divisions on the dialect level of this language.

4.6.1 Paluan dialect

The Paluan proper dialect as isolated here is found along some tributaries of the Padas River around Tenom township east over southern Keningau District along the Dalit and Keramatoi Rivers as well as the lower Sook River valley and south around the headwaters of the Talankai River in Pensiangan District (Figure 38).³⁴ This dialect is estimated to consist of about 4500-5500 speakers at present.

Other ethnonyms and nomenclature applied to this group besides 'Paluan' (also Peluan) are 'Dalit Murut', 'Sook Murut' and 'Takapan'. Prentice (1972) also noted the terms 'Makaheeliga' and 'Makialiga'.

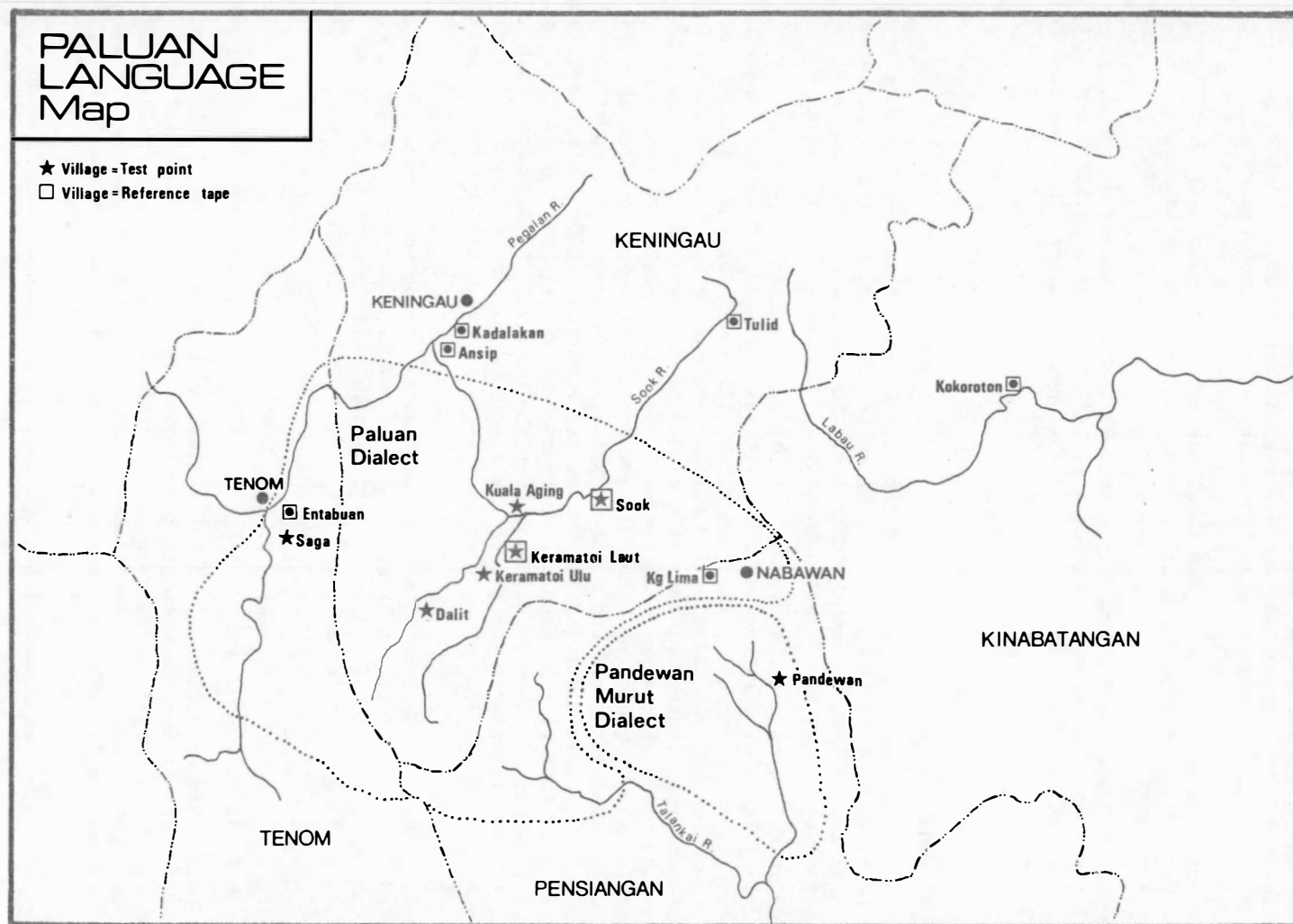


Figure 38: Paluan language map showing test points, sources of the reference tapes used in testing and the general area where this language is spoken

Lexically the Paluan dialect is midway between the dialects of the Sumambu/Tagal language to the south and those of 'Central Murut' to the north. Geographically they act as a buffer between these same two groups. Paluan subjects demonstrated high intelligibility of both Nabay and Pensiangan Murut stories. Their overall intelligibility of Timugon and Baukan stories was lower. Timugon subjects did not register appreciable intelligibility of this dialect.

Rutter (1929) included a 186-item wordlist of the 'Peluan Murut' dialect³⁵ and Woolley (1927; 1928) published three Paluan songs from Dalit KU and he also collected another which is produced in Rutter's (1929) volume. Prentice (1971) identifies the *English-Murut phrase book* (1964) as belonging to this dialect. Lees (1966) made comparison with Paluan and Tagal in her brief orthography study. Cohen (1981) used four wordlists from this dialect in his study which showed Keramatoi Laut KU and Dalit KU more closely related to one another than to either Sook KU or Nabawan KU. This follows their geographical position as well.

4.6.2 Pandewan Murut

The Pandewan Murut dialect is found strictly in Pensiangan District along the Nabawan, Pamentarian and Mesopo Rivers, as far downstream as Matiku PN, about seven miles north of Sapulut PN (Figure 38).³⁶ It is estimated that the Pandewan Murut dialect consists of 1200-1400 speakers. They claim to have always lived in their present location.

In Pandewan PN they referred to their language as Murut Asli *original or authentic Murut* or as 'Pandewan Murut', but never as Paluan or Tagal. This dialect may be partly included in the dialect labelled Sapulut (also Sapulot, Sepulot and Sipulote) by Prentice, Rutter and others.

Aside from Paluan, this dialect shares its closest lexical relations with Baukan, Nabay, Pensiangan Murut and Timugon, in that order. However, no appreciable intelligibility was shown of Baukan, Timugon or Salalir and only marginal intelligibility of Paluan.

4.7 Sumambu/Tagal language

The Sumambu/Tagal language consists of a group of interrelated dialects which vary sufficiently in some cases to inhibit mutual intelligibility between them. It is spoken over the whole south-western region of the Murut area of Sabah and down into Kalimantan (Figure 39). Speakers of this language have begun to migrate north into Timugon, Paluan and Nabay areas during the past 50 years. Other than that, the historical roots of the group as a whole have not been traced.

A fair estimate of the population of the Sumambu/Tagal groups as delimited here is 13,000-14,000, nearly twice the size of any other Murutic group.

The terms 'Tagal' and 'Sumambu' have generally been applied when referring to this group as a whole with only slight variation.³⁷ Rutter (1929:34) used Sumambu to refer to Rundum Murut and Sapulut Murut collectively. Other ethnonyms will be handled under the respective dialects below.

Five dialects are distinguished here, but in a language group such as this each river or vicinity varies somewhat from the next. These dialects include Pensiangan Murut, Salalir, Rundum Murut, Tomani Sumambu and Maligan Tagal.

