

## THE PAITANIC LANGUAGE FAMILY

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### 0. INTRODUCTION

The people of Sabah who speak languages here classified as members of the Paitanic language family, live throughout the northern and west-central parts of the state. They are generally an inland people who live along rivers in the interior of Sabah, though a few coastal settlements also exist (Figure 1).

The origin of this group is uncertain since most of the persons interviewed maintained that they had originated in their present locations. However, some people in the villages visited during the survey spoke of a migration of a group of people from the upper Kinabatangan River area to the village of Lanas KU across the Wittti Range. From Lanas KU and surrounding villages another group later moved to Tampias RU and other villages in that area because of village rivalry and warring. This migration is attested to by linguistic data collected in those areas. There is greater linguistic similarity between those two villages than between them and other villages of the Paitanic family.

The only other known movements of people speaking Paitanic languages involve some government resettlement within the upper Kinabatangan River area, from very remote areas along the river's tributaries to locations more easily accessible along the Kinabatangan River.

The people speaking languages of the Paitanic family have a complicated system of nomenclature. Ethnonyms for this large Paitanic family of languages are numerous and vary from one village to another based on sociological and/or linguistic factors.

In the upper Kinabatangan River area, Paitanic groups have names which they say were adopted by their group after the introduction of Christianity to the area. Some of these names are 'Sinabu' (also 'Sinobu'), 'Sinarupa' (also 'Sinarupo'), 'Makiang', 'Rumanau' (also 'Romanau', 'Roomarrows' and 'Rumanau Alab'), 'Kolobuan', and 'Sungai' (also 'Sungei', 'Orang Sungai', and 'Orang Sungei'). Several persons who were interviewed from these groups said that their former name was 'Tambanua' (also 'Tambanuo', 'Tambanuva', 'Tambanwas', 'Tambenua', 'Tambunwas', 'Tembenua', 'Tombonuva', 'Tunbumohas', and 'Tunbunwha') but that when they adopted Christianity, the name Tambanua was changed to a new name in order to distinguish themselves. At present the name 'Sungai' (*river*) or 'Orang Sungai' (*people of the river*) is being widely accepted in the upper Kinabatangan River area as a generic autonym.

