

NOR-PONDO LEXICOSTATISTICAL SURVEY

Stan Abbott

1. INTRODUCTION

1.1. Reasons for conducting survey

The reasons for conducting this survey were to confirm tentative conclusions for the classifications of dialects, languages, language families, and stocks by determining the relationships according to lexicostatistical procedures and to find a suitable allocation in which to do linguistic, literacy, and translation work.

1.2. Groups surveyed

The target of the survey was a group of Nor-Pondo languages (names after the words for 'man' in the two groups) in the East Sepik Region of Papua New Guinea. The Nor-Pondo Families are considered to be a part of the Sepik-Ramu Phylum posited as follows by Laycock (1973):

Sepik-Ramu Phylum: 192,362

Sepik Sub-Phylum: 133,412

Lower Sepik Sub-Phylum (Nor-Pondo): 11,658

Nor Family: 2,594

Murik Language: 1,476

Villages:	Aramut	Karau
	Darapap	Mendam
	Jangimut	Wagamut

Kopar Language: 229

Villages: Kopar
Singarin
Wongun

Pondo Family: 9,064

Angoram Language: 6,514

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Villages:	Angoram	Moim	Maramba
	Kambrindo	Tambali	Sapalu
	Kambrok	Yueriman	Chuimondo
	Kanduanam	Angrumara	Bien
	Krinjambi	Andua	Imbuando
	Magendo	Arangunam	Marbuk
	Mundomundo	Kausimbi	
	Pinang	Kundima	

Karawari Language: 1,300

Villages:	Ambonwari	Kungriabun
	Imanmeri	Manjamai
	Kaiwaria	Marinyam
	Konmei	Masandenai
	Kundiman	Meiderobi

Chambri Language: 1,050

Villages:	Aibom	Kilimbit	Milae
	Arinjone	Luk-Luk	Timbunmeri
	Changriman	Mari	Wombun
	Indingai	Mensuat	Yambi Yambi

Yimas Language: 200

Villages: Yimas

The primary focus within the Nor-Pondo Families was the Murik and Kopar Languages of the Nor Family and the Angoram Language of the Pondo Family.

1.3. Previous linguistic work

Previous linguistic work in the area includes a grammar statement for Murik by Joseph Schmidt 1924-26, 1933, and 1953; preliminary establishment or perception of relationships of the Nor-Pondo Stock by Karl Lauman 1951, 1952, and 1954; confirmation and extension of the establishment of Nor-Pondo relationships by Eike Haberland in 1966; and three survey fieldtrips for the proposition of the entire Sepik-Ramu Phylum by D.C. Laycock 1965a, 1965b, and 1973.

1.4. Geographic description

The Murik language group is located on the Murik Lakes, from the mouth of the Sepik River west along the coast approximately 23 miles to the village of Kaup, and inland approximately ten miles to the flood plain region, an area of approximately 232 square miles. The area is almost totally mangrove swamps and the Murik Lakes are primarily salt water, controlled by the Bismarck Sea. The Bismarck Sea is very slowly removing the beach area along the coast of the Murik Lakes area and forcing the villagers inland. Jangimut, Wagamut, and Aramut (collectively called Murik by the people of the area) and Mendam, in which only a few old people reside, are the villages left on the actual beach area. Most of the people of Mendam have relocated at the village site of Bramick inside the lagoons. The remaining few people of Bramick merely incorporated into the village of Mendam and therefore Bramick is no longer considered a separate village. Karau was forced to relocate inland approximately $\frac{1}{4}$ or $\frac{1}{2}$ mile from

the beach in the mangrove swamp. Darapap is the only village without the problem of a loss of beach area. Approximately 20 years ago a steamship sunk directly off the coast adjacent to the village of Darapap. Since that time the sand has actually been building up on the sunken hull of the ship. Therefore Darapap has about $\frac{1}{4}$ mile of high ground between the village and the sea. The lagoons are shallow in many places and there are many water trails cut through the mangrove trees. A guide is a necessity.

The Kopar language group is located on the Sepik River from the mouth of the Sepik, upriver approximately 25 miles. The area is primarily flood plain forest, mangrove swamps, and nipa. This language group is part of the Lower Sepik 11 Census Division along with the villages of Bien, Marbuk, and Imbuando of the Angoram language in the Pondo family. The total land for all six villages is approximately 176 square miles.

The Angoram language group begins on the Sepik River where the Kopar group ends (for map orientation see Marienberg Mission and Angoram vicinity). The last village on the Sepik of the Kopar group is Singarin and the first village of the Angoram group is Marbuk. This Angoram language group extends up the Sepik River approximately 50 miles. The majority of the villages in this language group are built on the river banks usually only one house deep and parallel to the river. The approximate land mass size of this area is 716 square miles.

For a division of all villages into sub-districts and census divisions along with population figures see Appendix A. For a general orientation to the geographic location of the East Sepik Region see Map 1.