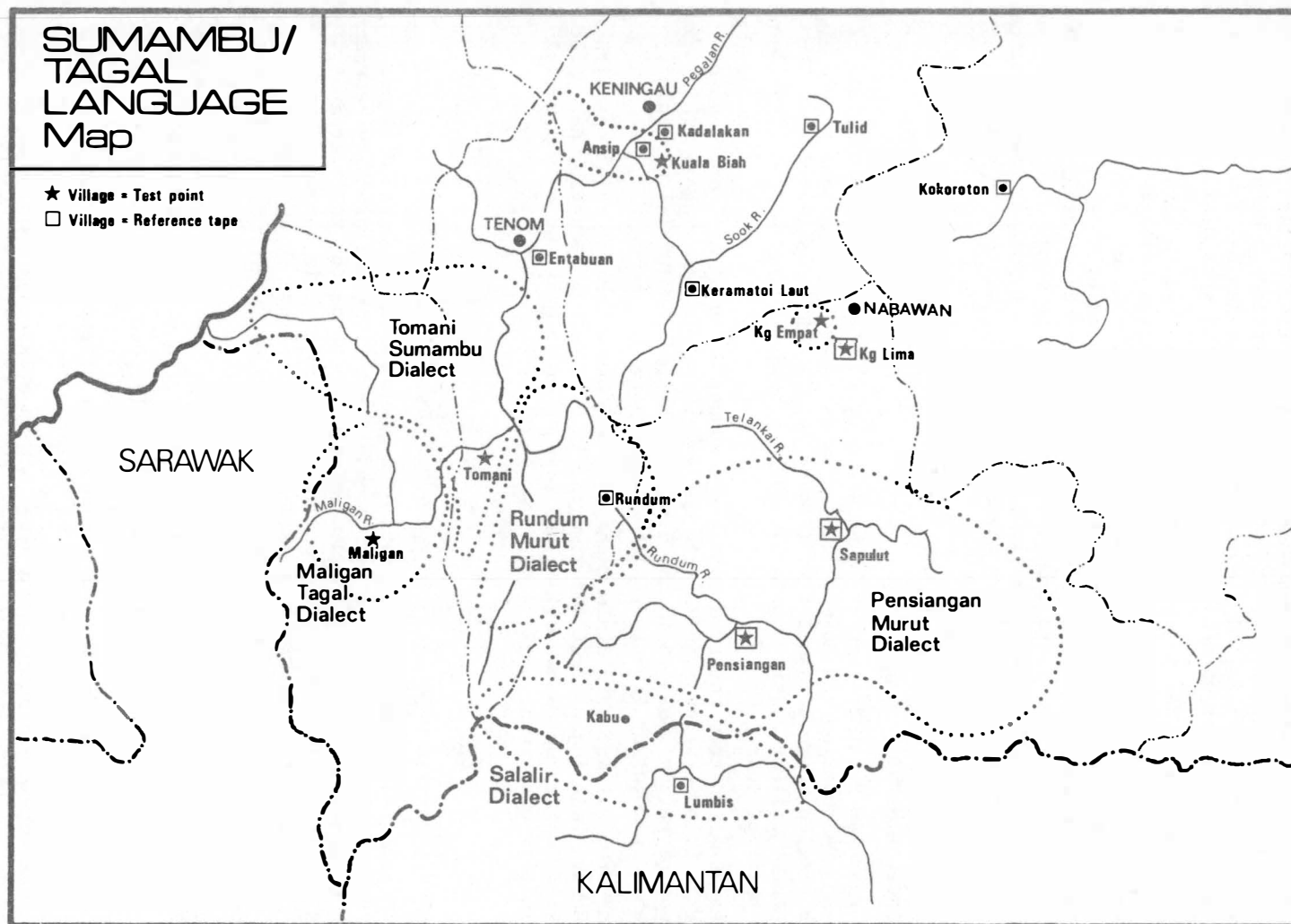


Figure 39: Sumambu/Tagal language map showing test points, source of reference tapes used in this testing and the general locations of the dialects of this language

4.7.1 Pensiangan Murut dialect

The Pensiangan Murut dialect of Sumambu/Tagal is found along the lower reaches of the Sapulut, Talankai and Rundum Rivers, and the Tagul and Sansian Rivers, all in Pensiangan District. There has been a great movement from this area to other areas, most recently to the Nabawan Scheme PN near the Keningau/Pensiangan border³⁸ and to a few villages in the central part of Keningau District.³⁹

This dialect represents the largest number of Sumambu/Tagal speakers. It is roughly estimated to consist of 4000-5000 speakers.

The 'Pensiangan Murut' dialect (also Pěntjángán and Penchangan) is partly referred to as 'Sapulut Murut' (also Sepulot, Sapulot and Sípulote).⁴⁰ It has been called 'Tagal' (also Tagul, Tagol and Taggal),⁴¹ and 'Lagunan Murut'.

Pensiangan Murut is the dialect most widely understood of the Sumambu/Tagal language group. Intelligibility testing in this dialect showed they did not understand Paluan and Baukan, nor Timugon and Nabay if checked in a non-immigrant village. Their intelligibility of the Salalir dialect varied from low to marginal. It was not checked with Tomani Sumambu or Maligan Tagal but showed marginal intelligibility of Rundum Murut. Paluan villages demonstrated intelligibility of Pensiangan Murut, as did some Keningau Murut and Baukan villages, probably due in part to language learning. Rutter (1929:34) felt Pensiangan Murut was closely related to Kalabakan and Serudung Murut, which is not the case.

Genderen Stort (1916) has a wordlist from this dialect⁴² and Woolley collected a Murut chant from the Tagul River area which was published in Rutter 1929. Woolley's (1936) article describes some of the technical hunting terms from this area. Prentice (1971) mentioned a *Murut Catechism* (1960) by the Roman Catholic Mission at Keningau. Clayre's (1970) discussion of focus in the 'Tolokoson dialect' may apply to Pensiangan Murut as well. Prentice's discussion and outline of the phonology and morphology of Highland Murut include this dialect as delimited here (1971:285-300). Cohen (1981) included lists from two migrant Pensiangan Murut villages in his lexical study.

4.7.2 Salalir dialect

The Salalir dialect is spoken along the river of the same name near the Sabah and Kalimantan border (Figure 39). Other than the fact that most Salalir Murut on the Sabah side of the border have migrated from there to other areas in Pensiangan, Tenom and Sipitang districts,⁴³ the origin and population of this group are unknown. Because of that extensive exodus from their homelands a more thorough survey of possible Salalir villages in the other areas is necessary before an accurate assessment can be made of the population.⁴⁴ The people of the Lumbis KAL area along the Lumbis River in Kalimantan are also considered part of this group.⁴⁵

The dialect has been called 'Salalir' (also Sadalir, Sěďálir, Selalir and Saralir). One informant now living at Kg Lima PN used the generic term 'Tagal' but generally speakers simply called their language 'Murut' or 'Murut Kabu'. The 'Lumbis' (also Alumbis and Loembis) speakers are usually referred to specifically by that name.

Lexically Salalir shares its closest relation with Pensiangan Murut and Salalir speakers demonstrated relatively high understanding of that dialect as

well as some significant intelligibility of Rundum Murut. They seem to have no trouble understanding Lumbis⁴⁶ but they do not understand Timugon well. Other dialects had more difficulty understanding Salalir. Both Pensiangan Murut and Tomani Sumambu showed low to marginal intelligibility of a Salalir story from Kg Lima PN.

On the basis of PSC relations and Salalir intelligibility of Pensiangan Murut there is no reason to distinguish this dialect from Pensiangan Murut. However, since Pensiangan Murut intelligibility of Salalir was low to marginal and other researchers have recognised a language level distinction (Prentice 1971:302), a dialect division does not seem too extreme since it presupposes some mutual intelligibility.

4.7.3 Rundum Murut

The Rundum Murut dialect as delimited here extends along the Sungih and Kapulu Rivers to the junction with the Telekosang River and south-east along the Rundum River and tributaries. Along the Rundum River it merges with the Pensiangan Murut community (Figure 39). This is somewhat broader than Prentice's (1970) description of the Arundum subdialect but does not include nearly as broad an area as Rutter (1929) has described as Rundum Murut.

Their origin is unknown although one informant ventured the opinion that years ago (100?) they came up from Pensiangan area. There is nothing particularly telling about this view though it is linguistically possible.

This dialect is considered to be one of the smallest two dialects of Sumambu/Tagal but a rough estimate might claim as many as 1,000-1,300 members at present.⁴⁷

No other ethnonym besides 'Rundum Murut' (also Arundum) is known for this group though Clayre (1970) probably includes this when she describes 'Tolokoson'. Others have, of course, used the generic terms 'Murut' or 'Tagal'.