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139

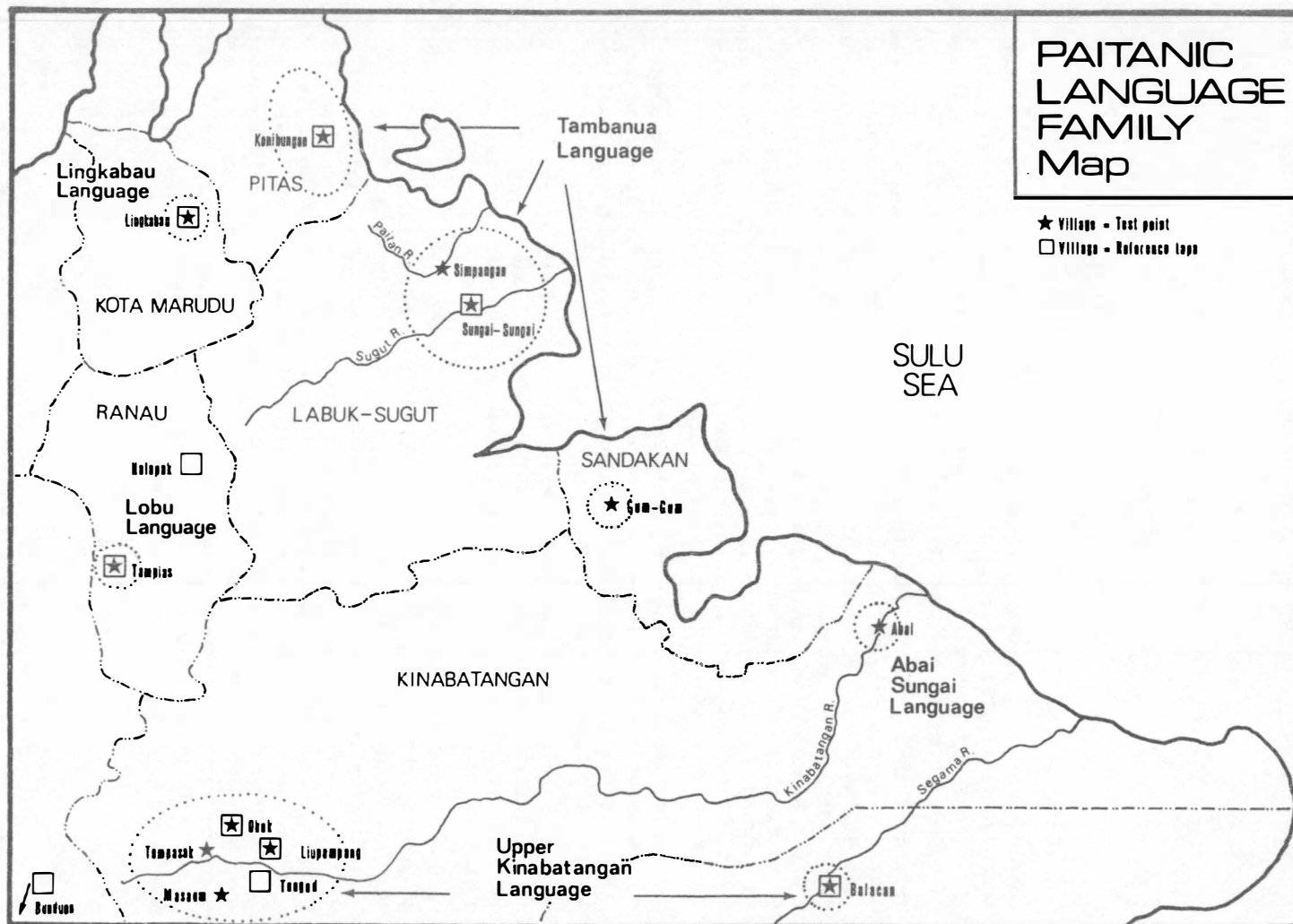


Figure 1: Paitanic language family map showing the general area where the five Paitanic languages are spoken, the villages where intelligibility testing was done and the sources of the reference tapes used in the testing

In the lower Kinabatangan River area as well as the regions along the Sugut and Paitan Rivers and on the Bengkoka Peninsula (Pitas District) where languages of the Paitanic family are spoken, the distinction is quite clear between the 'Tambanua' people who consider themselves religionless and the 'Orang Sungai' who follow the religion of Islam. The 'Orang Sungai' who were interviewed said that they changed their autonym when they converted to Islam.

The people living in Lanas KU and surrounding villages and those speaking the same language in Tampias RU and the surrounding area call their language 'Lobu', which in the Paitanic languages means *people*.

Two other groups speaking languages that are here classified as Paitanic are the 'Lingkabau' (also 'Linkabau') people living in a village of the same name and other villages in the surrounding area in southern Kota Marudu District; and the 'Dusun Segama' (also 'Saga-i', 'Saghai', 'Segai', and 'Segama Dusun') people living along the Segama River in Lahad Datu District.

The people of Parancangan LS speak the 'Dumpas' language (→ Dumpas). This language patterns lexicostatistically on the border between Dusunic and Paitanic. Though it had been originally classified as Dusunic, intelligibility testing results indicated a closer affinity to the Tambanua (Paitanic) language. Since no cross-testing has been done, Dumpas will continue to be considered Dusunic.

