

MISCELLANEOUS NOTES
ON LANGUAGES IN WEST IRIAN, NEW GUINEA

C.L. VOORHOEVE

SUMMARY

In these short notes new information is presented concerning a number of languages in north-east and south West Irian. In the north-eastern corner the so-called Tami languages form a stock consisting of two families. This stock is part of the North Papuan Phylum which further includes the languages of the Tor River Stock, further to the west. The intervening Sentani and Nimboran languages do not seem to belong to this phylum but rather to the Trans New Guinea Phylum. South of the Tami Stock are found the languages of the Senagi Family, the Pauwasi Phylum, and several unclassifiable languages. The Sko Language on the north coast links up with the Vanimo language on the Australian side of the border. The language is tonal and seems to have three tones. The notes on Sko supplement the first notes on that language by Cowan.

In south West Irian the Kajagar Family is found in the hinterland of the Casuarina coast, wedged in between languages of the Asmat-Kamoro, Awju, and Jakaj Families. It has been provisionally classified as a family-isolate within the Trans New Guinea Phylum. The neighbouring Sawuj language appears to be a fringe member of the Awju Family. Inside Asmat territory, the two villages of Warkai and Bipim speak a Marind-type language most closely related to Jakaj.

1. PREFACE

These notes are for a large part based on information collected by me during a field trip to West Irian from early March to mid June 1970. The opportunity to make the trip arose when the National Geographic Society asked me to join a team of photographers which was to visit the Asmat people on the south coast of New Guinea. Besides acting as an advisor and interpreter I would be free to conduct my own research. The importance of the proposal was obvious: I would be able to collect new data in a number of lesser known languages in an area to which a routine field trip because of the practical difficulties and the costs involved, would be out of question. The Australian National University generously gave its consent and I left Australia in early March in company of the two other members of the team, the photographers Malcolm Kirk and his wife. After a week in Djakarta and a week in Djajapura we flew to the Asmat area. There we spent two months travelling up and down the rivers of the central Asmat area and the Casuarina Coast and its hinterland. I used this time to collect data in several Asmat dialects, the language of the villages Warkai and Bipim, the Sawuj language and the languages of the Kajagar Family, Kaugat, Kajgir, and Tamagario.

Early in June I left the party and returned to Djajapura where I stayed for two weeks at the Roman Catholic Mission in Abepura. There I collected further data in Jakari, Sko, Awji, Manem, Waris, Dera, and Morwap, all in north-east West Irian, and in Nalum, the westernmost of the Mountain Ok languages. In mid June I returned from West Irian to Australia via Australian New Guinea.

I wish to express my gratitude to the Australian National University and the National Geographic Society for providing the funds for this field trip; to the Indonesian Embassy in Canberra for their assistance in completing the necessary formalities; to the Lembaga Ilmu Pengetahuan Indonesia in Djakarta for granting me permission to do linguistic research, and to the Indonesian Authorities in Djakarta, Biak, Djajapura and the Asmat District whose friendly cooperation has been of great help. I also feel greatly indebted for the valuable assistance I received from the missionaries of the Roman Catholic Mission in Djajapura, Abepura, Sentani and the Asmat, and also of the Evangelical Alliance Mission in Pirimapun, whose hospitality I enjoyed. To all those, and to all others who were my companions, helpers and informants go my sincerest thanks.

The collection of notes presented in this paper falls into two main parts: those concerning the languages in the north-east corner of

West Irian, and those on the languages in the south-western plains.¹ The north-eastern languages have in the past already been the subject of surveys made by Dutch linguists. The data collected by these has been combined with my own data in order to arrive at the fullest possible picture of the linguistic situation in the area. No such earlier published accounts were available for the southern languages I dealt with. However, a manuscript containing grammatical sketches of the Tamagario and Kajgir languages, by the missionaries Drabbe and Lommertsen, was available to me during my stay in Pirimapun, Casuarina Coast.

2. LANGUAGES OF NORTH-EAST IRIAN

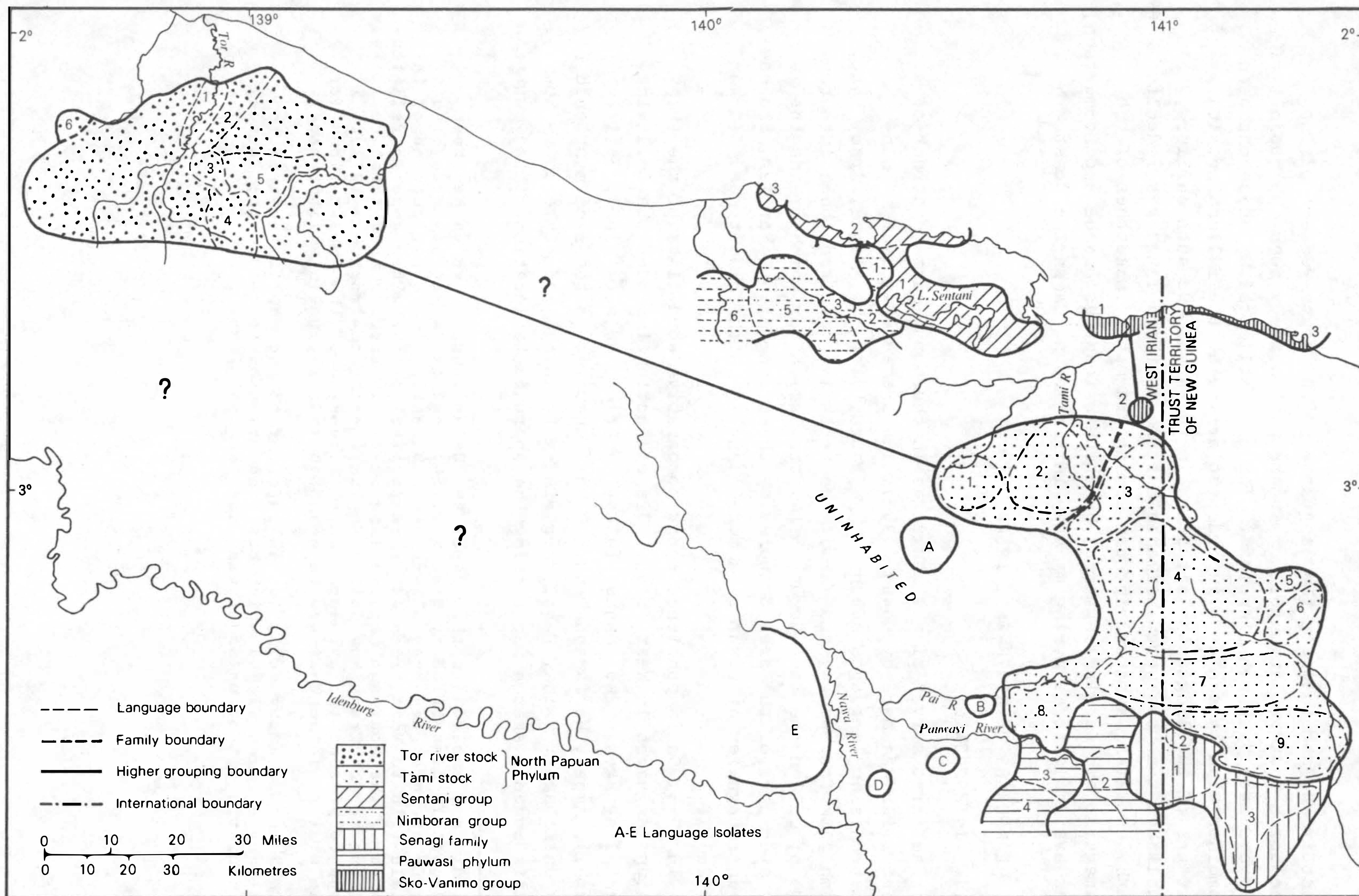
2.1. INTRODUCTION

The first survey of the languages in the north-eastern corner of West Irian was made by Cowan (1953). He presented a list of non-Austronesian languages south of Djajapura, viz. Sko, Sanke, Arso, Njao, Wembi, Skofro, Ampas, and Waris. He tentatively united these into one group, called the Tami Group, after the Tami River which drains the greater part of the area occupied by these languages. Earlier, Sko had been recognized by Cowan as a tonal language with three tones. (Cowan 1952a).

In 1955, Galis published short comparative word lists of the then known languages in West Irian. His collection included the following Tami languages: Sko, Sanke, Taikat (= Arso), Awje (= Njao), Jeti (= Wembi), Ampas, Waris and Tabu. Other languages in the area mentioned by Galis are : Waina, Dera, Wargarindem (= Jafi), and Kiamerop (= Emumu). Galis added a sketch map showing the approximate location of the languages.²

¹I did not include in this paper the Nalum language which has been adequately classified by Healey (1964), and the Asmat dialects, the study of which deserves a separate publication. Another outcome of the field trip to West Irian was a reappraisal of the wider genetic relationships of the Moni and Kapauku languages. It appears that these definitely belong to the Trans New Guinea Phylum (McElhanon-Voorhoeve 1971). I hope to present the evidence and a discussion of the implications for the status of the West New Guinea Highlands Phylum in a later paper.

²This map, sketchy as it is, is superior to the map of the area in Salzner's Atlas (1960) which bears no relation to all to the factual linguistic situation as it was known at that time.



MAP 1: NON-AUSTRONESIAN LANGUAGES OF NORTH-EAST WEST IRIAN

NON-AUSTRONESIAN LANGUAGES OF NORTH-EAST WEST IRIAN

- Sko-Vanimo Group:**
1. Sko
 2. Sanke
 3. Vanimo
- Tami Stock:**
1. Awji
 2. Taikat
 3. Manem
 4. Waris
 5. Daonda
 6. Simog
 7. Waina (Sowanda)
 8. Sengi
 9. Amanab
- Tor River Stock:**
1. Berrick
 2. Dabe
 3. Bonerif
 4. Mander
 5. Ittik, Ittik-Tor
 6. Najdjbedj
- Sentani Group:**
1. Sentani
 2. Tanah Merah
 3. Denta
- Nimboran Group:**
1. Mekwei
 2. Kantuk
 3. Kwansu
 4. Gresi
 5. Nimboran
 6. Uria
- Senagi Family:**
1. Dera
 2. Duka-Ekor
 3. Senagi
- Pauwasi Phylum:**
1. Jafi
 2. Emumu
 3. Dubu
 4. Towe i
- Unclassified languages:**
- A. Morwap
 - B. Molof
 - C. Usku
 - D. Tofamna
 - E. Kaure

The same author made a surveying patrol through the region south of the Tami languages in 1956. The results of this (ethnographic) survey appeared in two reports. The first (Galis 1956a) contains a word list of the Sengi language, spoken south of the Pai River. The second report (Galis 1956b) contains comparative word lists in eleven languages south of the Pai River, viz: Jafi, Emumu, Dera, Mongowar, Waina, Dubu, Towei, Molof, Usku, Tofamna, and Kauri. The map added to this report shows the tribal (= language) boundaries in some detail.

In 1957 Cowan presented more data to back up his claim that the Tami languages were interrelated. He separated Sko and Sanke from the Tami group on grammatical and lexical grounds and united them into one group with the Wutuŋ and Vanimo languages on the north coast of Australian New Guinea. The genetic relationship between Sko and Vanimo had already been pointed out by Capell (1954). Within the Tami group Cowan now recognized three sub-groups: Arso-Njao, Skofro-Wembi, and Ampas-Waris.

Cowan then showed that on the basis of lexicostatistical evidence the Tami group could be united into a much larger grouping with three other groups of languages, viz. the Sentani, Nimboran, and Upper Tor languages. This large grouping he called the North Papuan Phylum.

In 1969 the present writer showed that the Sentani languages and possibly also the Nimboran languages have closer relationships with languages of the Trans New Guinea Phylum (then called the Central and South New Guinea Phylum) than with the Tami and Tor languages. He proposed to restrict the use of the name North Papuan Phylum to the Tami and Tor groups.

During his visit to West Irian the writer worked with informants from seven villages near the Indonesian-Australian border: Sko, Sawa, Wor, Wembi, Njao, Waris and Amgotro, collecting the word lists, grammatical notes and other relevant information which have been worked into the notes presented below.

The languages will be dealt with in the following order:

1. The Sko language
2. The Tami Stock
3. The Morwap language
4. The Senagi Family
5. The Pauwasi Phylum
6. Unclassified languages.

It should be noted that the latest census figures available for the region date from 1961. All the population figures given below therefore depict the situation of 10 or more years ago. In recent years many inhabitants of the border area have migrated to the eastern side of the border leaving their villages deserted. Therefore no villages have been listed other than those mentioned by the informants as actually existing.