2. PROCEDURES

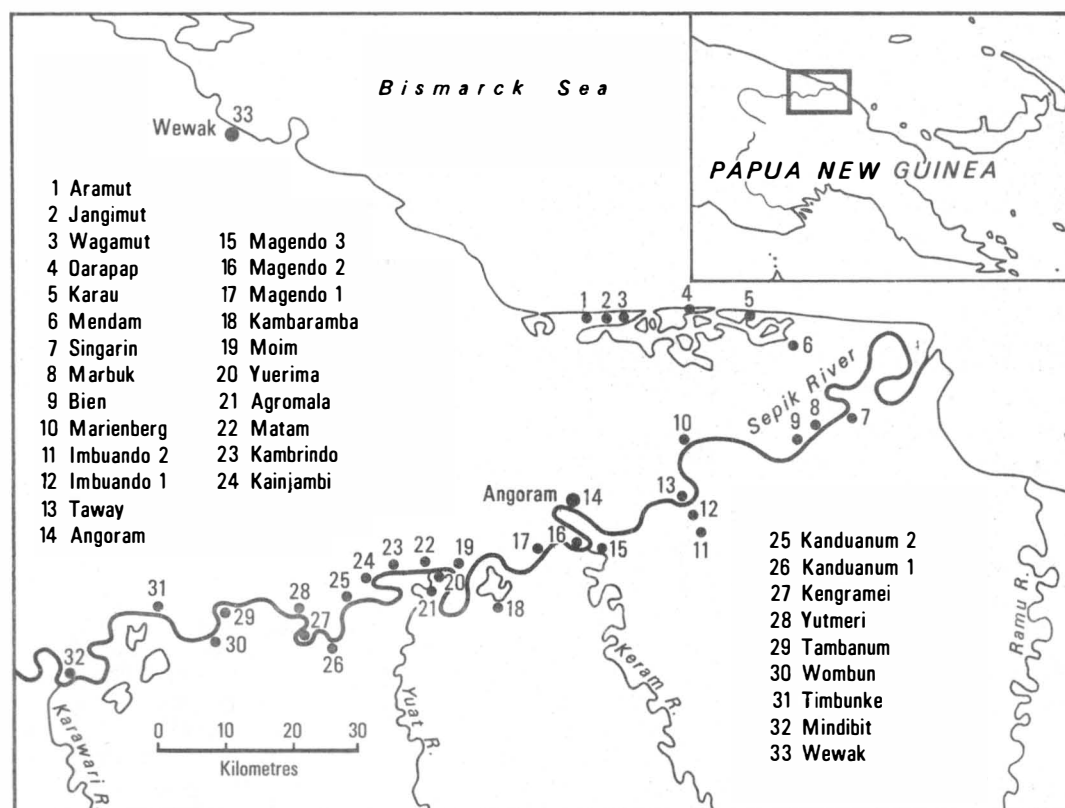
2.1. Survey methodology

Lexicostatistical methodology was chosen because of the ease and expedience for survey work being done in short periods of time with limited funds. The first concern prior to departing on the survey was selection of the proper wordlist. The lexicostatistical method postulates that a 'diagnostic list of 'N' items can be or has been established; when this list is applied to any particular language, a single word can be found for each item...' (Chretien 1962:11). With this thought in mind, a revised version of the Papua New Guinea Summer Institute of Linguistics' 190 word survey wordlist with a 36 word lowlands supplement was used. Beginning with 226 words each word was reviewed on the basis of two criteria:

- (1) Ability to be clearly conceptualised and terminology distinct in the area to be surveyed
- (2) Vocabulary observed to be stable throughout areas which are otherwise linguistically homogenous at some level, but contrastive between such areas at some level (Bromley 1967:287-288).

This list was reduced to 173 words. Items were removed from the wordlist or carefully scrutinised after elicitation on the basis of the following:

- (1) Unavailable items, i.e. 'hour' non-indigenous



Map 1: Nor-Pondo languages, East Sepik Province

- (2) Multiple items with the same root, i.e.
 bark/skin
 egg/eye
 feather/hair
 person/people
 man/woman
- (3) Items difficult to match, i.e. colours
 full
 many
 this/that
- (4) Items requiring narrower definitions, i.e.
 ashes - fine white or coarse black
 belly - inside or outside
 rain - a.m. or p.m.
 neck - throat or back
- (5) Items requiring broader definitions, i.e.
 foot - unit of foot and leg
 arm - unit of hand and arm
 (Bromley 1967:289)

After elicitation from Tok Pisin to vernacular, 75%-80% of the vernacular data was read back to the informant to elicit the corresponding Tok Pisin response. All of the wordlists were checked in this manner. The use of Tok Pisin in the area was extensive because of contact with missions, government officials, and tourists; therefore the method of elicitation was lingua franca (Tok Pisin).

The second concern for procedures was how to determine the probable cognates. 'True cognates are developed from the same word in a common parent language and only true cognates are conclusive evidence of relationships. The most accurate estimate of whether or not the pairs of words in a given comparison are cognate is arrived at by the careful use of the comparative method in reconstructing the proto-language' (Gudschinsky 1956:175-210). Since this type of proto-language study was not available because of limited time and funds, the 'probable cognates' were determined impressionistically, cf.

Tok Pisin	gras bilong het	sikau
Kambrindo	'wabiɾ ₁	—
Marbuk	'wobiɾ ₁	'monago ₅
Mabendo 2	'wabiɾ ₁	'manak ^h o ₅

In the case of questionable cognation between two forms, a conservative approach was taken and the two forms were listed as non-cognates. Illustration of this approach is as follows:

Tok Pisin	mama	yes
Kilimbit	—	'ai ₁
Kambrindo	'nɪŋe ₁	—
Kambaramba	'niam ₂	—
Singarin	—	'ao ₄
Karau	'ŋain ₄	'ao ₄
Wagamut	'ŋiən ₄	'ao ₄
Marbuk	'nana ₅	—

2.2. Sociolinguistic testing

At different locations in each language group a series of sociolinguistic questions were asked. The locations considered were those on the extreme outside boundaries of the language groups and those thought to be in the geographic center of the areas. The questions asked were as follows:

- Linguistic: 1. What is the name of your language?
 2. Who speaks this language?
 3. Who speaks a little differently but almost the same?
 4. Who in your area speaks differently from you (no understanding)?
- Contact: 1. Where are the markets in this area?
 2. When you have a singsing, who comes?
 3. Do you go to singsings in other places?
 4. Do all of the men in your village understand Tok Pisin?
 5. Do all of the women in your village understand Tok Pisin?
 6. Do all of the children in your village understand Tok Pisin?
- School: 1. Do your children go to school?
 2. If so, where?
 3. How many from this village go?
 4. How many years do they go to school?
- Marriage: 1. Where do the men here get their wives?
 2. If they get their wives from other villages, what determines the priority?

The villages of the Murik and Kopar language groups questioned were Murik (Jangimut, Wagamut, and Aramut combined), Darapap, Karau, Mendam, and Singarin.

3. RESULTS

3.1. Explanation and display of diagnostic lists

Upon completion of the survey there were a total of ten diagnostic lists. These lists were elicited in the following order:

Date elicited	Language	Elicited at
1. 24 January 1977	Chambri	Council center at Maprik
2. 26 January 1977	Angoram	Kambrindo
3. 26 January 1977	Kambot	Kambaramba
4. 27 January 1977	Kopar	Singarín
5. 27 January 1977	Murik	Karau
6. 27 January 1977	Murik	Wagamut
7. 28 January 1977	Angoram	Marbuk
8. 28 January 1977	Angoram	Magendo 2
9. 29 January 1977	Angoram	Kanduanam
10. 30 January 1977	Angoram	Moim

The last diagnostic list taken on the 30th of January at Moim was not the standard Tok Pisin to vernacular elicitation. In this village the vernacular diagnostic list that had been elicited from Kambrindo was given to the informant and a Tok Pisin response was elicited. This was to serve as a check on the transcription accuracy and to see if the vernacular would be easily understood between the two villages. 97 Kambrindo vernacular words were read to the Moim informant eliciting a Tok Pisin response. The Tok Pisin word with which the Moim informant responded was the same as had been used to elicit the vernacular responses from the Kambrindo informant except two, the words for 'stone' and 'fish'. The Moim informant showed no evidence of understanding the Kambrindo vernacular words for 'stone' and 'fish'.