In the whole of Sabah there are approximately 20,000 people speaking the languages that are here classified as Paitanic.<sup>1</sup>

The only known published material about Paitanic languages are a linguistic sketch by Asmah Haji Omar, in which she describes the 'Paitan' language of Membangan BT,<sup>2</sup> and a description of dialect intelligibility testing among the languages of the upper Kinabatangan River area by Hurlbut and Pekkanen (to appear) which includes one of the languages here classified as Paitanic.

### 1. LEXICOSTATISTICAL CLASSIFICATION

Smith (in this volume) classifies the Paitanic language family as consisting of five languages: Upper Kinabatangan (which includes also Dusun Segama), Tambanua, Abai Sungai, Lingkabau, and Lobu. He further states that these languages relate to each other as a language chain. Each of the five languages forms a link in the chain and each link relates to at least one other in the range of 75-80 percent of shared cognates (PSC). The Upper Kinabatangan language is said to form the central link in this language chain (Figure 2). Most of the inter-language relationships are well below 75 PSC as can be seen in Figure 3.

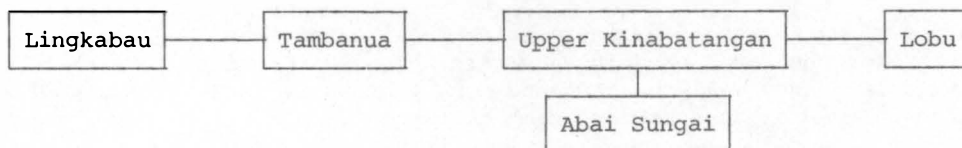


Figure 2: Language chain of the languages in the Paitanic family (from Smith, in this volume)

									LU (Lingkabau KM) ————— Lingkabau Language
70									SI (Pulau Jambongan LS) ————— Tambanua Language
79	80								TA (Konibungan PS)
65	70	77							SI (Abai LS) ————— Abai Sungai Language
64	67	70	73						DA (Bukit Balacan LD)
71	72	76	79	85					KB (Pinangah KN) ————— Upper Kinabatangan Language
71	76	79	73	75	85				SI (Gum-Gum SN)
68	67	71	67	69	80	74			SU (Liupampang KN)
66	60	69	58	60	67	65	72		LO (Tampias RU) ————— Lobu Language

Figure 3: PSC relations between representative samples of the five languages in the Paitanic language family. (from Smith, in this volume) (LU = Lingkabau; SI = Sungai; TA = Tambanua; DA = Dusun Segama; KB = Kolobuan; SU = Sinabu; LO = Lobu.)

Because of these relatively low PSC relations between the languages of the Paitanic family, it was necessary to do testing to determine the level of intelligibility between these related languages. In the case of language chaining such as this noted in the Paitanic language family, there is often found to be a loss of intelligibility between the more distant links.

## 2. TESTING PROCEDURES

Ideally at least two villages should have been chosen as test points for each of the five Paitanic languages. However, in the cases of Lingkabau, Lobu and Abai Sungai languages only one village was tested for each.<sup>3</sup> More than two test points each were chosen for the Upper Kinabatangan and Tambanua languages. This was due to the significantly larger size and geographical spread of the groups speaking these languages and also to the great linguistic and sociological diversity found within these two language groups.<sup>4</sup>

The taped stories used for testing differed somewhat from language to language and also sometimes from village to village within a given language. An attempt was made to test and cross-test each of the five Paitanic languages. This was not done, however, in the case of the Abai Sungai language (→ Section 3.3) nor the Lobu language (→ Section 3.5).

Figure 4 gives a summary of the testing done in Paitanic language villages, showing the reference tapes used in each case. The test results in each of the five Paitanic languages will be discussed more thoroughly in Section 3 showing the specific reference tapes used at each test point.

All of the tapes used for the intelligibility testing were considered good with regard to technical quality. The content of all of the stories was also good, although in the case of the story from Liupampang KN the subject matter and progression of the story may have been too easy to provide a good test. In all cases where that tape was used subjects scored very high.