2.2. THE SKO LANGUAGE

Sko is spoken in three small villages on the seashore about 12 miles east of Djajapura. The Sko informant referred to his people as the Tumawo people and to his language as the Tumawo language. However the current name Sko will be retained here. Cowan (1952a) published some grammatical notes on Sko and a short word list (1952b). The writer's own data consists of a recorded word list and some grammatical notes.¹

Sko is related to the languages of Wutung and Vanimo in Australian New Guinea. The wider relationships of the group are presently being studied by D. Laycock.

2.2.1. Phonology

There seem to be 9 vowel phonemes and at least 13 consonant phonemes in the Sko language. The vowel phonemes and their main allophones are:

i	[i,ɪ]	ü	[ü,ʊ]	u	[u]
e	[e]	ö	[ö,ø]	o	[o]
ɛ	[ɛ̃,ɛ]			ɔ	[ɔ]
		a	[a,ɑ]		

/ü/ and /ö/ are high-rounded and mid-rounded vowels respectively, each with front and centralized allophones.

All vowels also appear nasalized but it is not certain whether the distinction is phonemic. At least in a number of cases nasal vowels are the result of the dropping of a nasal consonant in the immediate environment, e.g. *tana* ~ *tãã* *bird*, *ne pãnete* *we are cutting wood*, *te paẽte* *they are cutting wood*.

Vowel length seems predictable and therefore non-phonemic. Phonetically long vowels were found only as final vowels in the citation² forms of monosyllabic words.

¹The informant was a well educated elderly man, unfortunately the time he could spend with the author was limited to less than one hour.

²i.e. context-free forms as elicited from the informant.

The consonant phonemes and their main allophones are:

p	[p, p ^w]	t	[t]	k	[k]
b	[b]				
	f	[f, pf]		h	[h]
m	[m, m ^w]	n	[n]	ŋ	[ŋ]
		l	[l]		
		r	[r̥, r̥ʰ]		
w	[w]	j	[j, j̥]		

Noteworthy is the absence of voiced alveodental and velar stops and the corresponding fricatives. These do not show up in Cowan's data either except *s* which occurs only in the name *Sko*, and this name could be of foreign origin and is therefore suspect. The allophonic distribution is as follows:

[p] alternates freely with [p^w], and [m] with [m^w] when preceding an unrounded vowel; in word-initial position [f] alternates freely with [pf], [j] with [j̥]; [r̥] and [r̥ʰ] alternate freely and often are slightly aspirated when in word-initial position.

There seem to be three tones in *Sko*. Cowan defined the tones as high, mid, and low. The writer's informant volunteered examples of three different tones, using monosyllabic words consisting of a consonant plus vowel. In citation forms the tones are realized as two falling and one rising tone, one falling tone having a slightly higher pitch than the other. In musical notation:



Thus: 1. *pa water, river*; 2. *pa bundle, tuft*; 3. *pa house*;
1. *ta bow*; *ta similar*; 3. *ta hair*.

In a frame, the tones are realized as low, high, and low-high:

1. *pa maki a big river*; 2. *pa maki a big bundle*; 3. *pa maki a big house*.

In the monosyllabic words recorded, falling and rising tones are easily distinguished but further study would be needed to determine which falling tones are to be interpreted as low and which as high. The other examples of rising tone noted are: *kö tooth*, *ha star*, *ti sea*,

mö fish, lū fly, tō ashes, pi language.¹

The majority of the recorded words end in a vowel; the only consonants found word-finally are /l/ and /ŋ/. In Cowan's examples final /n/ occurs. Sequences of two vowels occur initially, medially and finally. Consonant sequences occur only word-medially. They all consist of a stop preceded by the homorganic nasal.

2.2.2. Grammar

In this section the writer's observations are presented against the background of Cowan's notes in order to obtain the fullest possible picture of Sko grammar. Most of Cowan's examples have been included; his spelling does not differentiate between /e/ and /ɛ/, /o/ and /ɔ/, and lacks /ü/. Cowan's *ë* probably represents the same sound as /ö/. His tone markers follow the vowel; : indicated mid, + high, and - low tone. Cowan's examples will be preceded by the Capital C, the writer's examples by the capital V.

2.2.2.1. The Verb

The two main features of the verb are the near-absence of verb morphology and the formal changes in the verb root which are dependent on the gender of the subject when this is a noun, and on person, number and gender of the subject when it is a pronoun. This formal interdependence or concord stretches across the verb: several particles exhibit formal changes similar to those occurring in the verb root, depending on the same factors. See the examples below under subject pronouns and tense and aspect.

Subject pronouns: According to Cowan these are prefixed to the verb root. However, his own examples show that they can be separated from the root by intervening words and particles:

C:	ni ha bame le	I'm coming from the village
	kä ka bame to	he is coming from the village
	[bame village; nile I am coming; (ha,ka..) from; këte	
	he is coming]	

¹In the following section on the grammar and in the word list (appendix I), tone will not be indicated. Instead, the relative pitch of stressed syllables will be marked by ' if it is higher, by ` if it is lower than the pitch of the preceding and/or following syllable. However, where Cowan's examples are quoted the indication of tone as made by Cowan will be retained.

The subject pronoun is not necessarily always present, compare:

V:	pí ni léile	I am talking
	ai pí leilè	father is talking
	[pi <i>language</i> ; ni <i>I</i> ; ai <i>father</i>]	
	ja mö ma na	have you eaten?
	ani ja ma na	mother, have you eaten?
	[ani <i>mother</i> ; mö <i>you</i> ; ja <i>perfective aspect marker</i> ; na <i>question marker</i>].	

It seems better therefore to regard the subject pronouns as separate words and not as verb prefixes.

Object markers: The markers of the direct object are the only morphemes which seem to be true verb prefixes. They vary for gender. **Examples:**

C:		a.	b.	c.
	I	nile	nike	niwë
	you s.	mere	meke	mewë
	he	kële	këke	këwë
	she	përe	pëwë	pëwë
	we	nere	neke	newë
	you pl.	ële	ëke	ëwë
	they	tëre	tëkë	tëwë
	nake in këkelen niã		dog (male) that he-it-gives to-me	
	nake in këwëlen kea		dog (female) that he-it-gives to-him	
	naa in këwëlen pea		basket (fem.) that he-it-gives to-her	

Not all verbs take object prefixes:

C:	pa nikun	I am drinking water
	pa pëwun	she is drinking water
	pa ëhun	they are drinking water
V:	ri ni léile	I am cutting a tree
	ri ke léile	he is cutting a tree
	ri ne ténete	we are cutting a tree
	pi ni léile	I am talking
	pi te tétete	they are talking.

Tense, aspect: In the data on hand, verb forms occur in three tenses: present, past and future, and with perfective aspect. The only formal difference between present and past tense forms is a difference in tone; an exception is the root with the 1st person sg. subject which shows no change of tone (Cowan).

C: <i>to go</i>	present (high tone)	past (low tone)
I	ni:rë+	ni:rë+
you s.	me:mee+	me:mee-
he	kë:ti+	kë:ti-
she	pë:te+	pë:te-
we	ne:nee+	ne:nee-
you p.	ë:rë+	ë:rë-
they	të:tee+	të:tee-

The future tense forms are characterized by duplication of the verb root; they are obligatorily followed by a particle (le/pë/te....) showing concord with the changes in the verb root:

C: <i>to go, future tense</i>			
I	ni:rë+rë:le:	we	ne:nee+nee:të:
you s.	me:mee+mee:pë:	you	ë:rë+rë:lë:
he	kë:ti+ti:lë:	they	të:tee+tee:të:
she	pë:te+te:të:		
pëtete bame të she will go to the village			

V: <i>to eat</i>	[<i>fe tomorrow; hö sago</i>]
fe hö ni kākā tè	tomorrow I shall eat sago
fe hö né nana tè	tomorrow we shall eat sago
fe hö ké kākā tè	tomorrow he will eat sago
fe hö pö panpan tö	tomorrow she will eat sago
fe hö té tantan tè	tomorrow they will eat sago

Perfective aspect is indicated by a particle *ja* preceding the subject pronoun and the past tense form of the verb:

V: <i>to eat</i>	
ja ni kākā	I have eaten
ja ke kākā	he has eaten
ja te tã / ja te tãŋ	they have eaten
ja mö ma nà	have you eaten?
ja é aŋa nà	have you all eaten?
ja pö pã nà	has she eaten?

Some more present tense paradigms are:

C:	<i>to do</i>	<i>to speak</i>	V:	<i>to hear</i>	<i>to see</i>	<i>to sit</i>
I	ni lë	ni len		ni lö	ni fũ	ni mölekõ
you s.	mepë	mepën		mε pö	-	-
he	kë lë	kë len		ke lö	ke fo	ke mölekõ
she	pëtë	pënu		pe ru	pe fo	pe mötekõ
we	netë	neten		ne rö	nε fo	ne mötekõ
you pl.	ëlë	ëlen		e lö	-	-
they	tëtë	teni		-	te fo	-

At this stage it is impossible to formulate any rules underlying the formal changes of the verb root. That they are to a certain extent systematic appears from the following chart which shows the consonant changes in the verb roots mentioned in the text.

	<i>do</i>	<i>sit</i>	<i>talk</i>	<i>cut</i>	<i>speak</i>	<i>take</i>	<i>hear</i>	<i>go</i>	<i>eat</i>	<i>drink</i>
1 p.s.	l	l	l	l	l	l	l	r	k	k
3 p.s.m.	l	l	l	l	l	l	l	t	k	h
2 p.p.	l	-	-	-	l	l	l	r	∅	∅
2 p.s.	p	-	-	-	p	r	p	m	m	m
1 p.p.	t	t	-	t	t	r	r	n	n	-
3 p.s.f.	t	t	-	-	n	r	r	t	p	-
3 p.p.	t	-	t	-	n	r	-	t	t	j

2.2.2.2. Nouns

There are two gender classes (masculine, feminine) which are not formally marked but which govern the choice of object marker, the 3rd person singular subject pronoun, and the corresponding changes in the verb root:

C: o-tan in këkelen mea	lime container (masc.) that he-gives -it to-you
naa in këwëlen pea	basket (fem.) that he-gives-it to-her
oto pëte tëba përeere të	car (fem.) it-goes (and) people it-will -pick-up

According to Cowan there is no object marker with the last verb because the plural form tëba *people* [as against keba *man* and peba *woman*] is neither masculine nor feminine. This would suggest a third class of nouns with neutral gender.

2.2.2.3. *Pronouns*

The personal pronouns have a full and a short form: the full form is an emphatic form and also occurs as indirect object (Cowan). The short form occurs as subject.

Full forms:			Short forms:		
C:	I	nia	C:	ni	V: ni
	you	mea		me	me,mö
	he	kea		kë	ke,kö
	she	pea		pë	pe,pö
	we	nea		ne	ne,nε
	you	ea		ë	e
	they	tea		të	te

The possessive pronouns are formed by suffixing a possession marker to the short forms of the personal pronouns. The possession marker has the general form (C)ε; the initial consonant harmonizes with the preceding consonant of the personal pronoun. V: pa níne, mémε, kéε, péε, néne, éε, tēte *my house*, etc.

The possessive markers of the third person are also suffixed to the last noun in the possessive construction involving two nouns:

V:	Tumáwo píte	<i>Tumawo their-language, the language of the Tumawo people.</i>
C:	tuan pa-ke	<i>the house of Mr</i>
	njonja pa-pe	<i>the house of Mrs</i>
	[tuan and njonja are loans from Indonesian].	

2.2.2.4. *Syntax*

In the preceding sections several examples of possessive phrases and of transitive and intransitive clauses have already been given. A few other examples can be added here. Predicative clause: bame hábã the village is far away; noun-modifier phrases: pa tótó an old house, pa hápo a small house, ba ĩto two men, ba áli one man. Note that the order subject - object - verb is found when the subject is a noun, but the order is object-subject-verb when the subject is a personal pronoun: ai pi leile, but ri ni leile (2.2.2.1.).

2.3. THE TAMI STOCK

2.3.1. Introduction

The Tami languages occupy in West Irian a crescent shaped area stretching from the Sekanto River south-east towards the Australian border and back to the south-west along the Pai River (see map I, page 50). They also stretch a considerable distance across the border into the Western Sepik District of the Territory of New Guinea. On that side, the languages of Daonda, Simog, Sowanda, Amanab, and Waris have been united into one family by Bass and Loving (1964). The present notes will deal only with the languages on the West Irian side of the border.

Within West Irian the following six languages belong to the Tami group: Awji, Taikat, Manem, Sengi, Waris, and Waina. The last two languages saddle the Indonesian-Australian border. Waina, or Waina-Sowanda, is the language called Sowanda by Bass and Loving.