A compilation was made of the remaining nine wordlists so that all of the words elicited from each village could be compared at the same time. This compilation can be seen in Appendix B. The test words formed the columns and the different villages where the lists had been elicited formed the rows. Out of the original possible 173 words on the lists, there were 128 used (but not 128 common to all nine diagnostic lists). The remaining possible 45 words were either too hard to elicit or unable to be elicited for various reasons.

At this point another screening process took place to make sure of the quality of the diagnostic list. Out of 128 words, 44 were eliminated. The criteria for elimination were as follows:

- (1) No vernacular response for six or more villages out of the nine possible.
- (2) Possible non-indigenous items to the specific area.
- (3) Possible phrases.
- (4) Suspicious looking words because unusually long.
- (5) Totally different vernacular forms given by majority of the the villages for any one word elicited.

Examples of these words eliminated can be seen in Appendix B. The words not used are marked out and no numbers were assigned showing their probable cognate sets. The total number of words compared between the nine villages can be seen in the following matrix:

Kilimbit

63	Kambrindo						
61	71	Kambaramba					
64	76	72	Singarin				
64	76	72	79	Karau			
72	69	67	73	75	Wagamut		
53	59	59	61	63	66	Marbuk	
51	54	53	55	57	60	62	Magendo 2
52	59	59	60	62	65	68	62 Kanduanam

Using the inspection method described in the section on procedures, all of the words were grouped into probable cognate sets (synchronically similar sets: hereafter referred to as either cognates or probable cognates for expedience). Where a word was not given for comparison, the block of the matrix was assigned a zero. The first word in each row was assigned number 1 and the next word in that same row, if 50% the same, was assigned the same number 1. If the next word in that same row was not 50% the same to the previous words in the row, then that word was assigned number 2. This same procedure was repeated until all of the words in each row had been assigned numbers and all of the words in the matrix had been assigned numbers. Upon completion of grouping probable cognate sets for all 84 words and all nine villages, this data was fed into a computer to find the cognate percentages between the villages. The computer presented the data in matrix form as follows:

Kilimbit

15	Kambrindo						
0	9	Kambaramba					
11	19	1	Singarin				
6	13	1	39	Karau			
6	15	1	41	90	Wagamut		
15	64	12	30	22	22	Marbuk	
18	90	10	25	20	22	67	Magendo 2
13	66	8	26	21	19	61	65 Kanduanam

3.2. Matrix analysis

Out of the nine villages listed, two, Kilimbit and Kambaramba, were removed from the matrix on the basis of the following criteria:

- (1) Extremely low cognate percentage relationship with the other village and/or
- (2) Mutual agreement by surveys of the area to be separate language groups.

The remaining seven villages of Karau, Wagamut, Singarin, Marbuk, Kanduanam, Magendo 2, and Kambrindo were then grouped according to similarity of cognate percentages by permutation of the matrix as follows:

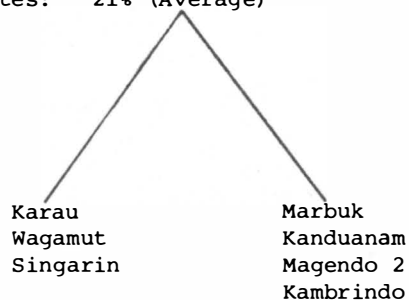
Karau						
90	Wagamut					
39	41	Singarin				
22	22	30	Marbuk			
21	19	26	61	Kanduanam		
20	22	25	67	65	Magendo 2	
13	15	19	64	66	90	Kambrindo

The cognate percentages presented within this matrix form a pattern indicating language divergence, recognised by the block of adjacent low and relatively equal figures as follows (Simons 1976):

Karau Wagamut Singarin

22	22	30	Marbuk
21	19	26	Kanduanam
20	22	25	Magendo 2
13	15	19	Kambrindo

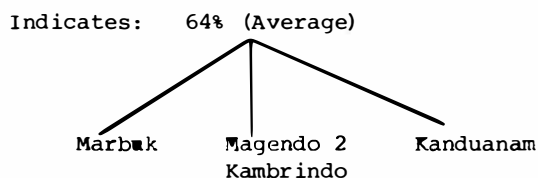
Indicates: 21% (Average)



$$76 + 78 + 100 = \frac{254}{12} = 21\% \text{ average}$$

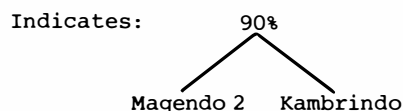
Using this block of adjacent low and relatively equal figures as the indicator that there is a language divergence, the present cognation between the two groups would be represented by an average of all of these percentage figures at approximately 21% as diagrammed above.

Marbuk				Marbuk				Marbuk			
61	Kanduanam			61	Kanduanam			61	Kanduanam		
67	65	Magendo 2		67	65	Magendo 2		66	66	Magendo 2	
64	66	90	Kambrindo	64	66	Kambrindo				Kambrindo	



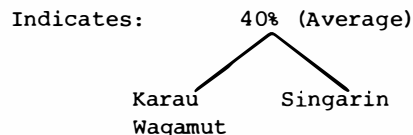
The first matrix immediately above shows Marbuk, Kanduanam, Magendo 2, and Kambrindo grouped by like percentage figures. Because of the similarity between Magendo 2 and Kambrindo reflected by the 90% cognation figure (an average of almost 26% higher cognation than the 61%-67% range within the matrix) Magendo 2 and Kambrindo can be collapsed into one column as diagrammed in the second matrix immediately above. The range of difference between the 64, 65, 66, and 67 percentage figures the surveyor interpreted as not significantly different and therefore collapsed into one row represented by an average of the figures. This averaging is illustrated by the third matrix immediately above. The three percentage figures (61, 66, and 66) represented in this third matrix, because of their similarity, indicate a three-way split between Marbuk, Magendo 2 and Kambrindo, and Kanduanam who presently share an average cognation of 64% as seen in the tree diagram immediately above.

Magendo 2	
90%	Kambrindo



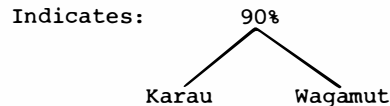
Magendo 2 and Kambrindo are presently 90% cognate. (Illustrated in the diagrams above.)

Karau	Wagamut	
39%	41%	Singarín



Karau and Wagamut are presently 39% and 41% cognate respectively to Singarin.