REFERENCE TAPES  TEST POINTS	UPPER KINABATANGAN	TAMBANUA	ABAI SUNGAI	LINGKABAU	LOBU
UPPER KINABATANGAN Liupampang KN Tempasak KN Masaum KN Bukit Balacan LD	10 xx xxx xxx xx	7 xx xx xx x	-	1   x	2 x x
TAMBANUA Konibungan PS Sungai-Sungai LS Simpangan Paitan LS Gum-Gum SN	12 xxx xxx xxx xxx	5 x x xx x	-	1   x	2  x x
ABAI SUNGAI Abai KN	3 xxx	2 xx	1 x	1 x	
LINGKABAU Lingkabau KM	3 xxx	2 xx	-	1 x	1 x
LOBU Tampias RU	2 xx				

Figure 4: Summary of Paitanic language family test points and reference tapes used for testing at each point. (The numerals indicate the number of reference tapes used in the testing within each language group. x's indicate the number of reference tapes used at each test point.)

### 3. TEST RESULTS

#### 3.1 Upper Kinabatangan language

Intelligibility testing was conducted in four villages which had been classified as representing the Upper Kinabatangan language. The results of this testing are shown in Figure 5.<sup>5</sup>

Three of these test points, Liupampang KN, Tempasak KN, and Masaum KN are located in the upper Kinabatangan River area and refer to themselves and their languages as 'Sinabu', 'Makiang', and 'Rumanau' respectively. The fourth test point village was Bukit Balacan LD, located near the Segama River in Lahad Datu District. The people of this village refer to themselves as 'Dusun Segama'.

REFERENCE TAPES  TEST POINTS	UPPER KINABATANGAN			TAMBANUA		LING- KABAU	LOBU
	Liupampang KN 'Sinabu'	Tongod KN 'Makiang'	Bukit Balacan LD 'Dusun Segama'	Konibungan PS 'Tambanua'	Sungai-Sungai LS 'Sungai'	Lingkabau KM 'Lingkabau'	Tampias RU 'Lobu'
Liupampang KN 'Sinabu'		87 (80)	60 (69)	64 (71)	58 (69)		70 (72)
Tempasak KN 'Makiang'	85 (79)	94 (95)	70 (81)	67 (77)	64 (76)		54 (67)
Masaum KN 'Rumanau'	87 (85)	86 (74)	67 (62)	59 (68)	62 (65)	41 (65)	
Bukit Balacan LD 'Dusun Segama'	91 (69)	91 (82)		60 (70)			

Figure 5: Intelligibility testing results from four Upper Kinabatangan language villages tested with the Upper Kinabatangan language and other Paitanic languages. (Scores are given as percentages. PSC figures are in parentheses. An autonym for each village is given under the village name.)

All four of the test points obtained high scores on the stories from Liupampang KN and Tongod KN, both of which had been classified as representing the Upper Kinabatangan language. However, results on the story from the village of Bukit Balacan LD, which was also classified as representing the Upper Kinabatangan language, are quite low.

There are two possible explanations for the low scores recorded on the Bukit Balacan LD tape. One possible reason is that the village of Bukit Balacan LD is geographically quite distant from the other villages which were tested or from which reference-tape stories were taken. But, since the test subjects at Bukit Balacan LD scored very high on the other two Upper Kinabatangan language stories, this reason may not be viable.

A second possible explanation is that Bukit Balacan LD represents a distinct dialect or even a distinct language from the Upper Kinabatangan language samples. This seems possible based on the relatively low PSC relations between Bukit Balacan LD and the other Upper Kinabatangan language samples (62, 69, 81 and 82 PSC). But since the Bukit Balacan LD test subjects scored so high on the other Upper Kinabatangan language samples, and language learning is an unlikely explanation for that, any reclassification of the Bukit Balacan LD sample will have to wait until more data can be gathered and more thorough testing can be done.