Pensiangan Murut and Salalir speakers showed marginal intelligibility of the Rundum dialect, which confirms the dialect distinction made on the basis of lexical relations. But Maligan Tagal speakers showed high intelligibility of Rundum Murut, though there was a relatively low lexical relation (*75 PSC). More information is needed before determining whether Maligan Tagal, Tomani Sumambu and Rundum Murut should, in fact, be grouped more closely than done here.

Rutter (1929) includes a 'Rundum Murut' wordlist but the geographic boundaries of the group so designated by him are much wider.⁴⁸ This list was used by Bolang and Harrisson (1949) to establish the distinctiveness of Sabah Murut from Sarawak Murut.

4.7.4 Tomani Sumambu dialect

The Tomani Sumambu dialect is spoken along the Padas River between Kemambong TM and Tomani TM including villages along the Tomani River and near the upper Telekosang River.⁴⁹ The sizeable 'Tagal' population shown along the Mengalong River valley from around Sindumin SG eastward may belong to this dialect, or to the Maligan dialect. This area includes at least ten villages and residents of others (Figure 39).

An estimate of the population of this dialect community is difficult since many Salalir Murut have immigrated to the Tenom area where Tomani Sumambu speakers live.⁵⁰

The ethnonym 'Sumambu' (also Sumambuq, Semambu and Semembu) may be the most common one applied to this group by other Murut people, but 'Tagal' is also used, however inappropriate. Prentice (1970) classified this dialect under the linguistic designation 'Tomaniq subdialect' of Sumambu.

Tomani Sumambu test subjects showed fairly high intelligibility of the Pensiangan Murut dialect spoken in Sapulut PN, but not Salalir. Nor did they show any appreciable intelligibility of any non-Sumambu/Tagal dialect tested.

4.7.5 Maligan Tagal Murut

The Maligan Tagal dialect is spoken in the hilly region along the Ibul, Logan and Maligan Rivers in Sipitang District (Figure 39).⁵¹ A rough estimate could assign as many as 1,000-1,200 members to this language community, but it cannot be said with any degree of certainty.

A Salalir informant suggested that this group originated in the Tagul River area, but Maligan informants could not elaborate on this other than to say some had arrived one generation ago. The main immigration has not taken place in recent history since Rutter (1922:66) already has isolated this group.

The 'Maligan Tagal' (also Mauligan) group is sometimes known as 'Tagal' or 'Bol Murut' (also Bole Murut).

Lexical relations with the other Sumambu/Tagal dialects show this dialect to be the most remote of the five. The intelligibility testing demonstrated that they understand both Rundum Murut and Pensiangan Murut well, but as expected, no significant intelligibility of Paluan, Nabay or Timugon dialects was shown.

It is possible that the 'Tagal' translation of the New Testament books and stories, *Kula-Kula' Buku Nu Rahu Nu Tuhan* (1968) and *Kuasa' Nu Tuhan; Tagal* (1975), were done in this dialect (cf. Prentice 1971:293). Other mimeographed materials were prepared using translation helpers from both Maligan SG and Masanoi TM. These include the New Testament books of Philippians and I and II Timothy (*Sambahian Ra Surat Ri Paulus*: 1977), Mark (*Aho Onsoi Sinuratan Ri Markus*: 1977), I John (*Surat Puu-Puun Intor Ri Yahya: Pasukuon Ra Ulun Nu Tuhan*: 1978) and Colossians and Philemon (*Sambahian Ra Surat Ri Paulus*: 1980). The biblical stories of creation (*Kasaukan*: 1977 and *Kawi Nu Atu-Atu Inuma Nu Allah*: 1979) and the Rich Fool (*Baal Nu Ulun Akaya' Am Ookot*: n.d.), as well as a Tagal catechism (*Paniluan Ra Languson Nu Buku Hitu*: 1979) and a prayer directory (*Ibiton Ra Sambayang*: 1979) have been produced. Prentice adds to this list *Buku Manani Rahu Tagol* (n.d.) and *Pangumangan Nu Tuhan Yesus* (?1961). He also suggests that the 'Tagal' wordlist in Ray (1913) and the items mentioned in Clarke (1951) belong to this dialect as well as Lees' (1966) article.

4.8 Kolod language

No intelligibility testing was conducted in the Kolod village of Baru Jumpa TM, but Kolod is clearly a distinct Murut language and is included here as such. The Kolod language group is traditionally located around the headwaters of the

Padas River (Rutter 1929) and in Indonesian Borneo. Prentice (1971) identifies the areas as the headwaters of the Tengoa and the region south of the Lumbis-speaking area. It is not known exactly how far this area extends. Some groups have migrated to Sabah around Tenom, and Rutter (1922) mentioned some in the Bol SG area (Figure 40).

Prentice (1971) estimates the population of the entire group to be 2000 speakers. At least one-fourth of these could be living in Sabah in villages and in various estates in Sipitang, Tenom and Tawau districts.

There is little historical information about this language community but it is certain that the Kolod language relates closer to Northern Murut and eastern Murutic groups than to the Lundayeh of Sarawak,⁵² though it is often assumed that the latter are more closely related to them (Rutter 1929, Voegelin and Voegelin 1965, Grimes 1978, Whelan 1970). Intermarriage between members of the two communities is evident even in this small sample (→ Section 2, note 11). The ethnonym 'Kolod' (also Kolur, Kolour, Okolor, and Unkolor) is pronounced by Muruts in Tenom okolod.

Prentice (1971:300-303) has included a phonological and morphological outline for this language, but no other linguistic data is known for Kolod.

4.9 Selungai Murut language

Selungai Murut is the language spoken in at least six or seven villages along the Sapulut/Sembakung River between the confluence with the Pensiangan/Tagul River and the Indonesian border (Figure 40).⁵³

The people of Selungai PN trace their recent roots back to Bantul PN, about a mile from the Indonesian border, from which they moved during the Confrontation in 1963. They feel a closer affinity with the groups along the Sembakung River than with those in Sabah, and it is possible that they came up from Indonesia before settling in Bantul PN.

The longhouse at Selungai is considered the largest in Pensiangan District with 161 persons living there. A conservative estimate of the population of this language group in Sabah is 600-800. There may be a significant population of Selungai Murut in Indonesia.

This language is referred to by other Pensiangan Muruts as 'Indonesian Murut'. Other than that, no ethnonym was discovered, though 'Sembakung Murut' drew a favorable reaction from the Selungai Murut themselves.

This language is most closely related to Sembakung Murut, also found along the Sembakung River, but much further downstream. It shares a considerable number of lexical items with Salalir and Pensiangan Murut, but it is significantly more distantly related to other Northern Murut dialects.

4.10 Sembakung Murut

The Sembakung Murut language is believed to be spoken all along the Sembakung River and tributaries in Indonesian Borneo (Figure 40).⁵⁴ No population or historical notes can be offered. Nomenclature other than 'Sembakung Murut' (also Simbakong, Sembakoeng and Sembakong) which has been used to describe this group includes 'Tidong' (also Tidung and Tidoeng) and 'Tinggalan' (also Tinggalum and Tingalun).



Figure 40: Eastern Murutic languages map showing test points, sources of the reference tapes used for testing and the general locations of the eastern Murutic languages

This dialect has long been considered a member of the Tidong language group, possibly due to religious affiliation, but in fact, it is lexically closer to the Murutic groups of Sabah than to the Tarakan Tidong which is spoken on Tarakan Island and in the Sabah districts of Tawau, Sandakan and Labuk-Sugut. The Bolangan dialect of Tidong, also in Indonesian Borneo, is lexically as distant as Tarakan Tidong (Sather 1972).