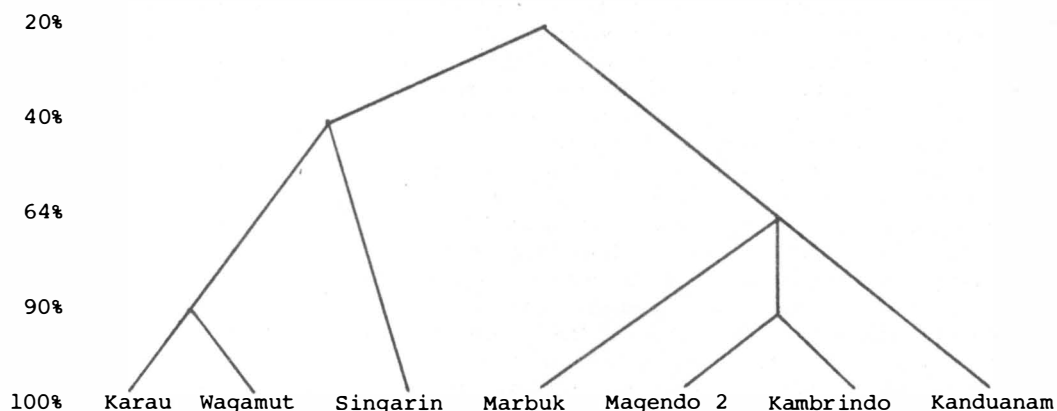
Karau	
90%	Wagamut



Karau and Wagamut are presently 90% cognate.

With all of the cognation percentages analysed within each section of the matrix and all of the divergent indications represented in simple tree diagrams, the next step is to make a compilation of all of the individual tree diagrams

in order to represent the overall relationship between Karau, Wagamut, Singarin, Marbuk, Kanduanam, Magendo 2, and Kambrindo. Such a compilation would be as follows:



This tree diagram shows that Karau, Wagamut, and Singarin were probably one language group that split from Marbuk, Magendo 2, and Kambrindo, and Kanduanam. Singarin has an average of 25% cognation with Marbuk, Kanduanam, Magendo 2, and Kambrindo and an average of 40% cognation with Karau and Wagamut. Singarin was grouped with Karau and Wagamut on the basis of the 40% average cognation rather than the 25% average cognation with Marbuk, Kanduanam, Magendo 2, and Kambrindo. However, the closeness between these two percentage figures indicates some type of convergence between the two groups. There is surely some specific reason for this closeness of cognation percentages but because of the brevity of this survey, the surveyor was unable to determine the exact reasons for this feature of the matrix.

3.3. Sociolinguistic data

Karau and Wagamut rate each other as the same and rate Singarin as similar but Magendo 2, Kambrindo, and Marbuk as different. Likewise Magendo 2, Kambrindo, and Marbuk rate each other as the same and Karau, Wagamut, and Singarin as different. Convergence between the two groups can be seen through Singarin, just as the matrix and three diagram analyses indicated. Singarin rate themselves as the same only with two other villages, the two villages of Kopar and Wongun. These three villages comprise the language group of the Kopar language. Singarin rate themselves as similar to Marbuk and to Karau, two villages which rated themselves as different. This identification by Singarin to these two different groups has far greater implications than the scope of this survey paper. However, it does point to the possibility of language convergence between the two groups.

Contact (1) *Trade* - During the dry season from June to October, Wewak is the major source of trade for the people. They travel to Wewak by canoe on the Bismarck Sea. However, during the rainy season from November to May the storms on the Bismarck Sea make canoe travel very hazardous so the people travel up the Sepik River to Angoram. (2) *Singsings* - All of the Murik language group (Jangimut, Wagamut, Aramut, Darapap, Karau, and Mendam) share equally in the preparation and staging of singsings. A co-operative rotation system is used

for these singsing productions. When a singsing is to be staged at one particular village, it is that village's responsibility to build any necessary facilities for the production, and help with some of the food supply. The remainder of the villages co-operate by bringing the majority of food stuffs to be consumed at the time of the singsing. This procedure is repeated among all of the villages until they have all had their turn staging a singsing and then the process begins again. (3) *Pidgin usage* - The majority of the men and women of Murik and Kopar language groups understand and speak Pidgin. The sources of trade at both Wewak and Angoram dictates the need for use of Pidgin. The largest and most extensive use of Pidgin is among the young people. Their education through contact with teachers and students from other language groups accentuates their need to know and speak Pidgin. (4) *School* - A government school is located at the village of Wongun in the Kopar language group. All of the villages of Murik and Kopar language groups send their children to this school. The children stay at the school during the week and return to their respective villages on the weekends. The school is primary grades only. The school was not actually visited by the surveyor but rather all of the data were gathered from the villages of the two groups. The general consensus of all of these villages was that school was good for their children and they were eager to co-operate. Several of the villages (Darapap, Mendam, and Singarin) had students who had attended at least some high school and Darapap had one university student. (5) *Marriage* - Murik language group only - The men get their wives from all of the villages within this Murik language group. They try to get a wife from their own village first but if there are none available or none desirable, they go to any of the other villages in their language group and select one. There is no special order of villages but merely random selection.

3.4. Relative phylum groupings

Thus far the relationships within and between language groups has been on a village name basis only. In an article on Papuan Language Classifications, S.A. Wurm and K. McElhanon represented the degrees of interrelationships between speech groups using the classification terminology of dialect, language, family, stock, and phylum. This type of terminology is useful in relating language groups to the overall Papua New Guinea linguistic scene. This table of interrelationships is as follows (Wurm and McElhanon 1975:152-5):

Cognation Percentages	Group	Constituent Members	Internal Relationship of members within group	External Relationship of group to other groups
Above 81%	Dialect	Sub-Dialects	Dialect-Level	Language-Level
70 - 81%	Language	Dialects	Language-Level	Family-Level
45 - 70%	Sub-Family			
20 - 28%	Family	Languages	Family-Level	Stock-Level
12 - 20%	Stock	Families	Stock-Level	Phylum-Level
5 - 10%	Phylum	Stocks	Phylum-Level	Unrelated

Using these figures to show degrees of interrelationship for the data within this survey paper, the classifications would be as follows:

Phylum 5-10%

Kilimbit - 6% - Karau	Kambaramba - 8% - Kanduanam
- 6% - Wagamut	- 10% - Magendo 2
- 11% - Singarin	- 9% - Kambrindo

Stock 12-20%

Kilimbit - 13% - Kanduanam	Wagamut - 19% - Kanduanam
- 18% - Magendo 2	- 15% - Kambrindo
- 15% - Kambrindo	Karau - 20% - Magendo 2
- 15% - Marbuk	- 13% - Kambrindo
Singarin - 19% - Kambrindo	Kambaramba - 12% - Marbuk

Family 20-28%

Marbuk - 22% - Karau	Singarin - 26% - Kanduanam
- 23% - Wagamut	- 25% - Magendo 2
- 30% - Singarin	Karau - 21% - Kanduanam

Sub-Family 45-70%

Marbuk - 67% - Magendo 2	Kambrindo - 66% - Kanduanam
- 61% - Kanduanam	Kanduanam - 65% - Magendo 2
- 64% - Kambrindo	Singarin - 41% - Wagamut
Karau - 39% - Singarin	

Language 71-78%

No percentages derived from this analysis for this category.