AWJI, formerly called NJAO, is spoken in four villages: Njao, Josko, Sowjo, and Bukisom. The people living in these villages call themselves Awji. In 1961 the Awji counted 211 people. Some lexical data in Awji were published by Galis (1955) and Cowan (1957). The writer collected a basic word list and some grammatical notes from a boy of Njao who had been away from his village for three years.

TAIKAT, called ARSO by Cowan, is spoken in 10 villages: Arso, Wor, Bagia, Sagware, Gwimi, Bate, Girere, Girwago, Sawiatami, and Wambes. In 1961 the number of speakers was approximately 800. Taikat is the name of the people living in Arso.

Some lexical data in Taikat were published by Galis (1955) and Cowan (1957). The present writer collected a short word list from a man of Wor village who was on a short visit to Djajapura.

MANEM, formerly called WEMBI, is spoken in 7 villages: Wembi, Uskwar, Kibae, Jeti, Skofro, Skotiaho, and Kriku. The informant also mentioned Major, Ampas, and Komieti. These are bilingual Waris villages near the Manem-Waris language border. The number of Manem speakers is estimated at 400.

Some lexical data in Manem were published by Galis (1955) and Cowan (1957). The present writer collected a word list and grammatical notes from a young man of Wembi village. The informant was studying in Djajapura and had been away from home for several years. Occasionally he had difficulty remembering his mother tongue.

SENGI was, in 1956, spoken in three villages: Sengi, Tomfor, and Umbekwai. At that time the number of speakers was 120. The only data on hand is the word list collected by Galis (1956a).

WARIS was, in 1961, spoken by approximately 3,000 people, most of whom lived on the Australian side of the border. On the western side there are the villages of Ampas, Komieti, Major, Waris, and perhaps a few more, but no full information is at present available.

Galis (1955) and Cowan (1957) published some lexical data in Waris, collected in Ampas and Waris villages. The present writer collected a word list from a school girl of Waris village.

WAINA was, in 1959, spoken by 130 people living in 5 settlements two of which, Ibela and Jabanda, were in West Irian. The remaining three, Jabae, Makrabo, and Arombawai were situated in Australian New Guinea. At present there seem to be no Waina villages on the Western side of the border.

The only data on hand is the word list collected by Galis (1959b).

2.3.2. Lexicostatistical Relationships

The lexicostatistical relationships between the Tami languages had to be assessed on the basis of a limited number of basic words because of large gaps in the lexical data. The cognation percentages presented below were calculated for the basic word lists added in appendix I. They show that the Tami languages fall into two sub-groups; 1. Awji-Taikat
2. Manem-Sengi-Waris-Waina.

	AWJ	TAI	MAN	WAR	SEN	WAI	
AWJ		66	30	30	30	25	
TAI	50		47	33	32	33	
MAN	77	47		50	50	38	cognation
WAR	82	54	71		50	53	percentage
SEN	71	49	62	71		36	
WAI	75	48	65	76	77		

Number of Items Counted

The high percentage shared by Taikat and its neighbour Manem may have been caused by mutual borrowing and has been disregarded for classificatory purposes. The high percentage shared between Waris and Waina is equally suspect in view of the low percentage shared between Waina and Sengi and Manem. Waina will be regarded here as a fringe member of the group.

Provisionally the Tami languages have been classified as a stock (the Tami Stock), and the sub-groups as the Taikat and Waris families.

2.3.3. Phonology

An analysis of the recorded data in Awji, Taikat, Manem and Waris yielded the following tentative results:

All four languages show a three-way position contrast in the stops and nasal consonants: bilabial, alveolar, and velar. All have voiced and unvoiced stops. All have at least two voiceless spirants, one flapped or lateral phoneme, and two semivowels. Each of the languages has at least 6 vowel phonemes: /i/, /e/, /a/, /o/, /u/, and /ə/, the last one having rounded, unrounded and backed allophones [ə, ə̄, ɛ̄]. Awji, Taikat and Waris seem to have an additional /ɛ/ phoneme but this phoneme cannot yet be regarded as well established. The same holds for the two rounded front vowels [ü] and [ö] in Manem which have been set up provisionally as separate phonemes.

In Awji the voiceless stops are lightly aspirated. Voiced stops tend to be prenasalized word-initially. /l/ has freely alternating flapped and retroflexed-lateral allophones. The spirants are labiodental /f/ and alveolar /s/. Semivowels are /w/ and /j/. Awji is the only language of the four which has nasal vowels. Nasality seems to be a distinctive feature although non-distinctive nasalization also occurs under the influence of a preceding or following nasal consonant.

In Taikat, voiceless stops are lightly aspirated as in Awji. No prenasalization of voiced stops was noted. /b/ has a fricative allophone [ɸ] alternating with [b] intervocally. /r/ is flapped; /f/ is labiodental; /s/ is alveolar. An uvular fricative [ħ] was noted only once and more proof is needed to establish [ħ] as a phoneme.

In Manem, the voiced stops are prenasalized. /ŋ/ has two allophones: a nasally released voiced velar fricative [g̃] which occurs word-finally, and a velar nasal [ŋ] occurring elsewhere. In present day Manem [ŋ] is often replaced by a flapped [ʃ] in word-final position and when /n/ follows a consonant: kiŋ / kir, fŋe / fre. According to the informant the change was initiated by missionaries and government officials who had difficulty pronouncing final [g̃] and clusters like [fŋ]. Older people still frown upon the new pronunciation and think it slightly ridiculous.

In view of these facts [ʃ] might perhaps be interpreted as a newly introduced allophone of /ŋ/. However, it is possible that the phoneme inventory of Manem already included a phoneme /r/. In several words containing [ʃ], the informant did not mention possible alternation with /ŋ/. /r/ has therefore been tentatively included as a separate phoneme.

In Waris, voiced stops tend to be prenasalized word initially. /b/ has two freely alternating allophones [b] and [ɓ] intervocalically. /x/ is a soft voiceless uvular fricative [h] word-initially; elsewhere /x/ is a soft voiceless velar fricative. Lateral /l/ is retroflex following low and back vowels.

The following chart gives a survey of the consonant and vowel phonemes in Awji, Taikat, Manem, and Waris:

AWJI			TAIKAT			MANEM			WARIS		
p	t	k	p	t	k	p	t	k	p	t	k
b	d	g	b	d	g	b	d	g	b	d	g
m	n	ŋ	m	n	ŋ	m	n	ŋ	m	n	ŋ
f	s		f	s	(h)	f	s		f	s	x
	r			r			r			l	
w	j		w	j		w	j		w	j	

i		u	i		u	i	(ü)	u	i		u
e	ə	o	e	ə	o	e(ö)	ə	o	e	ə	o
(ɛ)	a		(ɛ)	a			a		(ɛ)	a	

All four languages allow consonant clusters word-initially and medially (CC in all four languages, but in Manem medially also CCC). Word-finally, Awji and Taikat only allow single consonants, but Manem and Waris also allow clusters (Manem: -CC, Waris: -CC, -CCC). Final consonant clusters are also found in the other members of the Waris family, Sengi and Waina.

2.3.4. Grammar

The general grammatical information that could be gleaned from the few notes collected is summarized in the chart on page 65. A hyphen indicates that no information was obtained. The functions of the various verbal affixes are at this stage by no means clear. Except for the pronouns collected in Awji, Manem, and Waris which may be of interest for comparative purposes, it is not the intention of the writer to present specific data.

Awji:	Personal pronouns		Possessive pronouns
<i>I</i>		ku	kajap
<i>we</i>		-	jɛbap
<i>you s,pl.</i>		kebe	kebap
<i>he, they</i>		jɛ	jap

Manem:	Personal pronouns		Possessive pronouns
	subject	object	
<i>I</i>	ga	gaem	gaf
<i>you s.</i>	sa	sam	sef
<i>he</i>	aŋk	-	tef
<i>we</i>	kiŋ ta	kiŋ jam	kiŋ tanan
<i>you pl.</i>	kiŋ sa	-	kiŋ sanan
<i>they</i>	kiŋ aŋk	-	kiŋ aŋkan

Waris:	Personal pronouns		Possessive pronouns
	subject	object	
<i>I</i>	ka	kam	kanan
<i>you s.</i>	diɛ	jɛm	diɛnan
<i>he</i>	iɛ		ienan
<i>we</i>	pi		pinan
<i>you p.</i>	diɛta		kienan

	verb structure				noun suffixes	pronominal suffixes	noun phrases	clause structure
 prefixes suffixes duplicated roots suppletive roots				
AWJI	aspect person ? object ?	tense mode	in future tense	with plural object	-	marking posses- sive pronouns	N + PP N + Adj. N + Num.	± T ± S ± O + V
TAIKAT	-	-	-	-	-	marking posses- sive pronouns	N + PP	± S ± O + V
MANEM	aspect object ?	person tense	-	with plural object	instrumental locative directional	marking: pr. as object pr. as indirect object PP	N + PP but also: PP + N, if the PP is plural. N + Adj. N + Num.	± S ± O + V
WARIS	-	tense person	-	-	directional subject marker object marker	marking PP subject marker object marker	N + Adj. PP + N	± S ± O + V O ± Ind. O + V

Abbreviations: Adj. = Adjective; N = noun; Num. = numeral; O = object; PP = possessive pronoun; S = subject; T = time adverb; V = verb; Ind. O = indirect object.

2.3.5. Wider Relationships

The position of the Tami Stock within the overall picture of genetically related languages in New Guinea is still far from clear but the newly collected data make it possible to assess more exactly the relationship between the languages of the Tami Stock and those of the Sentani and Upper Tor groups to the west.¹ They also offer interesting prospects for the still wider relationships of the Tami Stock.

2.3.5.1.

The Tami languages have their closest relationships with the languages of the Upper Tor River area. These also form a stock, which henceforth will be named the Tor Stock.² Using 70 items of the comparative word lists in 8 Tor languages published by Oosterwal (1961), and Galis' and his own materials in the Tami languages, the writer arrived at the following highest percentages between any of the Tami and the Tor languages:

Manem - Ittik 19%	Taikat - Berik 14%
Waris - Ittik 17%	Sengi - Ittik 13%
Awji - Ittik 17%	Waina - Ittik 8%

These figures are sufficient to establish a phylum level relationship between the two stocks.³ The name 'North Papuan Phylum' proposed by Cowan for this wider group will be retained. To illustrate the lexical relationships between the Tami and Tor Stocks the list of probable cognates shared by Manem and Ittik is presented below, together with the supporting evidence. Language names will be abbreviated as follows: Awji - AW; Taikat - TK; Waris - WR; Sengi - SG; Waina - WN; Manem - MN; Berik - BE; Bonerif - BO; Ittik - I; Ittik-Tor - IT; Mander - MA; Kwesten - KE; Dabe - DA; Naidjbedj - NA.

¹The Nimboran group could not be included because of lack of lexical data.

²Oosterwal (1961) presented comparative word lists in 8 languages of the Upper Tor River area: Berik, Bonerif, Ittik, Ittik-Tor, Mander, Kwesten, Dabe, and Naidjbedj. All of these except Naidjbedj, form a family. Naidjbedj shows stock-level relationships with the other languages. The whole group will therefore be classified as a stock.

³The term 'phylum' now indicating that languages of the two stocks will share between 5% and 12% cognates within the 200-item basic word list of Swadesh. The North Papuan Phylum now stands on the same classificatory level as other lexicostatistically established phyla in New Guinea. Cowan's 'phylum' was based only on more-than-chance lexical correspondences between the two language groups.

Oosterwal's spelling will be retained except for the following changes:
oe > u; ie > i; u > ü.

		Supporting evidence:	
1.	<i>bird</i>	MN jon, jor I düü	WR noj, TK nor BE djoh, MA dzu, KE dun
2.	<i>bone</i>	MN kaŋ, kar I erre	WR kəl, WN kək, AW sa-kər BO errene, MA kerane, NA kaka

Note: In many words MA retains an initial k which has been lost in other Tor languages. NA intervocalic k or g correspond to r in other Tor languages. The BO and MA forms contain an element -ne or -n which is found with several names of body parts. It occurs in all Tor languages listed and perhaps indicates, or indicated, inalienable possession.

3.	<i>egg</i>	MN suiŋ, suir I süje	WR suwul, TK sur BE suju; MA, IT suwe; KE, DA sui
4.	<i>eye</i>	MN nof I nauwe	WR nop, SG now, AW najo, WN rugok BE nuwe, BO nuna, MA nuenne, DA nuoh, NA nukwe
5.	<i>hair,</i> <i>feather,</i> <i>leaf</i>	MN fŋe, fre tafre I saffe	TK tofei, WR sewre, weliei BE safna, BO, MA saffena, DA saffene, KE safen

Note: The Tami words all have the meaning *leaf*; the Tor words mean *hair, feather*. *Leaf* is not included in the Tor word lists.