The results of testing at Upper Kinabatangan villages with stories from the other Paitanic languages (Tambanua, Lingkabau and Lobu) are significantly lower than their respective PSC figures in all cases, thus confirming that the four are separate languages with only limited intelligibility between them.

When the Tambanua, Lingkabau, Lobu, and Abai Sungai villages were tested for their understanding of the Upper Kinabatangan language (Figure 6) scores were also quite low and definitely below the same-language threshold (→ Introduction) in all but two situations. As can be seen from Figure 6, there were three high scores on the Liupampang KN story. This however can be explained by the ease of that story, and the scores are therefore considered to be somewhat misleading (Section 2). The other situation where the test scores appear to be higher than expected were the results from the Lobu village of Tampus RU (→ Section 3.5).

REFERENCE TAPES  TEST POINTS		UPPER KINABATANGAN			
		Liupampang KN 'Sinabu'	Tongod KN 'Makiang'	Bukit Balacan LD 'Dusun Segama'	Obuk KN 'Rumanau'
TAMBANUA	Konibungan PS 'Tambanua'	76 (71)	45 (76)	56 (70)	
	Sungai-Sungai LS 'Sungai'	66 (69)	48 (75)	55 (71)	
	Gum-Gum SN 'Sungai'	93 (74)	39 (82)	76 (75)	
ABAI SUNGAI	Abai KN 'Abai Sungai'		66 (77)	62 (73)	
LING- KABAU	Lingkabau KM 'Lingkabau'	89 (68)	61 (70)	64 (64)	
LOBU	Tampus RU 'Lobu'	95 (72)			85 (76)

Figure 6: Intelligibility testing results when Upper Kinabatangan language reference tapes were used in testing at Tambanua, Abai Sungai, Lingkabau and Lobu villages. (Scores are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.)

### 3.2 Tambanua language

Three villages where the language classified by Smith as Tambanua is spoken were tested for their understanding of the Tambanua language of different areas than their own and their understanding of other Paitanic languages. In addition,

the village of Gum-Gum SN is included as a Tambanua test point even though it had initially been classified lexicostatistically as representing the Upper Kinabatangan language. During the intelligibility testing it was discovered that the wordlist on which the lexicostatistical classification was based, had been elicited from a person who had originated in the Upper Kinabatangan area. However, the majority of the residents of Gum-Gum SN who speak a Paitanic language (all of those who were tested) originally came from the Sugut River area and speak the Tambanua language. Figure 7 displays the results of that testing. Figure 8 shows the results of cross-testing Tambanua reference tapes in villages where other Paitanic languages are spoken.

From Figure 7 it can be seen that in testing within the Tambanua language, results were very high, so that it appears that there is no dialect distinction between the language as it is spoken in Pitas District and Labuk-Sugut District. The results at Gum-Gum SN, though lower, are still within the single-language boundary.

When Tambanua test subjects were tested for their understanding of the Upper Kinabatangan, Lobu, and Lingkabau languages, test results were generally below the same-language threshold and significantly lower than respective PSC relations. These results, then, would confirm that Tambanua is a distinct language from the Upper Kinabatangan, Lobu, and Lingkabau languages.

REFERENCE TAPES  TEST POINTS		TAMBANUA		UPPER KINABATANGAN			LOBU	LING- KABAU
		Konibungan PS 'Tambanua'	Sungai-Sungai LS 'Sungai'	Bukit Balacan LD 'Dusun Segama'	Liupampang KN 'Sinabu'	Tongod KN 'Makiang'	Tampias RU 'Lobu'	Lingkabau KM 'Lingkabau'
TAMBANUA	Konibungan PS 'Tambanua'		93 (91)	56 (70)	76 (71)	45 (76)		
	Sungai-Sungai LS 'Sungai'	93 (91)		55 (71)	66 (69)	48 (75)	60 (67)	
	Simpangan Paitan LS 'Sungai'	93 (90)	93 (91)	46 (70)	52 (73)	51 (75)		50 (77)
	Gum-Gum SN 'Sungai'	84 (79)		76 (75)	93 (74)	39 (82)	47 (65)	

Figure 7: Intelligibility testing results at four Tambanua villages. (Results are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.)