Its closest neighbour lexically is Selungai Murut, located much further upstream on the Sembakung River in Sabah. It is more remotely related to Pensiangan Murut (which was grouped as Tidong by Genderen Stort (1916)) and to Kalabakan and Serudung Murut (both of which were hypothesised by Prentice (1970) as belonging to Tidong together with Sembakung Murut). No intelligibility testing was conducted with Sembakung Murut data. The only published linguistic material known to exist concerning this dialect is Beech (1908) who included a few 'Simbakong' words along with his Tarakan material, and the 'Sembakoeng' wordlist in Genderen Stort (1916).

4.11 Kalabakan Murut language

Kalabakan Murut is spoken only along the Kalabakan River in Tawau District. It represents less than 1000 speakers, probably as few as 450-600.

Whelan (1970) and Keith (1981) record some of Kalabakan's turbulent history centred around the government clash with the Murut there in 1891. They were also involved in the conflict during the Confrontation in 1963. But nothing is known of their prior history. Informants all said that as far back as anyone knew they had lived on the Kalabakan River.

The Kalabakan Murut could offer no name for their language other than 'Tawau Murut' or 'Kalabakan Murut'. They adamantly rejected the term Tidong, possibly on religious grounds as much as anything, since Tidong speakers are usually Muslim while Kalabakan Murut do not generally subscribe to a religious faith. In fact, a group of speakers of the Tidong dialect (presumably similar to the Tarakan dialect) live at Kalabakan TU, so the distinctions are very apparent to both groups. Some Ida'an and Sungai informants in Bukit Garam KN considered Kalabakan Muruts part of the Tenggara tribe. It was not possible to verify this at Kalabakan TU.

The lexically closest dialect to this group is indeed the Tenggara dialect of the Baukan language group, but Kalabakan speakers showed very low understanding of the Tenggara story. They registered highest scores on a Serudung Murut story, but even that showed low comprehension. No other linguistic research in this language is known.

4.12 Serudung Murut language

Serudung Murut is spoken along the Serudung River in Tawau District and since 1963 in the village of Serudung Baru TU about 12 miles north-east of Tawau town.

The Serudung Murut language group consists of an estimated 350-450 speakers, about two-thirds of whom now live in Serudung Baru TU. Informants could tell nothing of their place of origin other than "along the Serudung". They mentioned Kalabakan TU as the place where the speech is most similar to their language,

but not the same. They gave no name for themselves other than 'Murut' or 'Serudung Murut'. Others have called them 'Tawau Murut' or 'Tidong', thus grouping them with the Kalabakan Murut.

Lexically, they are the most remote of the Murutic dialects, sharing the highest number of lexical items with Kalabakan Murut, followed much more distantly by Pensiangan Murut and Sembakung Murut. It is conceivable that this language represents a very early, unmixed speech form since until 1963 the whole group was very isolated from the other native groups.

Serudung Murut speakers showed comprehension of a very simple Kalabakan story but this is not mutual. They did not demonstrate intelligibility of either Pensiangan Murut or Nabay, nor of a Tidong story from Lidung LS. No other linguistic research in the dialect is known.

5. NATIONAL LANGUAGE INTELLIGIBILITY

Included in 26 of the 27 Murutic test sets was a national language (NL) reference tape.

Figure 41 gives a summary of the NL testing results by village along with the sociological data for the entire corpus at each test point, whether or not every subject participated in the NL test. A total of 224 subjects from six districts in the state were tested. The village averages for intelligibility scores ranged from 21% in Kg Lima PN to 93% in Masak KU. Both were represented by a fairly balanced corpus. The most obvious difference between the two corpora, as would be expected, is the average educational level attained.⁵⁵ The Masak KU test corpus averaged seven years of education. The Kg Lima PN subjects averaged less than one year of education. The correspondence between education and intelligibility scores, however, is not maintained consistently throughout the village averages. The village averages of sex and age do not show a pattern either. More revealing correspondences are seen in the average of the individual scores as discussed below.

Figure 42 shows the relative level of NL intelligibility among the Murut population by district. Averages range from 47% in Pensiangan District to 81% in Beaufort. However, the Beaufort corpus represents only nine subjects of one Murut village. The high score registered in that village may be due in part to the large Kedayan (→ Malayic) population in the immediate area and the need for a trade language. The low score in Pensiangan District probably reflects the lower degree of development in that district.

The present development pace of Keningau District as well as the "cosmopolitan" flavour of the community as a whole, which creates a need for a trade language, is probably accurately represented in the 74% intelligibility of the NL tape.

The Kinabatangan District average in Figure 42 includes the results from the two test corpora used by Hurlbut and Pekkanen (to appear).⁵⁶ This lower 51% intelligibility probably better represents the Murut community as a whole in that district than the higher 69% shown in Figure 41. In Tenom and Tawau districts the average intelligibility scores of 56% and 50% probably show a true average of the Murut communities at present, but the recent introduction of more schools is fast changing the general use and comprehension of Bahasa Malaysia among the younger generation.

TEST POINTS	AVG. SCORE	SEX M/F	AGE		EDUCATION		
			AVG.	RANGE	ED.	A.E.R.	A.E.S.
Bukau BT	81	6/3	50	22-71	3	5	2
Ambual KU	62	6/4	51	28-75	3	9	3
Apin-Apin KU	81	5/3	48	31-68	5	5	3
Dalit KU	85	9/1	36	17-58	6	6	4
Dangulad KU	84	6/4	38	24-58	5	9	4
Keramatoi KU	65	8/1	26	17-45	8	6	6
Kuala Biah KU	55	6/4	50	32-78	1	4	0
Kuangoh KU	86	5/5	39	21-62	4	7	3
Liau Laut KU	64	4/6	38	21-58	5	6	3
Masak KU ¹	93	5/5	36	19-70	7	9	7
Minansut KU ²	86	4/4	42	15-62	6	5	4
Sook KU	62	3/5	50	19-68	2	6	2
Tulid KU	68	5/5	32	13-56	7	6	4
Inarad KN	69	7/3	26	14-60	8	9	6
Kg Lima PN	21	5/5	37	20-50	1	3	0
Kg Empat PN	36	5/2	43	17-60	2	6	2
Pandewan PN ¹	60	6/4	32	12-62	6	6	3
Pensiangan PN	70	5/3	40	19-60	4	4	2
Selungai PN ³	50	8/3	31	18-48	4	4	2
Sapulut PN	59	5/5	39	18-59	3	6	2
Maligan SG ⁴	--	6/3	26	13-50	8	7	6
Kalabakan TU ¹	56	5/4	30	14-50	0	0	0
Serudung Baru TU	45	6/4	33	16-46	1	6	1
Entabuan TM	68	3/3	33	18-47	5	7	6
Langsat TM	33	5/5	46	16-63	4	6	2
Saga TM ¹	82	5/1	28	22-46	3	4	2
Tomani TM	59	5/4	30	21-58	6	5	4

Figure 41: Sociological data for the 27 Murut test points showing national language intelligibility scores. (Scores are given as percentages. The education data for each village are listed as the number of persons in the test corpus who had received formal education (ED.), the average number of years of education which those subjects had received (A.E.R.), and the average number of years of education per subject in the whole corpus (A.E.S.). Raised numbers after the village indicate irregular testing situations.⁵⁷⁾