Dialect Above 81%

Magendo 2 - 90% - Kambrindo	Karau - 90% - Wagamut
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The degrees of interrelationship seen in the Sub-Family and Family groups help support the convergence possibility of the two groups, Karau, Wagamut, and Singarin to Marbuk, Magendo 2, Kambrindo, and Kanduanam through Singarin and Marbuk.

3.5. Tentative conclusions for classifications confirmed and expanded

The classifications posited by Laycock in his 1973 survey of the Sepik-Ramu Phylum for the Nor Family are supported by the data of this survey. There has been a new census since 1970 and the figures have changed. (See Appendix A).

Using Wurm and McElhanon's chart showing degrees of interrelationships, Magendo 2 and Kambrindo are related on the Dialect level as 90% cognate. Marbuk and Kanduanam are rated in the 45-70% Sub-Family. Because of the high cognate percentage figure of 64% average between Marbuk and Kanduanam, and because there were no villages rated on the Language level according to Wurm and McElhanon's chart, the surveyor would classify Marbuk and Kanduanam as related on the Language level. Therefore the Angoram language could be classified into dialects as follows:

- | | | |
|------------------------|-----------|------------|
| (1) Downriver Dialect: | Marbuk | |
| | Bien | |
| | Imbuando | |
| (2) Central Dialect: | Angoram | Mundomundo |
| | Magendo | Tambali |
| | Chuimondo | Moim |
| | Pinang | Yueriman |
| | Kambrok | Kambrindo |
| (3) Upriver Dialect: | Angrumara | Sapalu |
| | Arangunam | Krinjambi |
| | Kundima | Kanduanam |
| | Andua | Maramba |
| | Kausimbi | |

4. ACKNOWLEDGEMENTS

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I also wish to thank Wayne Dye, Irwin Firchow, and Robert Conrad, all of the Summer Institute of Linguistics, for their help in the survey — Wayne Dye for accompanying me on the survey, and Irwin Firchow and Robert Conrad for their reviews and critiques of the survey paper.

APPENDIX A: 1976 Census

Lower Sepik (Nor-Pondo) sub-phylum sub-district divisions:

I. Nor Family

A. Sub-district: Angoram

Census division: Murik Lakes 13

L.G. council: Angoram

Open electorate: Angoram

App. area (sq. miles): 232

Population: 1,396

Aramut	Karau
Darapap	Mendam
Jangimut	Wagamut

B. Sub-district: Angoram

Census division: Lower Sepik 11

L.G. council: Angoram

Open electorate: Angoram

App. area (sq. miles): 176

Population: 1,024

Bien	Marbuk
Imbuando	Singarin
Kopar	Wongun

II. Pondo Family

A. Sub-district: Angoram

Census division: Middle Sepik 6

L.G. council: Angoram

Open electorate: Angoram

App. area (sq. miles): 716

Population: 6,869

Angoram	Mindimbit (non-council)
Angrimara (non-council)	Moim
Kambringo	Mundomundo
Kambrok	Pinang
Kaminimbit (non-council)	Tambali
Kanduanam	Tambanum
Kararau (non-council)	Timbunke (non-council)
Krinjambi	Wombun
Magendo	Yueriman

B. Sub-district: Angoram

Census division: Karawari 1

L.G. council: non-council

Open electorate: Angoram

App. area (sq. miles): 320

Population: 1,909

Ambonwari	Kungriabun
Imanmeri	Manjamai
Kaiwaria	Marinyam
Konmei	Masandenai
Kundiman	Meikerobi

C. Sub-district: Angoram
 Census division: Arafundi 4
 L.G. council: non-council
 Open electorate: Angoram
 App. area (sq. miles): 320
 Population: 616

Arambro	Meakambut
Auwin	Pundugum
Aviemi	Warlamas
Amboin	Yamandim
Isangan	Yimas

D. Sub-district: Ambunti
 Census division: Chambri Lakes
 L.G. council: Gaui
 Open electorate: Wosera-Gaui
 App. area (sq. miles): 568
 Population: 2,743

Aibom	Mari
Arinjone	Mensuat
Changriman	Milae
Indingai	Timbunmeri
Kilimbit	Wombun
Luk-luk	Yambi Yambi