REFERENCE TAPES  TEST POINTS		TAMBANUA	
		Konibungan PS 'Tambanua'	Sungai-Sungai LS 'Sungai'
UPPER KINABATANGAN	Liupampang KN 'Sinabu'	64 (71)	58 (69)
	Tempasak KN 'Makiang'	67 (77)	64 (76)
	Masaum KN 'Rumanau'	59 (68)	62 (65)
	Bukit Balacan LD 'Dusun Segama'	60 (70)	
ABAI SUNGAI	Abai KN 'Abai Sungai'	57 (72)	76 (72)
LING- KABAU	Lingkabau KM 'Lingkabau'	69 (79)	64 (77)

Figure 8: Intelligibility testing results for villages where a Tambanua reference tape was used for testing. (Scores are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.)

### 3.3 Abai Sungai language

The only village tested where the Abai Sungai language is spoken was the village of Abai KN. Results of that testing are shown in Figure 9. As can be seen from the chart, test results were low in all cases. This is likely due to the fact that this language group is isolated from other Paitanic language communities. It should also be noted that persons from Abai KN stated that members of the community are making an effort to use the national language (Bahasa Malaysia) more than their local dialect. This too could influence the test scores.

Based on the limited test results for Abai Sungai, there is no reason for reclassification of this language. Further intelligibility testing and cross-testing would be necessary in order to make a more complete statement about this language community. And further, a sociolinguistic survey of the language community could help in gaining a better understanding of language use in the Abai Sungai community.

REFERENCE TAPES	UPPER KINABATANGAN		TAMBANUA		LING- KABAU	LOBU
	Tongod KN 'Makiang'	Bukit Balacan LD 'Dusun Segama'	Konibungan PS 'Tambanua'	Sungai-Sungai LS 'Sungai'	Lingkabau KM 'Lingkabau'	Tampias RU 'Lobu'
Abai KN 'Abai Sungai'	66 (77)	62 (73)	57 (72)	76 (72)	44 (65)	44 (58)

Figure 9: Intelligibility testing results from the Abai Sungai village of Abai KN. (Results are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.)

### 3.4 Lingkabau language

The village of Lingkabau KM (not to be confused with Lingkabau LS, where the Tambanua language is spoken) was the only village tested where the Lingkabau language is spoken. The results of that testing are shown in Figure 10.

REFERENCE TAPES	UPPER KINABATANGAN			TAMBANUA		LOBU
	Tongod KN 'Makiang'	Liupampang KN 'Sinabu'	Bukit Balacan LD 'Dusun Segama'	Konibungan PS 'Tambanua'	Sungai-Sungai LS 'Sungai'	Tampias RU 'Lobu'
Lingkabau KM 'Lingkabau'	61 (70)	89 (68)	64 (64)	69 (79)	64 (77)	57 (66)

Figure 10: Intelligibility testing results at the Lingkabau village of Lingkabau KM. (Results are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.)

Intelligibility testing results were low in every case except for the test on the Liupampang KN story (→ Section 2). All the persons tested stated that each of the stories was difficult, even though they recognised some words. They felt that they really did not understand the tapes and that all the languages on the tapes were different from their own.

Intelligibility testing results, therefore, confirm the classification of the Lingkabau language as different from the other Paitanic languages with which it was tested.

### 3.5 Lobu language

Tampias RU was the only Lobu-speaking village where intelligibility testing was done. The results of that testing are shown in Figure 11.