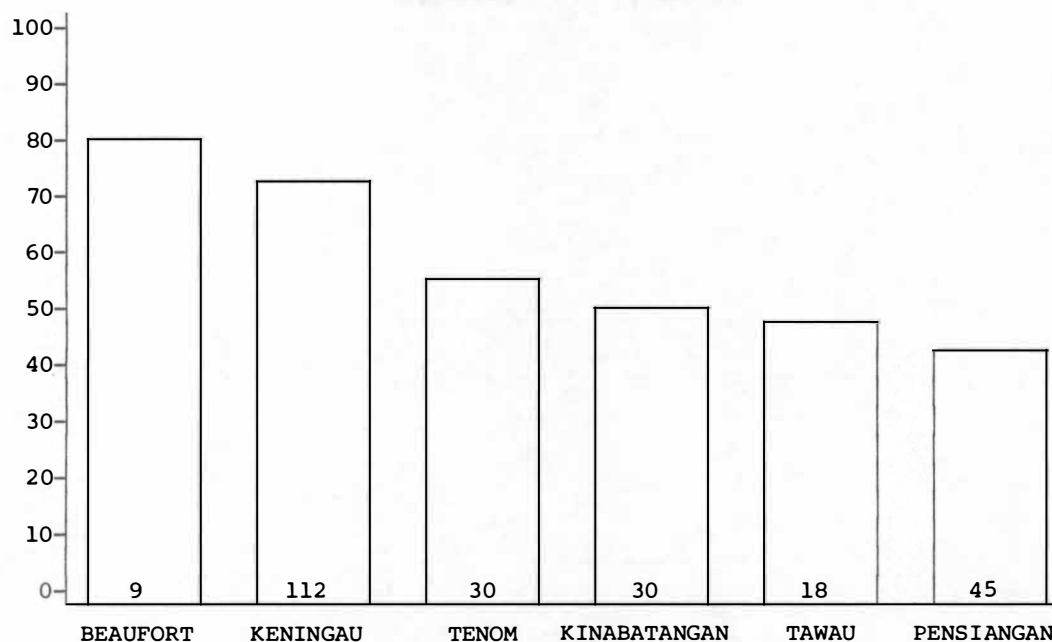


Figure 42: Average intelligibility of the national language tape by district. (The number of subjects considered in each average is noted in the respective column.)

Figure 43 shows the results of intelligibility of the NL tape by the level of education achieved, ranging from "no education" to "10 or more" years of formal training. The intelligibility results were directly influenced by this factor as seen in the steady rise from 47% among the non-educated to 95% among those receiving 10 or more years of education.

National language intelligibility testing demonstrated that the major factor influencing the intelligibility level attained was education in the medium of Bahasa Malaysia. Those with no formal training fared least well while those subjects having had some formal training demonstrated, on the average, intelligibility directly related to the level of education achieved. The factor of sex seemed to be significant only among the non-educated subjects. No other factors can be isolated with any degree of certainty as an influence on intelligibility. The factor of age appears to be of only limited significance by itself.

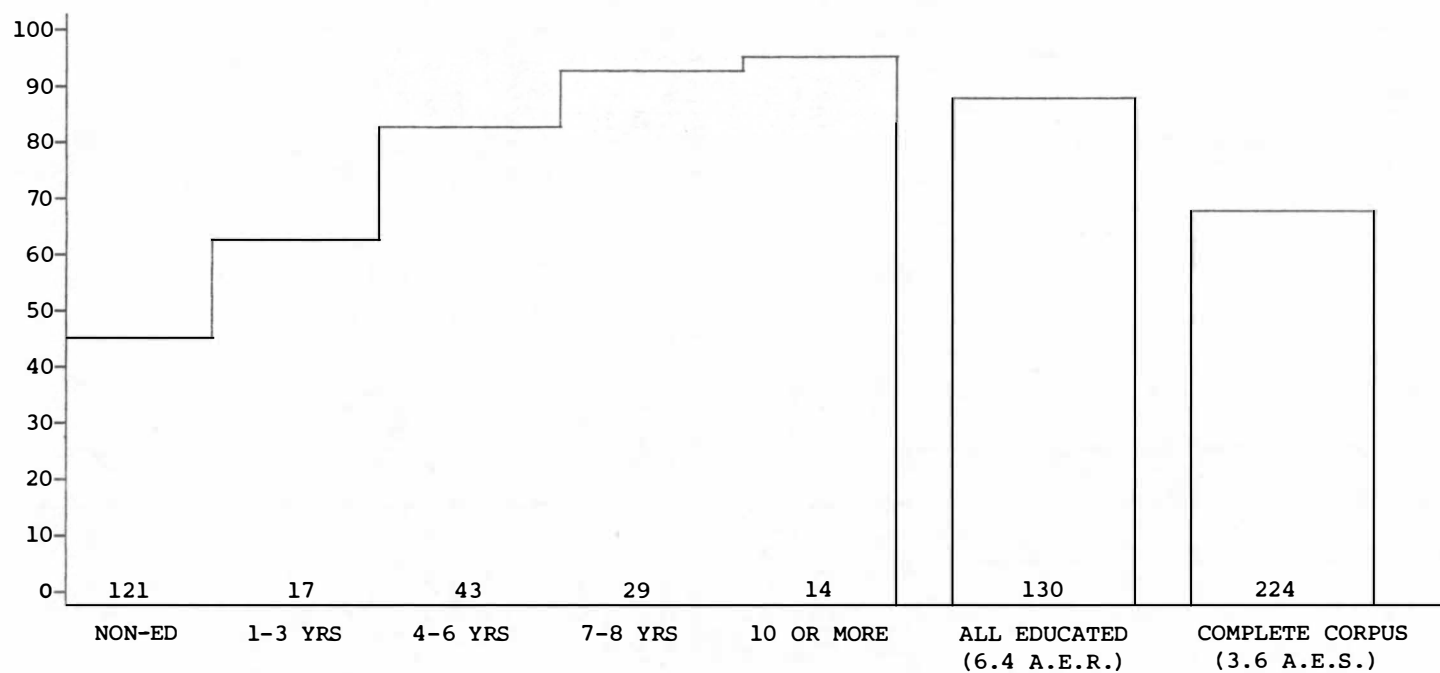


Figure 43: Average intelligibility of the national language tape by the level of education achieved.
 (The number of subjects considered in each average is noted at the bottom of the respective column.)

6. CONCLUSION

The research of the Summer Institute of Linguistics has gone a long way toward clearing up some questions concerning the classification of the Murutic languages of Sabah and Kalimantan. For instance, it is well established that 'Tawau Murut', while indeed Murutic, in fact, incorporates two Murutic sub-families and is not closely related to Pensiangan Murut, but shares its closest relation with 'Tengara' around the headwaters of the Kinabatangan River.

The delimiting of a distinct Tengara dialect and its classification with the Baukan language along the upper Sook River is also well established. It relates closer to Northern Murut dialects than to the eastern Murutic dialects or Tidong.

The results of the survey have demonstrated that the relationship between Tidong and Murutic languages is generally on the same level as their relation to the other two Bornean families, Dusunic and Paitanic. It was necessary first, however, to establish the classification of several languages (including Sembakung Murut, Tengara, Kalabakan Murut and Serudung Murut), formerly thought to be closer to Tidong, as Murutic.

An attempt has also been made to show that the Paluan language, rather than lexically belonging with either the Sumambu/Tagal or Central Murut dialects is situated (both geographically and linguistically) midway between the two language groups. Intelligibility testing seems to indicate the same, though some more testing using Paluan tapes is required.

Another question, not fully answered, is the isolating of four dialects of Keningau Murut. The degree of mutual intelligibility among all these dialects is still unknown. Related to this is the inclusion of Gana with Murutic languages rather than Dusunic. Gana intelligibility of Dusunic Kuijau, as well as Murutic Nabay, is established, making it somewhat of a 'juxtaposition' between Murutic and Dusunic languages.

Even so, much more research needs to be done among the Murutic languages before a more definitive classification can be offered. Specifically, wordlists should be collected from along the Telekosang River in Tenom and the Mengalong River in Sipitang. A wordlist from the Kolod area just west of Sipitang District along the Tengoa River in Sarawak is also needed. If it is possible to collect a wordlist from the Tengara speakers from the vicinity of the Kuamut River, an interesting lexical link might be found between Kalabakan Murut and Tengara, and thus other Northern Murut dialects.

In addition to the collection of wordlists, further intelligibility testing is necessary to verify some of the more tentative divisions. For instance, the two Kolod groups, Selungai Murut, Sembakung Murut and Pensiangan Murut should be tested for mutual intelligibility. Since others have considered Lumbis as very different from Salalir it would be prudent to do further testing in this area.

More testing among the Sumambu/Tagal dialects is also necessary. Mutual intelligibility must be tested between Rundum Murut and Tomani Sumambu, Maligan Tagal and Tomani Sumambu, and Maligan Tagal and Salalir. In addition, Salalir intelligibility of Tomani Sumambu and Maligan Tagal intelligibility of Rundum Murut should be tested. If the Telekosang and Mengalong River areas prove lexically distinct, they too should be included in the testing. Other languages which need further clarification by intelligibility testing are the dialects of Keningau Murut and Gana. Since only a Nabay reference tape was used in each of these, and an Apin-Apin Kuijau tape at Gana test points, much more testing could be done to show the present relations among these dialects.