APPENDIX B

Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarín	Karau	Wagamut	Marbuk	Magendo 2	Kanduanum
1. gras bilong het	wɔ'bɪ̃i ₁	'wabiɾ ₁	'wai ₂	'dwar ₃	'dwar ₃	'moʂuɾ ₄	'wobiɾ ₁	'wabiɾ ₁	'bugəmaɾe ₅
2. het	kʰa'ɾi ₁	'kʰaʔauaŋ ₁	tʰongaŋ ₂	'kʰaʔaŋ ₁	'kʰambəθath ₃	'kʰambəθath ₃	'kʰaʔauaŋ ₁	'kʰaʔauaŋ ₁	'kʰaʔauaŋ ₁
3. lip	an'tan'o ₁	'susum ₂	'phunəmpʰ ₃	'asupʰ ₄	'tsəkʰin ₅	'tsəkʰin ₅	'susum ₂	'susum ₂	'ʒuʒumbarə ₂
4. nus	'wambuʂu ₁	'maisith ₂	'pʰam ₃	'ɪmpoθ ₄	'daul(ʔ) ₅	'daul(ʔ) ₅	'musukʰ ₆	'maisith ₂	'naŋim ₇
5. ai	'biangkʰ 'tsutsiŋkʰ ₁	'tʰambli ₂	'iambən ₃	'nambrin ₂	'nabin ₂	'nabin ₂	'tʰamɔ̃ri ₂	tʰambɪ̃i ₂	tʰambli ₂
6. skin	maŋ'gekʰ ₁	'nanguni ₂	'unθ ₃	'nangun ₂	'nagun ₂	'nagun ₂	'ŋaŋi ₂	'nanguni ₂	naŋgə'bəɾ ₂
7. skru bilong lek	'pʔampʰ	'urukʰe	'ambwanpwan-dama	'pəntɪkipʰ	'nambig	'patʰuɾ	'ʔokʰai	'uɾukʰe	'iugue
8. man	nanma'slan ₁	'phondo ₂	'yol ₃	'noɾ ₄	'noɾ ₄	'noɾ ₄	'phondo ₂	'phondo ₂	'phondo ₂
9. meri	nu'mənən ₁	'anmandəkʰən ₂	'naiŋ ₃	'nəmantəkʰ ₁	'numaʔo ₄	'numaʔo ₄	'ŋan ₃	'anmandəkʰən ₂	'aŋuno ₅
10. pisin	iam'bwi ₁	andum'bwaliŋo ₂	'auən ₃				'tʂənəŋ ₄	'anambaɾe ₅	
11. dok	yu'ri	'ndanda	'wor nθ m tʰ	'or n	'dw n	'dw n	'kʰaukʰ	'ndanda	'm ndanda
12. dok i kaikaim man		'ndanda 'phondo 'nandikʰa	'vʔəndəma 'wa 'vaiənyat	'oren 'nor 'mbukʰaim 'matʰa 'kʰoia					
13. em i sindaun		'nandəkʰa ₁		'mantʰasa ₁	'tʰosasa ₂				
14. em i sanap		'nanimkʰa ₁		'maɾikʰetʰə ₂	'tʰoyaʔasə ₃				
15. em i slip		nan'kʰont- ʒikʰa		'makʰantʰə- kʰambaiyə	'tʰoaʔə				
16. rot	'hau ₁	'yoge ₂	'da ₃	'phəʔəkʰain ₄	'iagabol ₅	'iagaboɾ ₅	'kʰaukʰin- aməŋ ₆	'io ₇	'io ₇
17. ston	'oʔo ₁	'kʰambwakʰ ₂		'pʰatʰ ₄	'dug ₅	'dug ₅	'iai ₆	'ie ₇	'kʰambwakʰ ₂
18. bɪkpela	'ubo	'kʰəpan		'kʰapʰəm	'apʰo	'apʰo	'kʰəpan	'kʰəpan	'kʰəpan
19. liklik	ba'pokʰo	'tʰamatʰkʰa- ndigre	'kʰəʔənəs	'məndəkʰ	'ŋgangan	'ŋgangan	'tʰamaratʰə- kʰən	'səmatʰəkʰan- tʰəkʰən	'kʰindʒambagəm

APPENDIX B

Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarín	Karau	Wagamut	Marbuk	Magendo 2	Kanduanum
20. paia	hai'il 1	'uoŋ 2	'phəndama 3	'auŋ 2	'auŋ 2	'aul 2	'ŋaŋ 4	'uoŋ 2	'aŋkʰ 5
21. smok bilong paia	ela'pan	'gundingʔi	'pus	'athikʰ	'sakʰen	'sakʰəŋəkʰa-tikʰ	'sokʰai	'nkʰintʰən	'kʰintʰiŋ
22. sit bilong paia	esa'lo 1		'waukʰayan-tʰama 2				'aʔuŋ 3	'utʰəkʰaʔe 4	'aʔəwo 5
23. yau	kʰe'li 1	'bɛm 2	'kʰɔmbe 3	'kʰotakʰeʔ 4	'kʰarəkʰeʔ 4	'kʰalakʰeʔ 4	'kʰundum 5	'kʰundum 5	'kʰundum 6
24. tang	tubala'nunʔkʰ 1	'mənəŋ 2	'mɛnyo 3	'mbənəŋ 2	'mbɛnəŋ 2	'mbinəŋ 2	'mənəŋ 2	'mənəŋ 2	'mənəŋ 2
25. tit	'səlankʰ 1	'sɪsingli 2	'vaiwa 3	'iasɪʔaph 4	'iasəʔaph 4	'iasəʔaph 4	'susunʔ 2	'sɪsingʔi 2	'sɪsingʔi 2
26. han	'nunkʰalo 1	'iagʔi 2	'yabau 3	'napaŋ 4	'dəʔin 5	'dəʔin 5	'nangʔi 2	'pʰonɔm 6	'yangʔi 2
27. lek (foot)	'naməŋkʰ 1	'namuŋ 1	'spəŋ 2	'namoŋ 1	'dankʰ 3	'dankʰ 3	'namuŋ 1	'namuŋ 1	'namuŋkʰ 1
28. san	sɪnna'li 1	'mbwino 2	'aim 3	'akʰun 4	'akʰun 4	'akʰun 4	'nɔmbi-o 2	'mbwino 2	'mbwino 2
29. mun	'mwil 1	'ambuʔ 2	'mambo 3	'kʰareʔ 4	'kʰaʔewan 4	'kʰalewan 4	'kʰaʔeʔ 4	'amuguʔ 2	'məle 5
30. sta	'tuŋ'gwi 1	'inantʂo 2	'yangəndama 3	'moain 4	'moain 4	'moain 4	'aʔum 5	'inantʂo 2	'ʔəəndʂo 6
31. klaut	kam'plentʂe 1	'busuʔu 2	'banaban 3	'pantʰam 4	'pʰasakʰ 5	'bun 6	'nambisəne 7	'mangenən 8	'mangenən 8
32. ren	'mainu	'butʂine	'yandama	'tʰukʰakʰən	'aʔum	'alum/aʔum	'munum	'butʂine	'ʂuenəŋ
33. wara	'alum/arum 1	'aʔum 1	ya'məndama 2	'aʔum 1	'aʔum 1	'alum/aʔum 1	'aʔum 1	'aʔum 1	'aʔum 1
34. diwai	'iuan 1	'ioʔoʔ 2	'wintyeʔ 3	'eʔaʔ 2	'iaʔaʔ 2	'ialal 2	'ioʔoʔ 2	'ioʔoʔ 2	'ioʔoʔ 2
35. lip (leaf)	nɪmbə'lampʰ 1	'bəʔum 1	'baiəben 2	'bʔiŋdan 3	'nabiʔəkʰ 4	'nabiʔukʰ 4	nambəʔum 1	'bəʔum 1	'mbʔi 5
36. abus	am'dal 1	'aməgʔe 2	'məkʰəre 2	'mumuʔan 3	'nagun 4	'tʰaŋkʰ 5	'aməgʔe 2	'aməgʔe 2	'aməgʔe 2
37. gris	'iandləl 1	'nanbəʔ 2	'ambaiyo 3	'nonon 4	'tabwan 5		'nambəʔ 2	'nambəʔ 2	'nambəʔ 2
38. kiau	'awəŋkʰ 1	'uŋ 1	'mbwi 2	'aol 3	'ngaug 4	'ngaug 4	'ŋaŋ 1	'uŋ 1	'aunkʰ 1
39. em i kai-kai saksak		'mbwəwamga	'usindema 'vəndama	bon'mumbu-koia	'məndəʔimaro				