REFERENCE TAPES  TEST POINT	UPPER KINABATANGAN		KADAZAN/DUSUN	
	Liupampang KN 'Sinabu'	Obuk KN 'Rumanau'	Nalapak RU 'Dusun'	Bunduon PG 'Kadazan'
Tampias RU 'Lobu'	95 (72)	85 (76)	95 (59)	54 (55)

Figure 11: Intelligibility testing results at the single Lobu language test point of Tampias RU. (Results are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.)

The test set used at the village of Tampias RU was made up of two stories from villages where the (Paitanic) Upper Kinabatangan language is spoken and two stories from villages where Dusunic languages are spoken. The Dusunic languages were chosen because the village of Tampias RU is one of about three villages where the Lobu language is spoken in an area where Dusun is the dominant language. The testing of Lobu speakers with Dusunic language tapes was done only to demonstrate the amount of language learning which has taken place in the Lobu community.

The only Paitanic language tapes used in this testing were two representing the Upper Kinabatangan language. These were the only two with PSC relations high enough to warrant testing. When this testing was done, the existence of language chaining in the Paitanic language family had not yet been discovered. Further testing of Lobu with the other Paitanic languages would better reveal the position of the Lobu language in the larger Paitanic language family.

It is also interesting to note that although the Lobu test subjects scored very high on the two Upper Kinabatangan language stories, in cross-testing the Upper Kinabatangan test subjects scored only about 70% intelligibility on the Lobu story (Figure 5). The 95% intelligibility scored on the Dusun story from Nalapak RU also reveals that there has been a great deal of language learning on the part of the Lobu language community.

## 4. NATIONAL LANGUAGE INTELLIGIBILITY

National language intelligibility testing was done in each of the 11 Paitanic test points. The results of that testing, including some sociological data about each test corpus are displayed in Figure 12.

TEST POINTS	AVG. SCORE	SEX M/F	AGE		EDUCATION		
			AVG.	RANGE	ED.	A.E.R.	A.E.S.
Liupampang KN (Upper Kinabatangan)	49	7/3	37	17-62	2	4	1
Tempasak KN (Upper Kinabatangan)	50	5/5	35	21-55	0	-	-
Masaum KN (Upper Kinabatangan)	42	7/3	33	15-50	6	6	4
Bukit Balacan LD (Upper Kinabatangan)	88	5/6	35	13-65	4	6	2
Konibungan PS (Tambanua)	81	6/4	37	14-64	3	6	2
Sungai-Sungai LS (Tambanua)	80	7/3	37	16-64	4	6	2
Simpangan Paitan LS (Tambanua)	70	8/2	37	25-62	1	6	1
Gum-Gum SN (Tambanua)	96	6/4	32	16-48	5	8	4
Abai KN (Abai Sungai)	62	8/2	38	16-60	2	10	2
Lingkabau KM (Lingkabau)	35	6/4	37	23-55	1	6	1
Tampias RU (Lobu)	68	4/3	39	23-55	4	4	2

Figure 12: Comprehension of the national language in 11 Paitanic villages with sociological data. (Test scores are given as percentages. Under EDUCATION, ED. = the number of subjects who had received formal education, A.E.R. = the average number of education those subjects had received, and A.E.S. = the average number of years of education per subject for the corpus as a whole. Language names, following the classification in this paper, are given in parentheses beneath the village names.)

As would be expected, intelligibility of the national language was generally higher for persons who have had some formal education. This was true except in the case of the test subjects from Konibungan PS, where the persons who had some formal education averaged 77% intelligibility of the national language test story and persons with no formal education averaged 83% intelligibility. On the basis of the data gathered in this study no explanation of this seeming discrepancy can be offered here.

The village of Gum-Gum SN scored the highest on this test (96%). The village of Gum-Gum SN is a mixed language community, so that residents of that village must use the national language in order to communicate with persons from language groups other than their own. In addition, Gum-Gum SN is located in an area with easy access to the city of Sandakan SN, a major economic and educational centre.