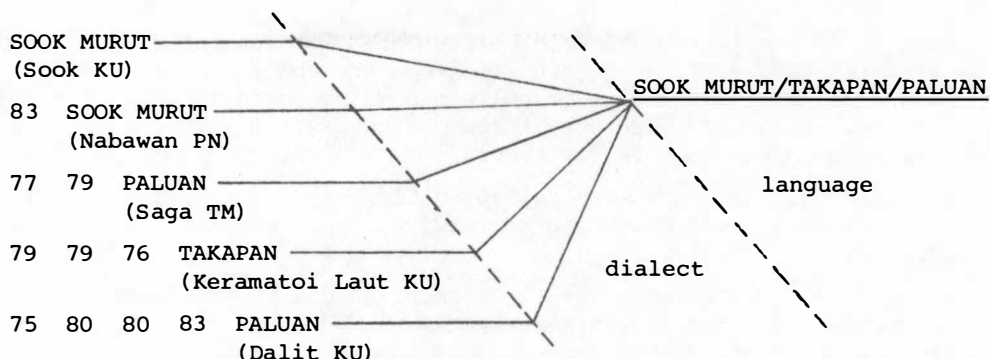
By this time, it seems that the nomenclature used to designate the Murutic language groups is hopelessly confused. But more extensive research among these groups than a general survey allowed may uncover some ethnonyms more descriptive of their ethnic origins and which are agreeable to the local people themselves as well as the professional linguist and anthropologist.

Concerning the intelligibility of the national language, it was shown that whereas comprehension of the NL tape was generally low among the Murut community as a whole, the educational level of the test subjects in the national language was isolated as the single most important factor in learning the language. Those having had some formal education demonstrated nearly twice the comprehension of the NL as those with no formal training. Therefore, as education in the national language continues to expand throughout the Murut community a higher level of intelligibility of the NL is certain to follow.

NOTES

1. The 1970 census listed a total Murut population of 30,947. The 31 December 1978 estimated population was listed at 39,282 (*Statistical handbook* 1978). These census figures tend to mix distinct linguistic and ethnic groups by including the Lundayeh as Murut, the Beaufort Murut as either Murut or Bisaya, and the Gana and Kuijau as either Kuijau, Murut or Kadazan (cf. Ride 1934; Jones 1966; Prentice 1971).

A convergence of several factors was used to arrive at the estimates used in this paper. Some of these factors include: 1) a comparison of the 1960, 1970 and 1980 census figures; 2) a check of available literature (Lee 1965; Jones 1966; Prentice 1971; Sullivan and Regis 1981); 3) estimates from the district officials, village headmen and others of the general populace; and 4) personal visits to more than 40 Murut centres.
2. Rutter (1922:65) derives the term 'Murut' from the Bajau word *belud mountain*. Woolley (1962:1) supposes it was first applied by Brunei or other foreigners. Prentice (1970:370) says only that it was of non-Ida'an origin. Some have thought that it implies *man of woods* (Whelan 1970:44).
3. This folk etymology was related by a young Lundayeh man in Sipitang District and agrees with that noted by Whelan (1970:44).
4. For convenience the two dialects have here been labelled Tagal 'A' and Tagal 'B', though Smith assigned no label to them.
5. This ethnonym could not be verified on subsequent trips to the Murut language area. However, for convenience it will continue to be used until the final analysis in Section 4.
6. A wordlist from Dalit KU was collected after Smith's data was compiled but prior to testing and was manually compared with several of the Central Murut languages. The following chart shows the lexical relations of these comparisons:



On the basis of the above, all five samples could be considered dialects of a single language. The remainder of this paper is written with this in mind. Also, the Dalit KU test point is handled together with Takapan since it shares the highest relation of PSC and is geographically closest to the language group.

7. Of SIL's wordlists, 22 were thoroughly checked and six only partially, but most PSC relations were recomputed. Eight of Smith's lists were not used at all since their high relations with other ones made in unnecessary. In addition, seven new wordlists were added.
8. Wordlists and other data were collected from several Murut villages which had not previously been visited. Intelligibility testing was conducted in five of these: Kuangoh KU (Gana), Kg Empat PN (Tagal), Selungai PN (Selungai Murut), Dalit KU (Takapan) and Pandewan PN (Sook Murut). Data from two remaining villages, Rundum TM and Lumbis KAL, were used in the testing and final classification along with the others.
9. Two of these tests have been included in Hurlbut and Pekkanen (to appear).
10. While there were two Serudung Murut villages, Serudung TU and Serudung Baru TU were considered as representing one village since the latter had migrated from Serudung TU within the past 20 years.

At the Takapan test point it was necessary to visit Keramatoi Laut KU, Ulu Keramatoi KU and Kuala Aging KU, all in the same vicinity, just to find a corpus of nine subjects. For this reason, the test point will be labelled "Keramatoi KU" since all of these villages are located along the Sook/Keramatoi River. The reference tape and wordlist, however, will be labelled "Keramatoi Laut KU" since they were collected in that village.

11. The intelligibility testing was sometimes conducted outside the village for which the wordlist, story or test point was named. Following is a list of such data:

Inarad KN - all the data found in Hurlbut and Pekkanen were collected in Inarad KN, but the second Inarad KN test was conducted at Pinangah KN and Tongod KN using people who had come downstream for trade, medical attention and school.

Labuk KAL - all the data were collected at Serudung Baru TU from a 50 year old man who had spent 14 years in Labuk KAL and from a 40 year old woman who had been born and reared in Labuk KAL.

Lumbis KAL - all the data were collected at Mendalom TM from a Murut man who had been born and reared in Lumbis KAL and spent considerable time there before migrating to Mendalom TM.

Maligan SG - all the data were collected at the town of Sipitang from Murut speakers who had come to town for trade or school.

Rundum TM - all the data were collected at Kemabong TM from a 40 year old man who had moved there only three months earlier and a 42 year old man who came to Kemabong TM for trade.

In addition, some data were collected from migrant villages, i.e., entire village populations which had migrated to their present location relatively recently.

Ansip KU - migrated from the Tagul and Sibangol Rivers in Pensiangan District more than 35 years earlier.

Baru Jumpa TM - migrated from Indonesia. Information and wordlist were obtained from a 40 year old man from Palumomot KAL and a 38 year old man from Kuala Lemumut KAL near Lumbis KAL. Both arrived about 24 years earlier. The former had a Lundayeh wife and the latter had a Lundayeh father and a "Kolod wife from Lumbis".

Kg Empat PN - migrated from Seliu PN on the Rundum/Sibangol River near Pensiangan PN a few years earlier. Kg Empat PN is one of the planned villages of the Nabawan Scheme in Pensiangan District.

Kg Lima PN - migrated from Kabu PN on the Salalir River near the Indonesian border about five years earlier. Kg Lima PN is also a planned village of the Nabawan Scheme.

Kuala Biah KU - migrated from the Tagul River area in Pensiangan District at least 45 years earlier to what used to be a 'Dayak' village.

Saga TM - at least some had migrated from the Dalit KU area about 20 years earlier. The man who gave the wordlist was not in this migration. Both of his parents (he was 52 years old) had originated from the Saga TM area. However, the story and the test subjects had originated from Dalit KU area.

Selungai PN - migrated upstream from Bantul PN, about one mile from the border, during the Confrontation with Indonesia.