APPENDIX B

Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Marbuk	Magendo 2	Kanduanum
40. em i lukim		'wasafikha ₁	'yamant ₂	'manasatakoia ₃	'mant ₄				
41. em i kam		'naniakha ₁	'mise ₂	'mai ₃	'manwoia ₃				
42. laus		'wak ₁	'mabawaya ₂	'mak ₃	'numbu ₄				
43. wan	'biank ₁	'benj ₂	'bwa ₃	'bat ₄	'abe ₅	'abe ₅			
44. tu	'usim ₁	'k ₂	'nungu ₃	'k ₄	'k ₅	'k ₅			
45. sol		'k ₁	'nam ₂	'fahon ₃	'phinagemb ₄	'phinagemb ₄	'k ₁	'k ₁	'k ₁
46. wasket	'k ₁	'k ₂	'mak ₃	'husin ₄	'k ₅	'k ₅	'k ₂	'k ₂	'u ₆
47. skru bilong pinga	'tuluk/ 'tu ₁	'ti ₁	'ianden	'nampap ₄	'phadek ₅	'phadek ₅	'sungadun	't ₇	'kwonbinam
48. nambawan pinga	'bwiamp ₁	'nunonanj ₁	'iok ₁	'k ₁	'da ₁		'pi ₁	'mben	'nunonunjoa
49. lek (leg)							'numbunag	'am	'namun
50. bun	'anamp ₁	'sa ₂	'wamo ₃	't ₂	'sa ₂	'so ₂	'sa ₂	't ₂	't ₂
51. blut	'ia ₁	'ia ₁	'sinduma ₂	'fa ₃	'wa ₃	'wa ₃	'ia ₁	'ia ₁	'ialuale ₁
52. gras bilong pisin	'iambelunk ₁	'wambwung ₂	'angoph ₃	'tsetseing ₄	'uason ₅	'uason ₅	'pakhenam ₆	'wambwung ₂	'wanblun ₂
53. wing bilong pisin	'nimpu ₁	'thumb ₂	'pha ₃	'lak ₄	'k ₅	'k ₅	'want ₆	't ₂	'k ₇
54. pikinini man	'no ₁	'pise	'bembogo	'tsement ₄	'gwarigangan		'pho ₁	'mant ₁	'p ₁
55. yangpela meri	'nam ₁	'thomanse	'lenkhan	'p ₁	nasegangan		'namanth ₁	'thomandze	'mamse
56. liklik pikinini	'lumen ₁	'thomat ₁	'bebuam	'tsement ₄	'gwan	'gwan	'mant ₁	'mant ₁	'mamse 'p ₁

Pidgin	Kilimbic	Kambrindo	Kambarangba	Singarai	Karau	Wagauit	Matruk	Magendo 2	Kanbuannum
57. lapun man	'nofoen	'apap	'uau	'khepanofo	'norapo	'aphanoʔ	'phondokho- phan	'phondokho- phan	'abap
58. lapun meri	'apap/'ate	'm	'khepaman- lak	'lapumafo	'lapumafo	'lapumafo	'gankhop'an	'phondokho- phan	'afambwo
59. papa	'ano	1	'ape	2	'atse	4	'ian	5	'ano
60. mama	'nige	1	'niam	2	'aia	4	'nian	5	'mat
61. bika brata bilang man	'athukh		'kahan	2	'athan	3	'athan	1	'athukh
62. bika susa bilang man	'wetme		'makahapan	'athan	'athan	'manan'kho- phan	'uteme	'man	
63. nem	'u!/'u!		'induma		'yaut				
64. rat	'man'toi	1	'yakh'auw!	2	'nanakh'at	4	'khimbau!	3	'takfan!
65. krokrok	'uan		'khandindama	3	'ikhun	4	'kha!	1	'kha'em
66. snek	'pwat'enu	2	'mage	2	'hamunt'ho	4	'thant	2	'amenge
67. pis	'k'ontsa!	1	'amenge	2	'mandufan	3	'to'aph	1	'k'angara'am
68. taro							'ph'iman	2	'alambay
69. banana	'pankh	1	'afambay	2	'nange	4	'ph'iman	2	'alambay
70. kaukau							'nambant'hak!	1	
71. tamio	'y'amp'hafu	1	'sa'kha'fema	2	'nkhai	4	'amborin- enge	2	'uak'h'amp'ize
72. naip	'inamph	1	'hange'fo	2	'hange'fo	4	'segit'h	2	'sange'fo