6.	<i>head</i>	MN bagar I nabbarror	TK nagər, SG repek BO nabbareh, IT napar, MA nebbar DA debaar, NA tsju-wagga
----	-------------	-------------------------	--

Note: Tami bagar, bagər, -pek correspond with Tor -barror, -bareh, -par, -baar, -wagga; SG re- corresponds with na-, ne-, de- in the Tor languages.

7.	<i>hot</i>	MN pabaŋ I mef	AW pabə, WR pəb, SG pap KE maf
8.	<i>meat</i>	MN nigin, nigir	MA ganin, DA matannin, NA okkardnin

Note: The Tor words are probably compounds; the relevant part is -nin. Compare also Kwansu (Nimboran group): niŋ.

		Supporting evidence:	
9.	<i>sand</i>	MN pefjis I dewes	MN (Skofro) puwis BE, BO, DA dui; KE dujis
10.	<i>skin</i>	MN tofno, tofro I tifen	WR towol MA tife, DA tifene
11.	<i>stone</i>	MN suk I tokwen	AW ser, TK sər, WR hon, WN kun, SG kwondr BE ton, BO, KE toon, DA ter, NA tonne
12.	<i>sun</i>	MN usam I busjan	MA busjan
13.	<i>tree</i>	MN ti I ti	TK di, AW, WR, SG, WN ti BE, IT ti, DA ti-bur
14.	<i>water</i>	MN pu I foh	WR, SG po, WN poa BE, BO, IT, MA, DA foh, KE fon

Further lexical correspondences between the two stocks are:

Item	Tor Stock	Tami Stock
<i>ear</i>	BO Jerrena, IT jeere I jurre, DA jərre, Na njar, MA keerre	AW keato, TK keat
<i>eat</i>	NA nan	AW, TK, MN, SG na, WR ne
<i>hand</i>	BE, BO taffa, IT, MA taffah, I taffer, DA teffah	AW t̄aba- in: t̄aba-iki <i>naił</i>
<i>nose</i>	BE, I, IT, MA maseh, DA mase, KE masen, BO massene	WR lomus, mos; mosoj (Ampas dialect).
<i>star</i>	BE match, I, IT mohte, MA monte, DA maton	AW, TK mase

2.3.5.2.

The closest relationships of the languages of the Sentani Group (i.e. Sentani, Tanah Merah, and Demta) appear to be with the languages of the Trans New Guinea Phylum (Voorhoeve 1969). A comparison of Sentani and Tahan Merah lists¹ with the Tor lists yielded the following cognation percentages:

¹The Sentani list was compiled from the vocabulary added to Cowan's Sentani Grammar (Cowan 1965); The Tanah Merah list was collected by the writer and represents the Jakari dialect as spoken in Demoi village. No Demta data was available to the writer.

	BE	BO	I	MA	DA	NA	
Sentani	4	6	6	3	7	10	total number counted: 70
Tanah Merah	4	6	6	4	4	10	

The language-isolate Naidjbedj, which is the westernmost of the Tor languages, appears to have the highest cognation percentage with Sentani and Tanah Merah.

A comparison of Sentani and Tanah Merah with Awji and Waris yielded percentages not exceeding 10%:

	Awji	Waris	
Sentani	10	6	total number counted: 85
Tanah Merah	10	9	

These percentages show that the Sentani group is less closely related to the Tami and Tor Stocks than the two stocks are to each other. They nevertheless point to the possibility of a distant genetic relationship. Evidence supporting this possibility can be found if the Tami languages are compared with other languages of the Trans New Guinea Phylum. A systematic study of these relationships has not yet been made and to attempt it here would fall outside the scope of these notes. A few examples will have to suffice:

	Tami Stock	Trans New Guinea Phylum
<i>ashes</i>	AW ku	Fasu ku; Gogodala uku-ru; Ok Family
	TK ko	ku-tep, ku-tib, ku-tub, ku-tab Goliath Family: uk <i>fire</i> ; Awju Family: ko-sep, ko-tep; Moni hu.
	WR smu	Moni zimu; Beami Family da-subu,
	MN wusmuf	da-suf; Kiwai Family tuwo; and also the second constituent in the Awju and Ok forms above (see MV 1971, p.72 ¹).
<i>belly, excreta</i>	AW al <i>belly</i>	Ok Family: al, ar, ool, wool, oor, ot <i>belly, intestines, excreta</i>
	MN asa <i>excreta</i>	Awju Family: or, oi, o <i>excreta</i> Asmat-Kamoro Family: as, ata, asa <i>excreta</i> Kajagar Family ² : ana, ane <i>excreta</i>

¹For: McElhanon-Voorhoeve 1971.

²See section 3.1 below.

	Tami Stock	Trans New Guinea Phylum
<i>breast</i>	WR tet WN toto	Awin-Pare Family: tute Beami Family: tor, toto Boazi Family: toto Moni: dudu <i>nipple</i> , <i>top</i> . (See MV 1971, p.24).
<i>cassowary</i>	AW kuji TK kuije MN egue WN kwai SG kui	Beami Family: kojɛbi, kojaib Marind Family: kei Jakaj Family: kuju Kajagar Family: kue, kujo Awju Family: kujɛ, woküe Mombum: kai
<i>ear</i>	AW keato TK keat (Tor languages: keere, etc. see above).	OK Family: kene-, kee- Awju Family: kere-, ke- Kiwai Family: gare (See MV 1971, p.26).
<i>eat</i>	general: na, ne	Asmat-Kamoro Family: na, ne Beami Family: na Gogodala: na (Cognates in most of the TNGP languages, see MV 1971, p.95.)

There seem to be lexical grounds, therefore, to unite the North Papuan Phylum and the Trans New Guinea Phylum into one super-group, or macro-Phylum. The existence of such a group was already posited on structural grounds by S.A. Wurm (1971), who gave it the name Central New Guinea Macro-Phylum.

2.4. MORWAP

Morwap is spoken by a few hundred people living in the villages Jamas, Sawa, Kasso, Penemon, and Samsai at some distance south-west of the Awji speaking villages. The language was called Tabu by Galis, who noted that Tabu is virtually identical with Sengi (1956a)¹. The 'Tabu'

¹According to Galis, the Tabu people are remnants of the original population south of Lake Sentani; they have been decimated by constant attacks of the Waris and Kauri tribes.

words listed in his earlier survey list (1955) are indeed identical to Sengi words except in a few cases in which a second form is presented. It appears that the additional forms are true Morwap; the other 'Tabu' words in Galis' list are pure Sengi. In fact, the Morwap language shows very little lexical relationship to the Tami languages and no relationship at all to most of the languages south of the Tami Stock, as is shown by the charts below. These charts are based on the comparative lists added in appendix I.

CHART I:

	Awji	Manem	Waris	Sengi	
Morwap	13	12	13	12	Cognation %
	80	71	80	70	number of words counted

CHART II:

	Amgotro	Jafi	Dubu	Molof	Usku	Tofamna	Kaure	
Morwap	5	0	1	0	2	0	0	Cognation %
	80	70	67	66	66	66	66	number of words counted

The cognation percentages shared between the Morwap language and the Tami languages may perhaps point to genetic relationship. However, it is probable that to a large extent they reflect the frequent contacts of Morwap speakers and speakers of neighbouring Tami languages. Galis (1955) mentioned that Tabu people were living in Njiao, and several other Tami villages. Intermarriage occurs at least with Awji speakers: the author's Awji informant was bilingual Awji-Morwap, having a Morwap mother.

A tentative analysis of the Morwap sound system yields 8 vowel and 13 consonant phonemes. The vowels and their main allophones are:

i	[i,ɪ]	u	[u]
e	[e,ɛ]	ə	[ə,ɘ]
ɛ	[ɛ]	a	[a,ɑ]
		ɔ	[ɔ]

Nasal vowels do occur and there is some evidence that nasal and non-nasal vowels contrast, e.g. bǎõ grub, baɔ elder sister; sũ speak, so urine, so you.

The consonants and their main allophones are:

p	[p]	t	[t, t̥]	k	[k]
b	[b, b̥]			g	[g]
m	[m]	n	[n]	ŋ	[ŋ]
f	[p ^f , f]	s	[ts, s]		
w	[w]	j	[j]		
		l	[l, l̥, ɻ, d]		

Bi-syllabic words generally have stress on the last syllable, tri-syllabic words have secondary stress on the first and primary stress on the third syllable.

Single vowels and sequences of two vowels occur word initially, medially, and finally; single consonants occur word initially, medially and finally, but consonant clusters occur medially only. These are mostly sequences of two consonants; the only three-consonant sequence noted is ŋgl.

Only a very few grammatical notes were collected. The sentence structure shows subject - object - verb in this order. The verb takes suffixes, e.g.

tele si fa-san	father is working the garden
tele bas to-san	father is eating
wəŋan-na	give it to me

2.5. THE SENAGI FAMILY

2.5.1. Introduction

Saddling the border south of Waina are two closely related languages, Dəra and Duka-ekor. Duka-ekor counted an estimated 230 speakers in 1956, Dəra an estimated 1300 speakers, 900 of whom were living on the Western side of the border. Dəra is called Kamberataro by Bass and Loving (1964), after the main Dəra village on the Australian side of the border. Bass and Loving give 687 as the number of Dəra speakers on the eastern side of the border.

Duka-ekor is not mentioned by Bass and Loving, but they mention that the northern village of Mengau possibly has a distinct dialect. It is probable that Mengau is the same village as Mongowar, the Duka-ekor village mentioned by Galis (1956b).

Dəra (Kamberataro) has been united by Bass and Loving into the Senagi family with its south-eastern neighbour the Senagi language. Provisionally Duka-ekor will here be added as third member of the family. The following percentages of cognates between the member languages illustrate their interrelationships:

Senagi - Dəra (Kamberataro): 33% [Bass and Loving; 180-item list]

Dəra (Amgotro) - Duka-ekor: 75% [70-item list, see Appendix I]

The Senagi Family seems to occupy an isolated position. Nowhere in its environments are languages found with which it can be united into one stock or even one phylum. The cognation percentages shared by Dəra, Senagi and the languages surrounding them east of the border do not exceed 4% (Bass and Loving). On the western side of the border the situation is not much better as is shown by the following chart. The figures are based on the word lists added in Appendix I.

	Waris	Manem	Awji	Jafi	Dubu	Molof	Usku	Tofamna	Kaure	
Dəra	10	5	7	6	9	2	5	2	1	% cognate
	82	76	84	82	77	75	75	75	75	number counted
	Tami Stock			Pauwasi Phylum		Unclassified languages				

2.5.2. Duka-Ekor. The only data on hand is a short wordlist collected in Mongowar village by Galis. The basic items in this list have been included in the comparative lists in Appendix I. Galis' list is too short to draw phonological or grammatical inferences from it.

2.5.3. Dəra. The data on hand consists of a word list collected by Galis and a recorded list and some grammatical notes by the writer. The informant was a schoolgirl of Amgotro village. Galis does not mention from which village his informant came. His list is slightly different from the Amgotro list and probably represents another dialect. The following notes are based solely on the writer's own data.

2.5.3.1. Phonology

In Amgotro-Dəra there are 6 vowel phonemes and 11 consonant phonemes. The vowel phonemes and their main allophones are:

i	[i,ɪ]		u	[u,ʊ,ü]	
e	[e,ɛ]	ə	[ə,ɐ]	o	[o,ɔ,ö]
		a	[æ,a,ɑ]		

The back vowels are often unrounded and slightly fronted when they occur word-finally.

The consonant phonemes and their main allophones are:

p	[p, p ^f , f]	t	[t]	k	[k, k ^x , x]
b	[b, ^m b, b, v]	d	[d, ⁿ d, ʎ, ʎ]	g	[g, ^ŋ g, ɣ]
m	[m]	n	[n]	ŋ	[ŋ]
w	[w]	j	[j]		

voiceless stops: affricate-stop, and fricative allophones occur word-initially only.

voiced stops: prenasalized stops alternate freely with non-prenasalized stops word-initially. Intervocally there is free alternation between stop and fricative allophones. The flapped allophone of /d/ is in complementary distribution with the voiced stop allophone. [ʎ] occurs intervocally and in clusters, as first consonant, and when the preceding consonant is a stop. Elsewhere [d] is found. [ʎ and ʎ] seem to alternate freely, with a preference for the retroflex flap.

All words end in a vowel. Single consonants and consonant clusters occur word-initially and medially. The following clusters have been noted: /kd/, /gd/, /kw/, /mb/, /md/, /nd/, /ŋg/, /mbd/, /pd/, /dnd/.

Sequences of two vowels can occur word medially and finally. The following have been noted: /ia, ea, oa, ua, ue, ua, ae/.

All polysyllabic words contain at least one stressed syllable. The place of the accent is not fixed, and stress may therefore be phonemic, although no actual cases of contrast have been observed.