12. Results from two Baukan dialect intelligibility tests conducted by SIL personnel using a slightly different approach are found in Hurlbut and Pekkanen (to appear). The tests were at Inarad KN and Kokoroton KN and included Baukan, Kolobuan, Makiang and Rumanau reference tapes. The latter three are representatives of the Upper Kinabatangan language (→ Paitanic). The results of the Murutic testing are included in the discussion in this section.
13. Baukan-Nabay PSC and intelligibility scores support this dialect division (→ Section 3.4). Using either parameter the Baukan village of Tulid KU shows a closer relation to Nabay than does the Baukan village of Inarad KN.
14. This division is further verified in Hurlbut and Pekkanen (to appear). While they record only 44-49% intelligibility of the Makiang and Kolobuan dialects by Kokoroton KN subjects, the Inarad KN subjects scored 82-89% intelligibility on two Kolobuan reference tapes. Not only does this suggest that Inarad KN subjects are assimilating more of the nearby Paitanic language, but it also reinforces the dialect distinction being drawn between Kokoroton KN and Inarad KN. Possibly the two Baukan dialects are diverging even more due to Inarad KN Muruts' frequent contact with Paitanic groups and Tulid KU Muruts' frequent contact with Keningau Murut groups.
15. At the time of testing, it was suspected that Selungai Murut was more closely related to Tagal dialects than the revised lexicostatistics indicate.

16. In addition to the advantage of the hometown tape, another factor that has probably influenced the score is the unbalanced ratio of male subjects to female subjects. The eight male subjects consistently showed higher intelligibility than the three female subjects. In the case of the Sapulut PN tape the males showed 93% intelligibility while the females showed 80%. This fact, together with the advantage of the hometown tape leads one to suspect that a marginal intelligibility score of 80% would more accurately reflect their performance.
17. The Northern Murut subfamily consists of all of the dialects classified by Prentice (1970, 1971) as Murut of his Ida'an family and referred to by authors variously as Northern Murut, Sabah Murut or Ida'an. The former is preferred here because it is most accurately descriptive and lacks the conflict with local ethnonyms that 'Ida'an' has (cf. Smith, in this volume). The use of Northern Murut is not synonymous with Cohen's (1981) use of the term.
18. Some of the Gana villages include Baru KU, Kuangoh KU, Narapot KU, Minansut KU and Tangkungan KU.
19. There is much confusion with ethnonyms applied to the language groups in the Keningau area. Prentice (1970:371) has a very useful chart in which he displays the names used by the various groups to identify one another. He further discusses nomenclature and the use of the ethnonym 'Minansut' for the group here identified as 'Gana'.

The use of the term Gana is retained for two reasons. First of all, Gana is the term commonly heard from the speakers themselves. The term means *lowland* or *plain* and thus accurately describes their present and past situation on the Keningau Plain east of the Pegalan River. Secondly, the source of the term 'Minansut' is not clear. While it may be a legitimate autonym it is not certain to what extent it was ever used. The SIL researchers who have lived and worked in the Keningau area have only heard it in reference to the Minansut KU village which is inhabited by Gana speakers. By Prentice's own admission the use of a particular autonym is often restricted to a single village or clan group.

20. While Prentice (1971) suggests that the items were apparently from a different subdialect than the one represented by his own Nabay list, it is more likely a mixture of several Keningau dialects. Using 294 comparable terms of Baboneau's 1800-item wordlist a revised Kadalakan KU (Nabay) wordlist has a relation of *90 PSC, revised Ambual KU (Ambual) and Liau Laut KU (Dusun-Murut) wordlists both have a relation of *77 PSC, a revised Apin-Apin KU (Apin-Apin Kuijau) wordlist has a relation of *74 PSC and a revised Minansut KU (Gana) wordlist has a relation of *64 PSC.
21. Using 106 comparable terms of Rutter's 185-item 'Keningau Murut' wordlist SIL's revised Nabay lists have relations of *80-85 PSC, with a revised Apin-Apin Kuijau list the relation is *82 PSC, with a revised Dusun-Murut list the relation is *83 PSC, with a revised Ambual list the relation is *85 PSC and with a revised Gana list the relation is *70 PSC.
22. One village leader estimated about 60 individuals.
23. One very old and influential man of the community said his father came from a village named Seraban on the Apin-Apin River and spoke Murut.
24. The position of Sodomon KU between Ambual and Mailo Rivers may contribute to the fact that it is actually more closely related lexically to Ambual KU of the Ambual dialect according to Smith's data. Tuarid Taud KU has also

been mentioned as a member of that dialect. However, lexically and geographically Tuarid Taud KU may better be grouped with Nabay villages. The mixed village of Binaong KU on the west side of the Pegalan River near the road also has some speakers of this dialect.

25. Some of these villages are Masak KU, Patikang Laut KU, Kadalakan KU, Limbawan KU, Dangulad KU, Tuarid Baru KU, and there are some speakers at Kg Keningau KU, Banjar KU and possibly Tuarid Taud KU.
26. Beaufort Muruts along the Padas River inhabit the villages of Saliwangan BT, Menonuk BT, Balibata BT, Papas BT and Malalugus BT. Others live along the Bukau River in Bukau BT, Tamangalong BT and Nalasadan BT.
27. Using 85 comparable terms of Crespigny's 142-item 'Murut Padass' wordlist, a revised Sandiwar wordlist from Bukau BT had a relation of *83 PSC and a revised Timugon wordlist from Langsat TM had a relation of *81 PSC.
28. District and village officials provided the following list of what they thought were Timugon villages: Tuan TM, Dolok TM, Mansalima TM, Naluyan TM, Gunting TM, Baab TM, Kalang TM, Uloi TM, Makakumpai TM, Makalalani TM, Entabuan TM, Amboi TM, Mendalom TM, Tumantalik TM, Mendalom Baru TM, Batu TM, Batu Batu TM, and some speakers in Tenom town TM, Saga TM, Sindugan TM, Makaniton TM, Kanar TM and Paguokon TM.

Residents of Langsat TM added those villages they considered the same as theirs: Logud TM, Simpangan TM, Mantailang TM, Pagausangon TM and Pulong TM.
29. Using 106 comparable terms of Rutter's 185-item 'Tenom Murut' wordlist, a revised Langsat TM (Kapagalan) wordlist has a relation of *88 PSC and a revised Entabuan TM (Poros) wordlist has a relation of *83 PSC. So in this data also it related more closely to the Kapagalan subdialect.
30. Some of the villages include Tulid KU, Pau KU, Tiong KU and part of Delayan KU. Keith (1936) added Tambalong (KN?) and Kindasan (KN?). Other Murut added Bunang KU, Mapila KU, Kapulu KU and Bersanan KU as Baukan, but these may better fit the Paluan language group. Residents of Limbawan KU called themselves Baukan but lexically the wordlist from there classifies better with Nabay.
31. The inhabitants of Kokoroton KN had dispersed between the time of SIL's first visit in October 1978 and the second visit in March 1981.
32. This village was mentioned by several people from Bukit Garam KN, Pinangah KN and Inarad KN. A district official in Tongod KN stated that they migrated within recent history from Inarad KN itself. However, Pryer (1881), Rutter (1929) and Keith (1981) designated this area as Tenggara and it may be they were there for at least several generations before recently dispersing.
33. Rutter's 'Tenggara' wordlist seems to be about *83 percent cognate with both SIL's Inarad KN and Labuk KAL lists and *82 percent cognate with SIL's Kalabakan TU list. It would be worth comparing the Tenggara language spoken along the upper Kuamut River if a speaker could be found, since Kuamut KN is nearly equidistant from Inarad KN and Kalabakan TU. SIL's samples from these latter two villages have a relation of 77 PSC between them.
34. The various village headmen and district officials gave the following list of villages. These include those "like" Saga TM: Batutingkang TM, Saga Ulu TM, Angalor TM with some speakers in Mansasoh Baru TM, Bambam TM, Sindugan TM and Mansasoh TM. The villages "like" Sook KU included Kuala Binuoh KU,

Babason KU, Tinagalan KU, Binakaan KU and Nabawan KU/PN with some speakers possibly at Bersanan KU, Susulat KU and Tiulan KU. The villages "like" Dalit KU included Kalampon KU, Tantaluan KU, Belinin KU, Ulu Puntih KU, Keramatoi Ulu KU, Keramatoi Laut KU, Punggol KU, Kahabah KU, Linayun KU, Kuala Aging KU, Malaing KU, Ramidi KU and Lumiri KU. It is not certain how far this extended, but some included Maluntok PN, Katalirus PN, Batutai PN, Sapulut PN (not the one on the Sapulut River), Suan PN, Lion PN, Ansapul PN, Damiliew PN and Pun Batu PN.