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarín	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
73. spia	'want ^h amp ^h	'andžimangən	'puʃi/'puli	'mbəmp ^h	'aiəmp ^h ep ^h	'nigek ^h	'inon	'ngəʃi	'ngəʃi
74. haus	'k ^h uʃil/ 'k ^h ulil 1	'nam 2	'pandama 3	'yin 4	'iʃan 5	'iʃan 5	'nam 2	'nam 2	'nam 2
75. graun	'nənkəʃump ^h 1	'andi 2	'bɪn 3	'din 4	'agin 5	'agin 5	'andi 2	'andi 2	'andi 2
76. waisan	oʃanti'k ^h as 1	'sɔŋwaia 2	'muɪŋ 3	'k ^h ək ^h əʃən 4	'gugudžəʃak ^h 5	'džəŋai 2	's ɲai 2	'tsingaiə 2	'k ^h əʃəʃən 4
77. maunten	'bawi 1	'uiŋ 2	'iəmbwan 3	'p ^h ant ^h am 4	'p ^h aʃam 4	'p ^h əʃam 4	'imbwan 3	'uiŋ 2	'wingʃi 2
78. win	'pari						'p ^h up ^h uan		
79. skin diwai			'moəŋ 1	'eʃoʃi'ʃok ^h - omp ^h 2	'imbəʃan 3	'imbəʃan 3			
80. nait	t ^h a'p ^h amp ^h 1	'i k ^h əmun 2	'bandan 3	'ʃak ^h amənt ^h a 4	'aganən 5	'aganun 5	'iuk ^h əmun 2	'iuk ^h əmun 2	'igomun 2
81. asde	'namənʃinɪn 1	'nak ^h əmun 2	'naiəndən 3	'naʃən 4	'aʃən 4	'naʃun 4	'nak ^h am 2	'nak ^h əmun 2	'nagəmun 2
82. tumora	'k ^h asɪp ^h 1	't ^h umbun 2	'bun 2	'naʃən 3	'aʃən 3	'naʃun 3	't ^h umbun 2	t ^h umbun 2	t ^h umbun 2
83. gutpela	yab'k ^h aʃən 1	'mandžikun 2	'yolaimən 3	'aʃat ^h ət ^h 4	'aʃat ^h ogo 4	'aʃət ^h o 4	'nandək ^h n 5		'aʃandək ^h ən 5
84. nogut	'mədʃəŋ 1	'magʃe 2	'džue 3	'mak ^h 2	'mwao 4	'mwao 4	'mwak ^h ən 5		'mwak ^h ən 5
85. longpela	k ^h ulnd'ʃəŋ 1	'k ^h aɪsek ^h ak ^h ən 2	'iolk ^h onət ^h 3	'ŋk ^h oŋk ^h op ^h aʃi 4	'gogongo 4	'gogonj 4	'k ^h oŋk ^h oʃono- k ^h ən 4		k ^h oŋʃant ^h ə- k ^h ən 4
86. sotpela	'apʃəamp ^h 1	'k ^h aɪsek ^h ən 2	't ^h e 3	'k ^h atarük ^h ük ^h 4	'p ^h ok ^h op ^h o 5	'p ^h ok ^h op ^h o 5	'k ^h asak ^h ən 2		k ^h aʃagəm'p ^h ə- nagəm 6
87. hevi	wopi'tarəŋ 1	'iəb ^h uk ^h ən- d k ^h ʃe 2	'dənat ^h 3	'patənt ^h ük ^h 4	'dip ^h at ^h o 5	'dip ^h at ^h o 5	'ibinat ^h ak ^h ən 6		'ivik ^h arak ^h ən 6
88. i no hevi		'pʃindəmusik ^h re 1	'pansəmbaʃi 2	'tsanənp ^h au 3	'sanabao 4	'sonəbao 4	'sna ^h mk ^h ən- t ^h ak ^h ən 5		sam'blakala- k ^h ən 5
89. kol	sa'luk ^h	'wak ^h ark ^h a	'k ^h obo	'tseʃəp ^h at ^h in	'nagunmwago- wagas iarn				'p ^h ubont ^h uk ^h

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarín	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
90. hat	a'leya'k'hín	'aiəkhark'hə	'visanaʔakhop		'undun	'akungəpəhə- rəpəhə			'aiəkhərk'hən
91. olupela	maʔi'lal			'pathənt'hək	'pat'həʔo				'phombosikh'ye
92. nupela				'nənk'hūmūk'h	'nəngəmoŋgo				'thəkhəsi pəʔənə
93. olgeta	mama'lɪŋ 1	'mdak'həbo 2	'aʔup 3		'abəthəbəthə 4				
94. dispela	mak'hə'le								
95. yes	'ai 1	'thəkhəp'hə 2	'na 3	'ao 4	'ao 4	'əo 4			
96. nogat	'tsɪkhəmpun 3	'anthəkh'ia 2	'ap' 3	'ak'aiyə 4	'ngwənde 5	'ngwənde 5			
97. em i tok		'suaʔə							
98. em i harim				'manant'hə- kh'oyə	'manenuʔawɪn				
99. em i save				'manant'hunda- thəkh'oyə	'mɛth'əʔat'h				
100. em i dring wara		'aʔəm wəmk'hə		'aʔəm bũ- kh'oyə					
101. em i slip		'nənk'hondʒik'hə		'mak'həntəkh'ū- mboyə	'manwəʔagaʔə				
102. em i kilim i dai		'nənk'həʔaʔe- nənt'hik'hə		'thəmbũpəŋ- k'həmant'hə	'thod iʔə				
103. em i dai pinis		'patipʔəkhəna			'thopəʔɪn				
104. paia i lait		'wanaiaʔiki- tak'hə							

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarín	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
105. em i pundaun		nam'k'holath- f, k'ha							
106. em i paitim dok		'ndanda 'nant'ikha	'u'funtai 'maip						
107. em i kus		'nanikowkha	'uthathap						
108. em i lap		'nanpithakha	'aialtha						
109. mi	'ami 1	'mitheph e 2	'ape 2	'ma 1	'ma 1	'ma 1			
110. yu	'nimi 1	'emethakhape 2	'yolangga 3	'momi 1	'mi 1	'mi 1			
111. em	sak'ha'ne 1	'nambe 2		'mo 3	'men 4	'men 4			
112. mipela	yi'p'hi	'panggeyam- bramnda		'pangü					
113. yupela	yi'bi	'thak'hte							
114. ol	yi'bi	'pupwe							
115. kokonas	yi'bam 1	'wankeřum 2	'tsombřa 3	'řuan 4	'daphag 5	'thəpak'h 5	'uan 4	'uan 4	'uan 4
116. buai		'pwařəŋ 1	'au 2	'pořəŋ 1	'phařəŋ 1	'phəřəŋə 1	'pwařəŋ 1	'pwařəŋ 1	'pwařəŋ 1
117. kambang		'auĩř 1	'ai 1	'aiř 1	'aiř 1	'aiř 1	'auĩř 1	'auĩř 1	'auĩř 1
118. saksak	thi'nam 1	'mbwe 2	'yapan 3	'mařinün 4	'duřin 5	'duřin 5	'řino 5	'uři 1	'tholi
119. kanu	'khe 1	'khe 1	'mənduma 2	'k'hain 3	'gain 3	'gain 3	'k'hair 3	'khe 5	'khe
120. pul	'nan'kh 1	'inaph 1	'napuŋ 2	'nan 1	'inan 1	'inan 1	'inaph 1	'inaph 1	'inaph 1
121. basket bilong pis		'k'haise	'want'hama	'aweř					

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarín	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
122. basket	'tʃi 1	'isi 2	'tʃa 3				'isi 2	'isi 2	'isi 2
123. pukpuk	'ayi 1			'oramen 2	'dwamin 2	'dwamin 2	'uaʃami 2	'uaʃami 2	'ualami 2
124. natnat	nan'kw n 1			'nangitʰ 2	'naukʰ 3	'naukʰ 3	'oʃaʃa 4	'uaʃəʃaʃam 4	'ualuale 4
125. solwara					'gugun 1	'gugun 1	'masak 2	'masak 2	'kʰuŋgun 1
126. nambis					'dʒ ɲain	'dʒəɲain	'səɲai		
127. em i wokabaut									
128. em i givim mi									

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