2.5.3.2. Grammar

The following pronouns have been noted:

	as subject	as (indirect) object	possessive
<i>I</i>	ewo	wambo	wanda
<i>you</i>	te	tagambo	tagaba
<i>he</i>	ea	-	aganda
<i>we</i>	igoa	-	igoaba
<i>ye</i>	te	-	tagae
<i>they</i>	namada	-	namadanda

The object marker -mbo and the possessive marker -nda also occur with nouns:

aja-nda warə	<i>father's pig</i>
ewo aja-mbo mangambi	<i>I call father</i>
ewo aja-mbo tatendaga	<i>I want to give it to father</i>

-mbo seems to occur only with nouns denoting living beings. Also with nouns occur a number of locative, directional, and instrumental markers. The data is too limited to establish whether these are separate particles or affixes:

instrument:	nombo;	peto nombo	<i>with a knife</i>
direction :	gwe	aru gwe (takowa)	<i>(put it) into the bag</i>
	na	kwe na	<i>to the river</i>
location :	gi	apobenda gi	<i>on the bed</i>

Verb inflection is by means of suffixes. Tense, aspect, mood, subject and object all seem to have separate markers, but the data is too limited to allow a reliable analysis of the suffix complexes following the verb root, many of which are semantically unclear. A few examples will have to suffice:

Imperative: -abo, -bo 2 p.s.; -i 2 p.pl.
 tata-bo *eat!*; pe-abo *walk!* (sg) pe-i *walk!* (pl);
 pabe-abo *speak!*

Some verbs do not take -bo, -abo but -a, -wa: tata-wa *give!* mando-a *roast it!* If there is an indirect object, the verb takes an object marker which is -ndi for the 1 p.s., zero for the 3 p.s.

mi, aja-mbo ban mando-a	<i>mother, roast sago for father</i>
mi, wambo ban mando-a-ndi	<i>mother, roast sago for me</i>

Prohibitive: -we; the verb is preceded by the negative nenda:
 nenda pabe-we *do not speak*; nenda kwade-we *do not cry!*

Stative: -mbdu, -embdu
 agot-emdu *he is sick*; namar-embdu *he is sitting*; gwaru du dægomda pdega-mbdu *one egg is broken*; mawa du dægomda pdega-mbdu *all the eggs are broken.*

In these examples there is no number marking in the verb. However, number seems to be marked in the verb of the following clause:

aja mi gabed-ebembdu *father and mother are on their way here*
 if compared with: aja gabed-embdu *father is on his way here.*

Present tense:

Some examples with suffixes which seem to be subject and object markers:

aja mi-mbo manga-da	<i>father calls mother</i>
aja wa-mbo manga-da-ndi	<i>father calls me</i>
ewo aja-mbo manga-mbi	<i>I call father</i>

Past tense:

-ge/-gi, and -giwa for 3 p.s. Although a semantic difference between forms with gi and those with -giwa is likely, this is not clear in the data.

kamani aja Amgotro dane pi-giwa	<i>yesterday father A-there he went</i> <i>- yesterday father went to Amgotro.</i>
---------------------------------	---

Sentence - medial forms: -mba

odo gwe gati-mba tato-ge	<i>house into having-gone he-ate</i>
tato gudi-mba apo-ge	<i>eating having-finished he-slept.</i>

Phrase structure: noun phrases.

Some adjectives were found to precede the noun, some to follow it. It is not clear whether they represent two distributional classes or can be shifted from one position to another, possibly with an accompanying shift of emphasis as is the case with demonstratives. Demonstratives can precede or follow the noun, the preposed demonstrative apparently being slightly emphasized. Numerals always precede the noun.

kətam gagadə *long rope*; kabodo kətamo *short rope*; odo takenawe *a small house*; edeba odo *an old house*; odo danu *this house*; odo kaena *that house*; danu odo egandu nu, gaena odo takenawe nu *this house is large, that house is small*; mano wadə *one pig*; imbu wadə *two pigs*.

Possessive pronouns precede the noun; in the possessive phrase Noun + Noun, the first Noun denotes the possessor and has the possessive suffix -nda:

Non-verbal sentences:

These consist of a subject + complement:

odo dane egandu nu	<i>this house is large</i>
danu korekapi ¹ nu	<i>these are matches</i>
ewo Teresia	<i>I am T.</i>
wadə gdane wa	<i>where is the pig</i>
wadə gaeno na	<i>the pig is over there.</i>

¹Loan from Indonesian.

The function of the particles *nu* and *na* is not clear.

Verbal sentences:

The structural pattern of the collected sentences is:

± time adverb ± subject ± indirect object ± object + verb: *anugo jabodo ajambo kdedo-ge recently a dog bit father*. In questions, however, the subject-object order is reversed: *tagambo jabodo kded-niwana did a dog bite you?* Examples involving an indirect object have already been given above.

2.6. THE PAUWASI PHYLUM

West of the Senagi Family a group of at least four languages seems to constitute a language phylum. The languages are Jafi (170 speakers), Emumu (1100 speakers), Dubu (130 speakers) and Toweï (115 speakers). Possibly also the Nambela language south of Toweï belongs to the group, but there is no data available in this language. The phylum will be named Pauwasi Phylum after the Pauwasi river which drains the greater part of the area covered by the phylum.

The only data on hand is the word lists collected by Galis (1956b). These are sufficient for purposes of provisional classification, but do not allow conclusions about phonological and grammatical structure.

There are two sub-groups: 1. Jafi and Emumu, sharing 75% cognates (100-item list), and 2. Dubu and Toweï sharing 56% cognates (100-item list). The sub-groups will be named Emumu and Dubu Family respectively. Between each other the two families share only phylum-level cognation percentages. Dubu and Jafi share 20% cognates (80-item list, see Appendix I), Dubu and Emumu share 14% cognates (100-item list).

2.7. UNCLASSIFIED LANGUAGES

West of the Pauwasi Phylum only small isolated languages are found till one reaches the Nawa River. They are Molof (200 speakers), Usku (20 speakers) and Tofamna (number of speakers unknown). West of the Nawa River the Kaure language is spoken by the Kaure tribe which seems to be of substantial size. The only data available is the word lists collected by Galis (1956b). Part of these have been included in Appendix I. The languages share very low cognation percentages with each other as well as with the languages of the Pauwasi Phylum, as is shown by the chart below:

	Dubu	Molof	Usku	Tofamna	Kaure	
Jafi	20	7	7	9	4	
	Dubu	10	12	7	2	
		Molof	10	5	4	cognation percentage
			Usku	7	6	
				Tofamna	6	

Number of items counted: 79-80

List used: see Appendix I.

Usku and Molof might perhaps be reckoned to the Pauwasi Phylum on the basis of the figures presented above, but other counts make it unlikely, e.g. Usku - Jafi 4% (100 items), Molof - Towei 7% (100 items). For the time being all these languages remain unclassifiable.

3. LANGUAGES IN SOUTH WEST-IRIAN

3.1. INTRODUCTION

The main source of information on the languages in the southern plains of West Irian is the work of the Dutch missionary P. Drabbe M.S.C.. During the more than 20 years that he worked in the area he studied most of the local languages, publishing grammatical sketches, grammars, word lists, dictionaries and texts¹. The last language the study of which he began was Tamagário, spoken on the Gondu (Queen Juliana) river. He found this language totally different in structure from the languages he had previously studied, and thought it was unrelated to any of the already known languages (Drabbe 1963, p.2 and personal communication).

For reasons of health Drabbe was not able to finish his study of Tamagário and his notes remained unpublished.

Apart from Tamagário there were at least two more unknown languages in the same general area east of the Casuarina Coast Asmat: the languages of the Sawuj, Kajaghar and Ujaghar tribes. This made the hinterland of the Casuarina Coast the last linguistic terra incognita on the south coast.

The present writer collected data in four languages of the Casuarina Coast hinterland: Sawuj, Kaugat, Kajgir, and Tamagário. These made it possible to classify Sawuj as a member of the Awju language Family, and unite the other three into the Kajagar Family. New data were also collected in the villages of Warkai and Bipim, two enclaves in Asmat territory in which a language of the Marind Stock is spoken. The notes on these languages will be presented in the following order:

¹A complete list of P. Drabbe's publications on New Guinea languages can be found in 'An Ethnographic Bibliography of New Guinea' Australian National University Press, Canberra 1968, Vol. I, p. 70-1.

1. The Kajagar Family
2. Sawuj
3. Warkaj-Bipim

3.2. THE KAJAGAR FAMILY

3.2.1. Introduction

The languages of the Kajagar Family are spoken in the basins of the Gondu and Cook rivers except for a narrow coastal belt in which the Casuarina Coast dialect of Asmat is spoken. Starting from the north-west the family border roughly follows the Kronkel river eastwards to its source, then dips to the south-east till it reaches the Gondu river. The border then follows the Gondu river upstream past the connection between the Peru and Gondu Rivers, where it turns north till it reaches its former latitude. Then it turns east again, crossing the branches of the upper Purumi river, after which it sweeps south and west in a wide curve, crossing the northern tributaries of the Bapai river, till it reaches the coastline.

The westernmost language of the family is Kaugat, spoken in 5 villages four of which lie on the Cook river, the fifth being on the Kronkel river.¹ The estimated number of speakers is 700.²

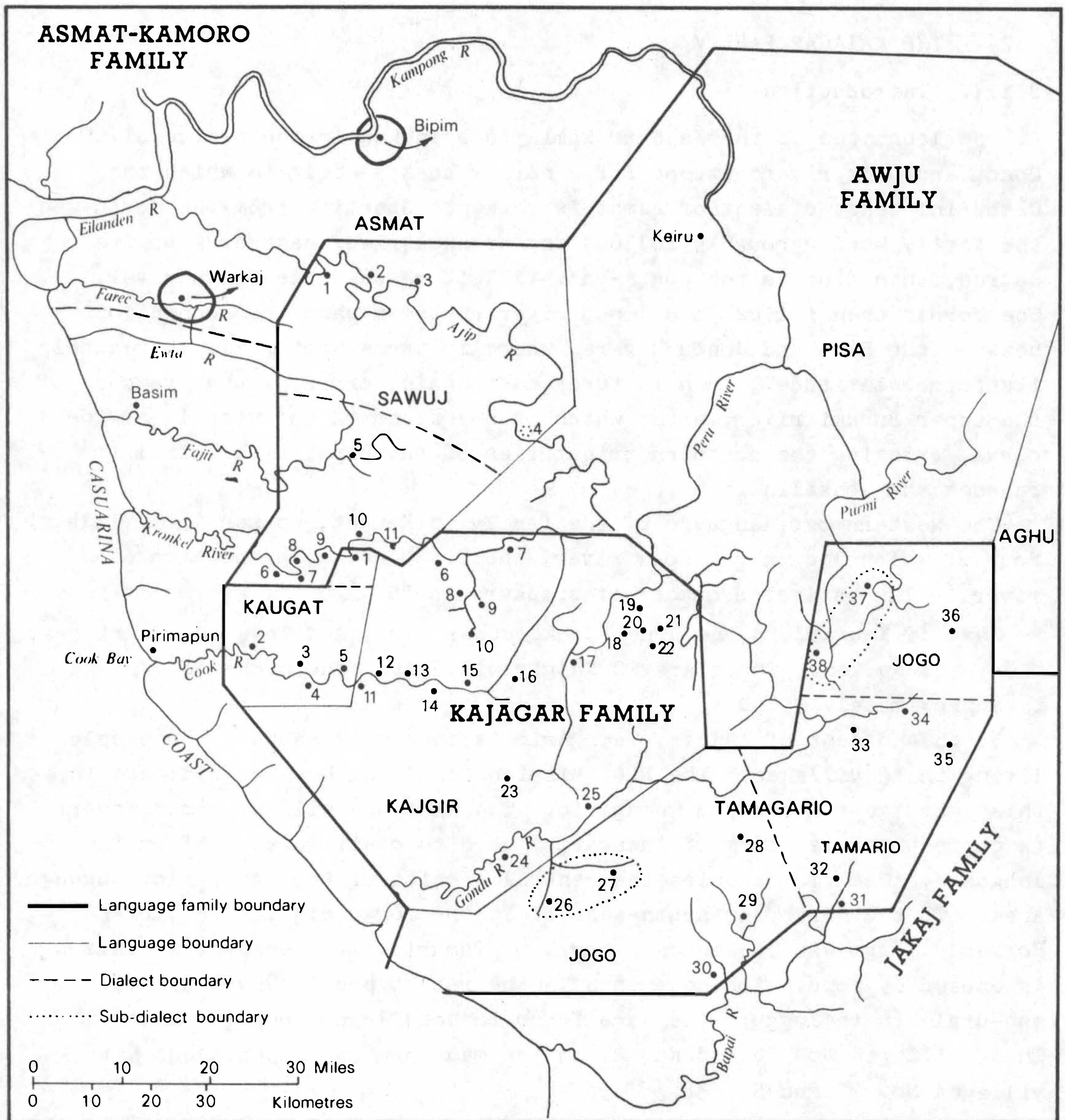
East of Kaugat, on the upper Cook, upper Peru, and lower Gondu rivers, Kajgir is spoken. There are 20 Kajgir villages. The number of speakers is approximately 3,000.