35. Using 105 comparable terms of Rutter's 186-item 'Peluan' wordlist, a revised Saga TM list has a relation of *89 PSC and a revised Dalit KU list has a relation of *84 PSC.
36. Informants at Pandewan PN included Matiku PN, Kagupil PN, Tataluan PN, Langkuku PN, Ulu Pandewan PN, Pamentarian PN, Takul PN, Mogontok PN, Piniris PN, Labug PN, Hongkuluson PN and Kagulio PN as having Pandewan Murut speakers.
37. For instance, Smith included both Salalir and Lumbis villages in his classification, Prentice did not. On the other hand, some of Rutter's Sumambu villages would undoubtedly be included in Prentice's Paluan classification.
38. Most of the residents of Seliu PN have moved to Kg Empat PN, part of the Nabawan Scheme PN. Most of the residents of Talingbakas PN, Silom PN, Kinabalau PN, Ulu Saliri PN and others have moved as well.
39. Ansip KU and Kuala Biah KU belong to this migration. More recently, it is reported, the Murut of Senagang Baru KU moved from Pensiangan District to Keningau District. Others have simply moved into other established villages such as Mambulu KU.
40. Harrisson (1967) mentioned two terms offered by his father/son informants, each rejecting the other's term. The son rejected 'Tagal' but suggested Ulun Kirong. The father also rejected 'Tagal' but rejected the latter term as well. He offered classification by river as being significant, recognising a) Ulun Saliu, b) Ulun Talankai and c) Ulun Sapulut. But, as later discovered, this did not distinguish specific ethnic/cultural groups but only where these groups were living at present. If they moved, the ethnonym would be changed to the name of the new location.
41. Throughout Pensiangan District informants rejected this ethnonym, but were aware that it was applied to them. It seemed to carry no more (or less) meaning than the term 'Murut'. However, in Sipitang, Tenom and Keningau districts they used this to identify themselves. The Tomani Native Chief even used 'Murut Sumambu Tagal', taking no chances.
42. According to Prentice (1970) Genderen Stort's (1916) wordlist belongs to this dialect.
43. The majority of the population of Kabu PN, near the Sabah/Kalimantan border, have moved to Kg Lima PN on the Nabawan Scheme PN. Masanoi TM informants stated that they arrived from the Salalir River area via Maligan SG ten years earlier and they mentioned residents from several other villages in the Tenom area who they thought also came from there, including Kauaran TM, Gumisi TM, Maugos TM, Belumbang TM, Enubai TM, Lampayak TM, Sungai Api TM and Abul TM, but this could not be verified.

Interestingly, the Masanoi TM wordlist patterned more closely with the Tomani TM list than the Salalir sample from Kg Lima PN. It is not certain whether this is due to recent borrowing or their original speech, but for

that reason, the 'Tagal' or 'Salalir' villages around Tenom TM remain suspect. Other factors may cause them to be grouped better with the Salalir dialect, but further investigation is necessary.

44. The Murut along the Salalir River and in Kg Lima PN probably number about 500, not including any in Kalimantan or those who may have migrated elsewhere. The Tenom migrant villages could number as many as 1000-1200 speakers.
45. SIL's Lumbis KAL list has been included on the basis of lexical comparisons, geography and some very limited intelligibility testing, but it does show some distinctiveness. Prentice (1970), using other wordlists, separates Lumbis from Salalir on the basis of 72 PSC and because of morphological differences he recognises (1971:299). Prentice (1971:4) estimated the entire Lumbis population in Sabah and Kalimantan as consisting of 3000 (?) members. It is possible that as many as a third of these could be in Sabah.
46. Three male and two female subjects listened to a simple Lumbis KAL story and averaged 95% intelligibility of the nine questions. They said it was the same as their own dialect, but they also said the same thing about Pensiangan Murut.
47. This would include such villages as Katubu TM, Kapulu TM, Emagit TM, Rundum TM and Salang TM, all in Tenom District.
48. Using 106 comparable terms of Rutter's 185-item 'Rundum Murut' wordlist SIL's Rundum TM list has a relation of *84 PSC, the revised Tomani TM list has a relation of *81 PSC and the revised Pensiangan PN list has a relation of *78 PSC.
49. Prentice (1970) isolated the Telekosang River region as a separate sub-dialect. Since SIL collected no list from that area, researchers had to depend on Tomani TM informants who considered it different from Rundum Murut and similar to their language. Since it is located on a different river, though, it is likely that it represents a unique dialect or sub-dialect.
50. Researchers were told the Tomani Native Chief held jurisdiction over 876 families. Some of the villages listed as having Tomani Sumambu speakers are Tomani TM, Bangkulan TM, Kalibatang TM, Marais TM, Bekuku TM, Melutut TM, Pangulobon TM, Katambalang TM, Kemabong TM, Ulu Tomani TM and Sugiang Lama TM. The Mengalong River group includes the villages Ulu Muaya SG, Ulu Mengalong SG, Kabawang SG, Kalangsat SG, Solob SG, Marau SG, Mengalong SG, Muaya SG, Kuala Muaya SG, Ulu Malaman SG, Malaman SG, Merapok Ulu SAR and Limpaki SAR. Researchers were told these Murut spoke 'Tagal' or 'Murut' (not Lundayeh) but no additional data was collected. Excluding any of the migrant villages mentioned above (note 41) but including the Mengalong River area, this whole dialect group could number as many as 4000-5000.
51. This includes such villages as Bol SG, Ulu Bol SG, Ibul SG, Maligan SG and Iburu SG.
52. The Kolod wordlist relates only 33-35 PSC with the three Lundayeh wordlists but *59-74 PSC with representative lists of the Northern Murut dialects. With eastern Murutic dialects it relates *56-71 PSC. With the Lumbis KAL list it has a relation of only *69 PSC even though they are supposedly very close geographically. However, SIL's Kolod wordlist was not thoroughly revised and it is believed that it may actually share a slightly higher relation with Sumambu/Tagal when the same considerations are afforded it

such as synonyms. If so, it too could be considered a Northern Murut language leaving Selungai Murut, Sembakung Murut, Kalabakan Murut, and Serudung Murut as more truly making up the Eastern Murutic subfamilies.

53. Also included are such villages as Bantul PN, Inpagis PN, Buntulon PN, and Kuala Temalasak PN. One informant listed 17 other villages which he felt were closer to Selungai Murut than to Pensiangan Murut. These are located along the Kuala Sumatalun River and further upstream along the Sapulut River to Agis PN and to Tinandok PN on the Tagul River. The author's impression is that the first information is more accurate, though differences probably appear gradually along the river. Some of the test subjects or their parents were born in the Indonesian villages of Linsayo KAL, Sematalung KAL, Isanal KAL, Kg Sembakung KAL and Simantabul KAL, "40" miles from Selungai.
54. The wordlist and information was collected from informants who originally came from Labuk KAL near the mouth of the Sembakung River. Labuk KAL is about eight days paddling from the Selungai Murut area, yet the two groups remain more closely related to one another (*77 PSC) than to any other group.
55. The number of years of education received includes the current year. No distinction is made between formal education of the national educational program and formal education of an adult educational program or formal religious instruction if it was conducted using Bahasa Malaysia.
56. The NL testing results of Hurlbut and Pekkanen (to appear) are used only on this district chart to provide a larger, more accurate picture. Their results would only minimally affect the much larger corpus using all Murut subjects. Thus it was not considered necessary to include their scores, since it would require considerable time to incorporate into the results presented here.
57. The irregular testing situations were as follows:
 - 1 One person refused to listen to the tape. His results were included in the Murut intelligibility scores and the sociological averages.
 - 2 One man seemed to be hard of hearing and was excluded from all the test results and sociological data. He showed 50% intelligibility.
 - 3 This village included only one subject who took the national language test.
 - 4 This village is included here for the sociological data only. No national language test was conducted.