The results of the national language test at Abai KN were surprisingly low, since the people in that village said they are making a conscious effort to make Bahasa Malaysia the primary means of communication in the community. It should be noted, however, that of the ten persons tested at the village of Abai KN, only one had been to school, and that factor alone could account for the discrepancy.

## 5. CONCLUSION

On the basis of the intelligibility testing results presented in this paper, it appears that within the Paitanic language family there are four mutually unintelligible languages: the Upper Kinabatangan language, the Tambanua language, the Abai Sungai language, and the Lingkabau language. In addition, the Lobu language may also be a language separate from the rest, but further study is necessary in order to confirm this.

In the Upper Kinabatangan language testing, although the test subjects at the village of Bukit Balacan LD had a very high level of understanding of other Upper Kinabatangan language tapes, the reverse was not true. Further testing is needed to determine more precisely whether the Upper Kinabatangan language of Bukit Balacan LD (the language there is known as Dusun Segama) should be considered a dialect or a separate language.

In all other cases of testing between the Upper Kinabatangan language, the Tambanua language, and the Lingkabau language, with the exception of the skewing caused by the Liupampang KN story (Section 2), the intelligibility testing results show clearly that these three groups have very low mutual intelligibility and should therefore be considered separate languages.

## NOTES

1. This figure can be broken down into separate language groups as follows: Upper Kinabatangan language, 5,000; Tambanua language, 10,000; Abai Sungai language, 500; Lingkabau language, 3,000; and Lobu language, 1,500. These figures are based on information given in the villages and from district officials.

2. The inhabitants of Membangan BT originally came from the Paitan River area, Labuk-Sugut District.
3. Other Lingkabau villages were not tested because of the remoteness of the area and the unavailability of guides. No further testing of the Abai Sungai language was done because the people of Abai KN were unaware of other villages where the same language was spoken. No further Lobu language testing was done because technicians were unaware at the time that there were other areas where the Lobu language was spoken. Since the initial intelligibility testing reported in this paper, it has been determined that there are at least two other villages near Tampias RU and approximately seven villages around Lanas KU where the Lobu language is spoken.
4. Initial intelligibility testing was done in the upper Kinabatangan River area of Sabah (Hurlbut and Pekkanen, to appear) prior to the collection of the full set of Paitanic language family data. That initial testing was restricted to the geographical boundaries of that region in order to test the mutual intelligibility of all the languages in that area.
5. Since the only Paitanic language considered by Hurlbut and Pekkanen (to appear) was the Upper Kinabatangan language, their intelligibility testing results (given in the following chart) are not considered relevant for the classification of Paitanic languages in this paper. In the chart results are given as percentages. PSC relations are in parentheses. An autonym for each village is given under the village name.

REFERENCE TAPES							
TEST POINTS		Diwara KN 'Makiang'	Tongod KN 'Makiang'	Pinangah KN 'Kolobuan'	Masaum KN 'Rumanau'	Obuk KN 'Rumanau'	Liupampang KN 'Sinabu'
UPPER KINABATANGAN LANGUAGE	Tempasak KN 'Makiang'		91 (95)				94 (79)
	Diwara KN 'Makiang'		95 (96)	89 (99)	77 (74)		98 (80)
	Langga KN 'Kolobuan'	59 (97)		86 (98)			
	Pinangah KN 'Kolobuan'		95 (98)		74 (74)		94 (80)
	Masaum KN 'Rumanau'		91 (74)	79 (74)			91 (85)
	Lulumiab KN 'Rumanau'		84 (--)	97 (--)	98 (--)		98 (--)
	Obuk KN 'Rumanau'		77 (74)				
	Liupampang KN 'Sinabu'		98 (80)			96 (88)	
	Kitumbalang KN 'Sinabu'		94 (84)			99 (85)	98 (93)
	Minusu KN 'Sinabu'		85 (83)			87 (88)	
	Bulot KN 'Sinarupa'		97 (77)	66 (99)		52 (78)	80 (80)

(Refer Note 5, previous page)