South and east of Kajgir, Tamagário is spoken by about 3,500 people living in 13 villages. The R.C. Mission distinguishes two dialects in this language: Joggo and Tamagário. The last one will be named Tamário (a current shorter form of Tamagário) here to distinguish it from the language. Tamario occupies the central section of the Tamagario language area. To the north and south-west of it the Joggo dialect is spoken. Formerly Joggo was spoken only north of Tamario; the present situation is caused by population movements in the recent past. There are two sub-dialects in Joggo; they are found in both Joggo speaking areas. Thus, villages No 26 and No 27 on the map form one sub-dialect with villages No. 37 and No 38.

The total number of Kajagar speakers is approximately 7,200. The neighbours of the Kajagar Family are: Asmat in the west, Sawuj and Pisa in the north, and Jakaj in the east and south.

¹A list of villages names has been added to the map, p. 80.

²The latest census figures available date from 1961, and these do not cover all the villages now existing. The figures given here and below can therefore be only rough estimates.



MAP 2: LANGUAGES OF THE CASUARINA COAST HINTERLAND

LANGUAGES OF THE CASUARINA COAST HINTERLAND

- | | | | | | |
|---------|-----|--------------------------------------|------------|--------|----------|
| Sawuj: | 1. | Bawor | Tamagário: | 26. | Taregaj |
| | 2. | Kagami | | 27. | Ati |
| | 3. | Tambor | | 28. | Kajegai |
| | 4. | Ero-Sato
(exact location unknown) | | 29. | Kageir |
| | 5. | Ujar-Kagas | | 30. | Gaumi |
| | 6. | Sanepaj | | 31. | Terejemu |
| | 7. | Bawor | | 32. | Makabak |
| | 8. | Isaip | | 33. | Arare |
| | 9. | Saremit | | 34. | Topum |
| | 10. | Kamur | | 35. | Pagai |
| | 11. | Kainam | | 36. | Xajtox |
| Kaugat: | 1. | Jakamit | 37. | Jame | |
| | 2. | Sanem | 38. | Segere | |
| | 3. | Sinepit | | | |
| | 4. | Ajkut | | | |
| | 5. | Kajpom | | | |
| Kajgir: | 6. | Amlan | | | |
| | 7. | Amegas | | | |
| | 8. | Amkum | | | |
| | 9. | Amsüme | | | |
| | 10. | Amkaj | | | |
| | 11. | Gagare | | | |
| | 12. | Ajru | | | |
| | 13. | Wagesu | | | |
| | 14. | Kawem | | | |
| | 15. | Amaru | | | |
| | 16. | Garuboob | | | |
| | 17. | Kajbu | | | |
| | 18. | Xairipm | | | |
| | 19. | Okor | | | |
| | 20. | Waragom | | | |
| | 21. | Asipm | | | |
| | 22. | Semtajpm | | | |
| | 23. | Gogogir | | | |
| | 24. | Gomberu | | | |
| | 25. | Sene | | | |

The materials collected in the Kajagar languages are:

Kaugat: two recorded word lists. Informants were a boy of Jakamit and two young men of Sinepit.

Kaigir: two word lists, one obtained from Kawem people visiting Pirimapun, one recorded in Kawem itself.

Tamagário: one word list, obtained from a young man of Arere.

Father F. Lommertsen m.s.c., missionary in Pirimapun, kindly supplied the writer with general information on the Kajagar languages and lent him a manuscript containing a grammatical sketch of Tamagário by Drabbe, and grammatical sketches of Kajgir and Joggo by himself.

3.2.2. Phoneme Inventories

3.2.2.1. Consonant phonemes:

All Kajagar languages have a stop at the bilabial, dental and velar points of articulation /p, t, k/, a bilabial and a dental nasal /m, n/, a flapped or trilled vibrant /r/, and two semivowels /w, j/. In addition, Kaugat has an unvoiced alveopalatal stop /c/, and both Kaugat and Kaigir have fricatives at the labiodental, dental and velar points of articulation /f, s, x/.¹

The main allophones and their distribution are presented in the following chart. Abbreviations used are: I = word-initially, M = word-medially, F = word-finally: the symbol ~ is used for 'freely alternating with'.

¹Kaugat /c/ developed from an original *t under influence of a high front vowel in the immediate environment, as shown by the following sound correspondences (/i/ to be read as: actual or reconstructable /i/):

	Kaugat	Kaigir	Tamagário	
	t	t	t	I, not followed by /i/
*t:	c	t	t	I, followed by /i/
	t	r	r	M, not preceded or followed by /i/ F, not preceded by /i/
	c	r	r	M, preceded or followed by /i/ F, preceded by /i/

In Kaigir and Tamagário, r < *t merged with the original /r/ which shows the correspondences:

*r	r	r	r	M,F
----	---	---	---	-----

phoneme	allophones and their distribution	language
p	[p] - I,M,F [b] - M, a) intervocally, ~ [p] b) in clusters with /m,n,r/, ~ [p] Note: In Tamagario one would expect also fricative allophones, but no such have been noted.	all
t	[t] - I,M,F [d] - M, in clusters with /r,n/, ~ [t] [t ^s] - I,F, ~ [t,s] [s] - I,F, ~ [t,t ^s]; M, ~ [t]	all Tamagário
k	[k] - I,M,F [g] - M, ~ [k] [?] - M, between /a/ and /a/, with exclusion of [k] and [g] [k ^x] - I,M (intervocally), F, ~ [k,g] [x] - M (intervocally), ~ [k,k ^x ,g] [ɣ] - M (intervocally), ~ [k,k ^x ,g,x] Note: in all languages, all velar allophones are backed when contiguous to /u,o,a/.	all Kaugat Tamagário

Footnote continued from page 82.

The other consonant correspondences are:

*p	p	p	p	I,M,F,
*k	k	k	k	I,M,F, except between /a/ and /a/
	k	x	k	M, in context /a/ - /a/
*f	f	f	p	I,M,F,
*s	s	s	t	I,M,F,
*x	x	x	k	I,M,F,
*m	m	m	m	I,M,F,
*n	n	n	n	I,M,F,
*w	w	w	w	I,M,F,
*j	j	j	j	I,M,F,

Thus, the proto-Kajagar consonant system probably was:

p	t	k
f	s	x
m	n	
w	j	
	r	

phoneme	allophones and their distribution	language
m	<p>[b] - I, when the next consonant is a stop or /r/</p> <p>[m] - I, when no consonant follows, or when the next consonant is a nasal. Alternation of [b] and [m] was noted in two instances, one with next consonant /p/, and the other with /r/ as the next consonant.</p> <p>- M, F</p>	all
n	<p>[n] - I, M, F</p> <p>[d] - I, there seems to be a tendency towards complementary distribution with [n]: if the next consonant is a nasal, only [n] occurs; if the next consonant is a stop, mostly [d] occurs (but [n] before intervocalic [ɣ] and [b]). Some cases of alternation between [n] and [d] have been noted.¹</p>	all Not in Kronkel river dialect of Kaugat, which lacks [d].
r	<p>[ɣ] ~ [ɣ̃] - M, F the trilled allophone is perhaps a feature of speakers with knowledge of the Indonesian language.</p> <p>[d] - M (intervocalically) ~ [ɣ̃, ɣ̃].</p>	all Tamagário
w	[w] - I, M, F	all
j	<p>[j] - I, M, F</p> <p>[j̃] - I, M, noted twice only, in Kaugat</p>	all
f	[p ^f] ~ [f] - I, M	Kaigir, Kaugat
s	<p>[s] - I, M, F,</p> <p>[t^s] - I, F ~ [s]</p> <p>In Kaigir, also voiced and interdental allophones occur intervocalically: [z, θ, ð].</p>	" "
x	<p>[x] - I, M, F</p> <p>[k^x] - I, F ~ [x]</p> <p>All allophones are backed when contiguous to /u, o, a/.</p>	" "
c	[č] - I, M, F	Kaugat

¹In this respect the Kajagar languages resemble Asmat, in which [b] and [m] are allophones of one phoneme /m/, and [d] and [n] allophones of /n/, the nasal allophones occurring almost exclusively if the next consonant is a nasal consonant, and always in word-final position.

3.2.2.2. Vowel Phonemes:

All Kajagar languages have the following vowel phonemes: /i,e,a,o,u/, and perhaps /ə/. For Kaugat two more phonemes were provisionally set up: 1. /ü/, to accommodate a rounded high front vowel [ü] which in some cases contrasts with /i/ and /u/, (e.g. *iki stone, ükü spittle, ku thunder*) but in others could be interpreted as an allophone of /i/ (after /w/, and in the environment /p/ - /p/, e.g. *wim,wüm tree*); 2. /ö/, to accommodate a slightly backed, rounded mid-front vowel [ö] and a rounded mid-central vowel [ə] which could not be allocated to any other vowel phoneme. /ü/ and /ö/ do not occur in the Kronkel River dialect of Kaugat.

Chart of the vowel phonemes and their main allophones:

i	[i,ɪ]	(ü [ü])		u	[u,ʊ]
e	[e,ɛ]	(ö [ö ə])	<u>e</u> [ə]	o	[o,ɔ]
		a	[a,ɑ,æ]		

() in Kaugat only

 phonemic status uncertain

In Kaigir, word-final /m/ tends to cause non-phonemic nasalization of the preceding vowel(s); a few cases were noted in which dropping of a final /m/ caused compensatory nasalization of the preceding vowel.

3.1.2.3. Distribution

Single consonants occur word-initially, medially, and finally. Clusters of no more than two consonants occur medially. Word-finally only the clusters /pm/ and /tn/ are permitted. In this position /pm/ and /tn/ contrast with final /p/ and /t/; the nasal in these clusters can carry stress [pʰ, tʰ].

Single vowels occur word-initially, medially and finally, as do sequences of two vowels, including like vowels.

3.2.3. Grammar¹

Personal pronouns: these have emphatic and non-emphatic forms, indirect-object forms, and possessive forms, as shown in the chart below.

¹The recorded word lists contain very few grammatical notes. For most of the following information I am indebted to Father Lommertsen M.S.C.

		non- emph.	emph.	ind. obj.	possessive <i>my</i>	possessive <i>mine</i>
Tamagário	s.1	nak	nakar	nakere	nem, nakanem	
	2	ak	akar	akere	anam	
	3	ek	ekamar	ekamere	enem	
	p.1	nep	nepar	nepere	nokom	
	2	akanek	akanar	akanere	ikim	
	3	wep wene	wepar	wepere	wepkom	
Kaigir	s.1	nax	naxare	naxeru	nem naxanem	nemar
	2	ax	axare	axeru	anem	anemar
	3	ekam	ekamare	ekameru	enem	enemar
	p.1	nep	nepare	neperu	naboxom noxom	noxomar
	2	axan	axanare	axaneru	axanikim	axanikimar
	3	ene	enare	eneru	enekem	enekemar
Kaugat	s.1	naxa	na' ar	na' akawe	namor	
	2	axa	a' ar	-	anemor	
	3	-	-	-	-	
	p.1	nipi	nipir	-	nipmor	
	2	a' ani	a' aner	-	ekmor	
	3	-	-	-	-	

Nouns: in Tamagário, possession is marked by a particle *akam*: *wakum aj akam father's pig*; *wakum junim nem akam my elder brother's pig*.

Verbs in Tamagário take suffixes and vary for tense, mood, aspect, person and number. There are five tenses: present, past (on the same day), past (recent past, before to-day), past (distant past), and future. There are two aspects: punctiliar, and durative-repetitive. The order of the suffixes is: durative - tense - person (number). A suffix marking plurality of actor occurs only in the punctiliar forms of some verbs. Otherwise, number is not indicated (1st person), or person and number are jointly indicated by one morpheme (2nd and 3rd person).

The present tense (progressive aspect) forms consist of: verb root, durative suffix, tense suffix, person (number) suffix:

urok parm-o-m-e	<i>I am talking / we are talking</i>
parm-o-m-an	<i>you s. are talking / they are talking</i>
parm-o-m-in	<i>he is talking</i>
parm-o-m-ren	<i>you p. are talking</i>

Present tense, punctiliar, with number suffix:

kere-m-e	<i>I hit it, he hits it (once)</i>
kere-m-an	<i>you s. hit it</i>
kere-aka-m-e	<i>we hit it</i>
kere-aka-m-ren	<i>you pl. hit it</i>
kere-aka-m-an	<i>they hit it</i>

There are sentence-medial forms indicating that the action is followed by another action. These forms vary for identity and non-identity of subject. The sentence-medial verb forms are compounds in which the second constituent is a form of the verb 'to cease':

verb root + tem	(identity of subject)
tema[riki]	(non-identity of subject)

Sentence structure: some examples of recorded phrases and clauses are presented here without further attempts at generalizing.

Tamagário: wow namor	(noun-possessive pronoun) <i>my house</i>
wakum pokura	(noun-adjective) <i>a big pig</i>
makam jair-o-me akari	(object-verb-indirect object) <i>I am roasting sago for you</i>
makaŋ ba jair-o-m-an	(object-question marker? - verb) <i>are you roasting sago?</i>
nakanem jaitem	(pronoun-verb) <i>roast it for me, roast mine</i>
jare kanakan	(verb-negative) <i>it has not been roasted</i>

Kaugat

(Sinepit) pérom kupiákaram	(noun-adjective) <i>a long rope</i>
pákém wow	(demonstrative - noun) <i>this house</i>
kep temenám	(object-verb) <i>stop speaking</i>
(Jakamit) axa ówm	(subject-verb) <i>you should eat</i>
nibi má?am o'w'p	(subject-object-verb) <i>let us eat sago</i>

3.2.4. Genetic Relationships

Internal: The Jakamit and Sinepit lists of Kaugat represent two different dialects; they share 92 items of which 86 (93%) yield pairs of cognates. The two dialects will be named the Kronkel and Cook River dialects respectively.

A comparison of a 136-item list in Kaugat (Sinepit), Kaigir and Tamagário yielded the following cognation percentages: Kaigir - Kaugat: 56%, Tamagário - Kaugat 57%, Kaigir - Tamagário 76%. Kaigir and Tamagário constitute a subgroup of the family.

External: A preliminary assessment of the relationships with languages outside the family made it clear that the Kajagar languages have their closest relationships with the languages of the Central and South New Guinea Stock (Asmat-Kamoro Family,¹ Awju Family, Ok Family). The relationship with these languages seems to lie well within the range of phylum-level relationships. The relationships with the languages of the Marind,² Jelmek-Maklew, and Frederik-Hendrik Island Stocks are less although perhaps still within the phylum-level range.

There are no languages with which the Kajagar Family has stock-level relationships. The family has been provisionally classified as a one-member stock within the Trans-New Guinea Phylum.

3.2. THE SAWUJ LANGUAGE

3.2.1. Introduction

The Sawuj language is spoken by an estimated 1,500-2,000³ people living on the middle and upper Ajip river, the upper Fajit river and on the middle Kronkel river. There are 11 villages: Bawor, Kagami, Tambor, and Ero-Sato on the Ajip; Ujar-Kagas on the Fajit, and Kamur, Kainam, Bawor, Esaip, Sanapai and Saremit on the Kronkel. Two more names were mentioned by informants in Kagas: Minaki and Mause. These are probably names of nomadic groups living near the Ajip river. The location of Ero-Sato is not known to the writer; the village is said to be one day's rowing upstream from Tambor.

Three word lists of varying length were recorded; they represent the dialects of Bawor (Ajip river), Kagas, and Saremit. A fourth list, collected in Sanapai, was kindly supplied to the writer by Father van der Wouw, Missionary in Basim. The Saremit and Sanapai lists are identical;

¹Early cultural contact between the Asmat and Kajagar tribes is suggested by two words in the sacred vocabulary of Asmat songs, which are of Kajagar origin: *okom water* and *kokopuc dog* (Kaugat: *opoc*). The headwaters of the Fajit and Kampong rivers, originating in the hinterland of the Casuarina Coast, play an important part in Asmat mythology.

²The Jakaj group may be relatively new in the area: the Kajagar languages show closer relationships to Marind than to Jakaj. The lists further suggest early contact of the Kajagar groups with the Sjiagha-Jenimu tribes and with the tribes now living on Frederik-Hendrik Island.

³This figure was arrived at by assuming an average of 150 inhabitants per village. The average is based on census figures dating from 1960, quoted in Amelsvoort 1964, i.e. Ujar - 165; Abtatie (=Kagas?) 174; Kainam - 146; Kamur - 164; Saremit - 137, and on the writer's own estimate of the size of the villages on the middle Ajip river.

the Kagas list is only slightly different from the Saremit list, showing minor differences in word form but 100% shared cognates (number of items: 90). The Bawor list is more divergent, sharing 91% cognates with Saremit (90-item list), and 93% cognates with Kagas (80-item list). All the villages on the Kronkel river are said to speak the same dialect; the same was reported for the villages on the middle Ajip. There appear then to exist at least two dialects in Sawuj; the middle Ajip dialect and the Fajit-Kronkel dialect. Saremit and Kagas represent two sub-dialects. The dialectal affiliation of Ero-Sato is not yet known.

3.2.2. Genetic Relationships

Genetically the Sawuj language has its closest relationships with the Awju languages.¹ Preliminary cognate counts using the Saremit list to represent Sawuj, showed that the closest relationships with languages within the Awju Family are with Sjiagha/Jenimu:² 36% (122-item list); next come Pisa: 29%, and Kaeti: 23%. If the Saremit and Kagas lists are combined, the test list is expanded to 166 items, yielding the following results: with Sjiagha/Jenimu 32%, with Pisa 27%, with Kaeti 19%.

¹The Awju languages form a family with two subgroups: Awju, and Dumut. Awju has 5 member languages: Sjiagha/Jenimu, Pisa, Aghu, Airo-Sumaghage, and Kotügüt; Dumut has at least three member languages: Wambon, Kaeti and Wangom. (Healey 1971: 997,998).

²It is interesting to note that Sawuj shares a number of cognates exclusively with languages spoken south of the mouth of the Digul river and on Frederik Hendrik Island:

banana	:	Sawuj xorob, Mombum xurub, Riantana karö
bad	:	" ea:x, " lkor, Dom jaxur Kimaghama jaka
big	:	" faran, Maklew balaq, Jelmek mbalak
bow	:	" xarab, Mombum xarew, Riantana karavo, Dom xaref (but in the Kajagar languages pe, Jakaj: mi)
housefly	:	" arwer, Kimaxama uraora, Dom worwer
wife	:	" lwar, Dom jebör
tooth	:	" torok, Dom trex; (also in languages near the Indonesian-Australian border: Moraori terox, Kanum tor, Jej ter).

The sharing of a cultural term like 'bow' and the formal similarity of the words make it likely that these languages have been in direct contact at some point in their history. This, combined with the fact that also the Kajagar languages show traces of contact with the same groups, and the fact that a Marind-type language is spoken in two enclaves in Asmat territory (Warkai - Bipim, see below) makes it clear that in the past considerable migrations must have taken place in the area.

These results are approximative because the equivalence of several of the compared words - especially of verb stems - is doubtful. On account of the above percentages it is possible to classify Sawuj provisionally as a member of the Awju family, forming a third sub-group by itself.

3.2.3. Phonology

There are no phonological differences between the two dialects. Tentative analyses of the three recorded lists all yielded the same results.

The consonant phonemes are:

p	t	k
b	d	g
f	s	x
m	n	
w	j	
	r	

/p/ and /b/, /t/ and /d/, /k/ and /g/, contrast in word-initial and word-medial position. In word final position this is not clear: neither clear contrast nor free variation was noted. A possible case of contrast is (Bawor): kood *eye* versus jitkoot *elbow*, workoot *neck*. Word final voiceless and voiced stops are written here as they were transcribed from the recordings.

/f/ was noted only once word-medially, and never word-finally. /x/ does not occur preceding front vowels. This is a feature which is characteristic of all the known Awju languages.

The following chart shows the main allophones of the consonant phonemes in Word-initial (I), medial (M) and final (F) position. The symbol ~ indicates free alternation.

	p	b	t	d	k	g	f	s	x	m	n	r	w	j
I	p	b	t	d	k ḳ	g g̣	p ^f ~f	t ^s s	k ^x x k ^x x̣	m	n	l	w	j
M	p	b~ḅ	t	d	k ḳ	g g̣	f	s~z	x x̣~ Y Ỵ	m	n η	ṛ~ṛ̣	w	j
F	p	b	t	d	k ḳ	g g̣	-	s	x x̣	m	n~∅	ṛ~ṛ̣	w	j

All velar consonants tend to be backed when contiguous to /a/ or /o/. Free alternation of voiceless and voiced fricatives occurs intervocalically only. The velar nasal [η] occurs only preceding /k/ and /g/. /n/ in word-final position causes optional nasalization of the preceding vowel;

in this position the nasal can be dropped, in which case the preceding vowel always becomes nasalized. A final nasal vowel thus has to be interpreted as vowel + /n/.

Consonant clusters occur word-medially only. The following have been noted: pt, pd, bk, bg, bx, bt, tk, sm, mb, md, ms, mx, nd, ng, rp, rb, rt, rk, rg, rm, rn, rw.

The vowel phonemes and their main allophones are:

i	[i,ɨ]	u	[u]
e	[ɛ̃,ɛ]	o	[o,ɔ]
a	[æ,a,ɑ]		

Sequences of two vowels occur word-initially, medially, and finally. The following have been noted: ai, ae, au, aa, ei, ee, ea, ii, ia, uu, uo, ui, oo, oa, oi.

Stress and vowel length: the last syllable in a word carries the (main) stress. Concomitant with stress is a lengthening of the vowel. In the word list eliciting situation in which an informant pronounces the words with a certain emphasis and free of context, this lengthening can approach the double length of short (unstressed) vowels. This is always the case with monosyllabic words ending in a consonant. Besides phonetically long vowels, sequences of two like vowels also occur, and it is possible that at least some of the long vowels noted have to be interpreted as vowel sequences. Pending further research the writer will follow the original transcription of the recordings, writing two like vowels where the acoustic impression was one of two separate vowels, and writing a long vowel in the other cases.

Pitch contours: typical for most of the words with a long vowel is a falling-rising pitch contour on the last syllable. A number of instances was recorded of a level pitch contour on the last syllable; the fact that in the three recordings the same words exhibit a level pitch contour (ko:d, mu:d, a:r, sir, a:p) rules out the possibility of an accidental variation of intonation, and points to the possibility of phonemic pitch in this language.

3.2.4. Grammar

A comparison of the few verb forms and sentences contained in the word lists with Drabbe's notes on Sjiagha/Jenimu (Drabbe 1950) showed the following similarities:

To be present, Sawuj: verb stem ba preceded by particle di or da:
 du di bá ne *is there sago?* du di ba *there is sago.* no ap ke da ba
my house in he-is. In Sjiagha the verb is bo-,baxa- *to sit* preceded by

a particle *da da:ne bax he is here (ne here = Sawuj ene)*. Futurum 1 p. pl., Sawuj: stem + *wi*, *xa-wi I shall go*; Sjiagha: stem + *we*, or *wæ*, *axa-wæ I shall go*; Imperative 2 p.sg. Sawuj: stem + *ni*, *popa-ni sit!*; Sjiagha stem + *na*, *ati-na bite!*, *bo-no (irregular) sit!* Past tense 1 p.sg. Sawuj: stem + *ke+ de*, *fan-ke-de I ate*; Sjiagha: stem + *kV + dewe*, *en-ke-dewe I ate (yesterday)*.

The Sawuj pronouns appear to have retained an old feature which has been lost in the other Awju languages; the characterization of the 1st and 2nd person plural forms by a high front vowel as against the low-central or back vowels of the singular forms. This feature is still found in many of the languages of the Trans New Guinea Phylum. Traces of it are found in the pronoun system of the Kajagar languages.

Chart: Comparative list of Sawuj, Sjiagha, Pisa, and Kaeti personal pronouns.

	Sawuj	Sjiagha	Pisa	Kaeti
sg. 1	nogo, nogop	no	nu	nöp
2	go, gop	go	gu	ngöp
3	e, ep	ewe, ege	eki	ege
pl. 1	nigi, nigip	noxo	nugu	nongüp
2	gi, -	goxo	gugu	nengip
3	-	joxo	joxo	jengip

3.3. WARKAI-BIPIM

3.3.1. Introduction

The villages Warkai and Bipim form two linguistic enclaves within the Asmat language area. The two villages speak one language, which belongs to the Marind Stock. Warkai is situated on the Farec river, about 5 miles upstream of the Asmat village Omadesep. Bipim is on the As (Kampong) river, three miles upstream of the Asmat village Ar-Danim. The villages are small; Warkai counted 115 people in 1960, Bipim 79. Their present size seems about the same. A few generations ago the two villages still lived together, presumably near the source of the Farec river. In Warkai the memory of the former unity with Bipim is still alive; in Bipim the informants denied to know anything about it.

The first word list collected in Warkai dates from the late fifties; it was collected by one of the early missionaries in the area, either Father von Pey, or Father van Kessel. Subsequent lists were recorded

in 1961 and in 1970 by the present writer, who also collected a word list in Bipim. The three lists, taken in chronological order, show an increase in Asmat loan words. The first list gives *reka* *fire* (// Jakaj *reka*), where the later lists have *usa*, from Asmat *jisa*. The 1961 list gives *ahaj* *old*; where the 1970 list has *tari* = Asmat *tari*. Other Asmat loans in Warkai are: *po* *paddle*, *jawi* *sun*, *ose* *tree*, *par* *wide*. Since the introduction of Mission and Government frequent contacts have developed between Warkai, Bipim, and the neighbouring Asmat villages. It can be expected that the Warkai-Bipim language will in the future be heavily influenced by Asmat. Warkai-Bipim is now separated from the other languages of the Marind Stock by languages of the Awju and Kajagar Families. It may have been in contact with several of these languages as is shown by the following probable loans:

jaka, Sawuj *jakae* *stone*; *eber*, Sawuj *sebar* *earth*; *kade*, Pisa *kadu* *meat*; *peheur*, Kaugat *xaur* *above*; *kasi*, Kaigir *xasi* *stone* *axe*; *kerme* Kaigir *xaxaram* *moon*; *pep* *fireplace*, Tamagario *pep*, *earth*; *marep*, Tamagario *manep* *star*.

3.3.2. Genetic Relationships

The Warkai-Bipim language belongs to the Marind Stock of languages. Its closest relative is the Jakaj language, with which it has been tentatively united into one family. A provisional cognate count, based on a 130-item word list, yielded 30% cognates with Jakaj, and 19% cognates with Bian-Marind. The comparative word lists presented below in Appendix II give the following results:

	Jakaj	Bian-Marind
Warkai:	29	12

3.3.3. The Sound System

There seem to be 15 consonant phonemes and at least 6 vowel phonemes. The consonant phonemes and their main allophones are:

p	[p]	t	[t]	k	[k, ḳ, g, g]	'	[ʔ]
b	[b]	d	[d]				
f	[p ^f , f]	s	[t ^s , s]	x	[x, x̣, γ, γ]	h	[h, ḥ] ¹
m	[m]	n	[n, ŋ]				
w	[w]	j	[j, j̣]				
		r	[ṛ]				

The glottal stop /'/ and the uvular fricative /h/ were noted word-medially only. The voiced-voiceless opposition in the stops seems to have been neutralized in word final position. In this position all stops are lenis and unvoiced. /f/ was not found word-finally; /x/ only word-medially. The velar consonants are backed when contiguous to /a/ or /o/, and have freely alternating voiced and unvoiced allophones in intervocalic position. The fricatives /f/ and /s/ have freely alternating affricate and fricative allophones in word-initial position. /n/ has a velar allophone [ŋ] when preceding /k/. Word-initially, /j/ has freely alternating alveodental and alveopalatal allophones.¹

The vowel phonemes and their main allophones are:

i	[i]	u	[u,ü]
e	[e,ě] (ə)	o	[o,ɔ]
ɛ	[ɛ,æ]	a	[a,ɑ]

The phonemic status of the mid-central vowel [ə] is uncertain.

Single consonants occur in all positions; consonant sequences occur word-medially only. The following have been noted: md, mn, ms, nd, nk, nj, jm, rw. Single vowels occur in all positions; sequences of two vowels were noted word-medially and finally only: ai, ae, au, ei, eu, ei, ia, ua, ou, aa, uu.

¹The sound system of Jakaj lacks the glottal stop and the fricative consonants (fricatives and affricate stops are allophones of stops). Warkaj /k, x, h and '/ all correspond most commonly to /k/ in Jakaj; the data is too limited to trace the causes of the four-to-one correspondence. Warkaj /s/ corresponds to Jakaj /t/; no correspondence involving Warkaj /f/ was found. The other most common correspondences are:

Warkaj	Jakaj	Warkaj	Jakaj
p	: p	m	: m
b	: b (initially)	n	: n
b	: mb (between vowels)	r	: r (finally)
d	: nd (between vowels)	j	: j

No correspondences involving Warkaj /t/ has been noted.

The Jakaj vowels are:

i	u
e	ö o
ä	a

The most common correspondences with Warkaj are:

Warkaj	Jakaj	Warkaj	Jakaj
i	: i	a	: a
e	: e	o	: o
ɛ	: a	u	: u

No correspondences involving Jakaj ä or ö have been noted.

BIBLIOGRAPHY

BASS, J. and RICHARD LOVING

- 1964 *Languages of the Amanab Sub-District*. Port Moresby, Division of Extension Services.

CAPELL, A.

- 1954 "A linguistic survey of the south-western Pacific", *South Pacific commission, Technical paper No. 70*.

COWAN, H.K.J.

- 1952a "Een toontaal in Nederlands Nieuw-Guinea", *Tijdschrift Nieuw Guinea* 13: 55-61.
- 1952b "De Austronesisch - Papoea'se taalgrens in de Onderafdeling Hollandia", *Tijdschrift Nieuw Guinea* 13: 133-144; 161-178; 201-207.
- 1953 *Voorlopige resultaten van een ambtelijk taalonderzoek in Nieuw Guinea*, 's Gravenhage, Martinus Nijhoff.
- 1957 "Een tweede grote Papoea-taalgroepering in Nederlands Nieuw Guinea", *Nieuw Guinea Studiën* 1: 106-118.
- 1965 *Grammar of the Sentani Language*, 's Gravenhage, Martinus Nijhoff.

DRABBE, P.

- 1954 "Talen en dialecten van Zuid-West Nieuw-Guinea", *Micro-Bibliotheca Anthropos* Vol. 11.
- 1959 *Kaeti en Wambon, twee Awju-dialecten*. 's Gravenhage, Martinus Nijhoff.

- 1963 *Drie Asmat-dialecten.* 's Gravenhage, Martinus Nijhoff.
- GALIS, K.W.
 1955 "Talen en dialecten van Nederlands Nieuw Guinea", *Tijdschrift Nieuw Guinea* 16: 109-118; 134-145; 161-178.
- 1956a *Ethnografische notities over het Senggi-gebied.* Hollandia, Kantoor Bevolkingszaken.
- 1956b *Ethnografische survey van het Jafi-district.* Hollandia, Kantoor Bevolkingszaken.
- HEALEY, A.
 1970 "Proto-Awyu-Dumut phonology", *Pacific-Linguistic studies in honour of Arthur Capell, Pacific Linguistics, Series C, No. 13*, 997-1063.
- OOSTERWAL, G.
 1961 *People of the Tor.* Assen, Van Gorcum.
- McELHANON, K.A. and C.L. VOORHOEVE
 1970 "The Trans-New Guinea Phylum", *Pacific Linguistics, Series B, No. 16*.
- SALZNER, R.
 1960 *Sprachenatlas des Indopazifischen Raumes.* Wiesbaden, O. Harrassowitz.
- VAN AMELSVOORT, V.F.P.M.
 1964 *Early introduction of integrated rural health into a primitive society.* Assen, Van Gorcum.
- VOORHOEVE, C.L.
 1969 "Some notes on the linguistic relations between the Sentani and Asmat languages of New Guinea", *Bijdragen tot de taal-land-en volkenkunde* 125: 466-486.
- WURM, S.A.
 1970 "The Papuan Linguistic situation" (to appear in *Current Trends in Linguistics, Vol. 8, Linguistics in Oceania*).

APPENDICES

APPENDIX I: languages of north-east West Irian, COMPARATIVE WORD LISTS.

English	Tumawo	Awji	Taikat	Manem	Waris	Waina	Sengi		
<i>all</i>	-	-	-	ogono	1	-	nonon	1	
<i>ashes</i>	tö	ku	1 ko	1 wusmuf	2	smu	2 imok	tokos	
<i>belly</i>	hü	al	embaro	1 askə	2	eɛ	2 atak	2 soak	
<i>big</i>	māki	tuja	1 -	1 tiafa	1	dɛkle	muka	fun	
<i>bird</i>	tāā, tāṅā	noj	1 nor	1 joŋ jor	1	tuawa	2 teafu	2 -	
<i>bite</i>	-	-	-	-	-	he-	-	-	
<i>black</i>	nɛmbɪ	tubulwa	1 -	1 tompo	1	suəhil	ongu	si	
<i>blood</i>	hi	keane	jafor	1 psonko	1	towol	1 tap	1 nine	
<i>bone</i>	ee	sakər	1 sagər	1 kaŋ, kar	1	kəl	1 kek	1 ke	1
<i>breast</i>	no	mā	1 mɛ	1 maŋ, mar	1	tɛt	2 tot	2 mandr	1
<i>burn</i>	-	tao	-	-	-	sang, 1) siŋk 1)	1 sumerk	1 urəbi	2
<i>cloud</i>	-	bu	tik	1 tik	1	tɛko	1 laŋgo	1 ku	
<i>cold</i>	lɛlaŋō	tapsasi	dur	kiga	nelpank	1 nenep	1 nenep	1 nener	1
<i>come</i>	-	manam	-	jepuŋ	1 paraw	1 joaŋbogo	1 joaŋbogo	1 poko	1
<i>cry</i>	-	o	1 -	1 wo naŋa	1	ubea	1 we	1 -	
<i>dead</i>	-	-	-	-	-	-	1 merik	1 murk, mundr	1
<i>dog</i>	naké	wəl	1 ur	1 -	1 unde	1 ure	1 ure	1 wandr	1
<i>dry</i>	-	təkəl	-	-	hoholɛl	goba	goba	sarlk	
<i>ear</i>	lö	keato	1 keat	1 kafŋe	1 aŋku	2 ongok	2 ongok	2 aten	1

Series of cognates have been numbered; words having no cognates in any of the lists have not been numbered.

Footnote: 1) With sg. and pl. object respectively.

English	Sawa	Amgotro	Mongowar	Jafi	Dubu	Molof	Usku	Tofamna	Kaure
<i>all</i>	-	maboa	-	-	-	-	-	-	-
<i>ashes</i>	subos 2	katəbu 2	karemp 2	unduk 2	wafu 3	tonkomo	fu 3	wenbo	sandehu
<i>belly</i>	wos	kambada 1	xambala 1	jalək 3	diale 3	kau 4	ku 4	kete 4	koal 4
<i>big</i>	angan 2	egandu wanada	buka 1	kiniai	soromape	aibe	pikine	lembuk	numogoa 1
<i>bird</i>	bisjas	du 3	tu 3	awe 4	olmu	au 4	lokwe	jetai	ku
<i>bite</i>	-	kded-	-	-	-	-	-	-	-
<i>black</i>	genjan	nambada 2	nemoare 2	seŋgəri 3	təŋəra 3	wolekana 4	polokwe 4	duike	sandetū
<i>blood</i>	wətwən	kodoa 2	hola 2	mob	təri	mat	mise	leki	katsa
<i>bone</i>	ok	gemda	saba	əndai 2	gwano	antai 2	kla 1	nta 2	loa
<i>breast</i>	pan 1	toto 2	tutu 2	muam 3	mamu 3	mu 3	mi 3	mo 3	mu 3
<i>burn</i>	-	-	iki	ərəbik 2	watuk	erse-ens	kiombra	wekimisima	sai
<i>cloud</i>	wəjɔŋ	namba	jobeli	kwabi	kau 2	majar- wakawə	keke 3	kco 2	kete 3
<i>cold</i>	səsanən	apde- amənaŋge	kekalbi	nənən 1	walofop- ka? a	wisita	soro	gokome	pese
<i>come</i>	laf	gabəda-	sokombo-	kwalopai 2	kəlawai 2	nembislai	duarse	maje	gembasa
<i>cry</i>	pəs	ekwad-	alani 2	aməlane 2	kemeŋi	jaŋdjis	nifikounde	ala	kuŋ
<i>dead, die</i>	-	awe- 2	maba- 2	ape 2	kma? a	-	-	-	-
<i>dog</i>	wəs 1	jabodo 2	-	jendru 2	-	-	-	-	-
<i>dry</i>	-	nagamda	sepale	arŋkper	nunwan	silea	leletom	bahe	pesebe
<i>ear</i>	uskɲs	kumbo- keda 3	gombo- gala 3	waigi	fa? a	ou	beikli 3	kemb lelu 3	goklu 3

English	Tumawo	Awji	Taikat	Manem	Waris	Waina	Sengi
<i>earth</i>	fíto 2	mu 1	ma 1	poskwe 2	petha 2	betoja 2	pit 2
<i>eat</i>	kā/tā/pā	na, ane 1	na 1	na 1	ne 1	nekem 1	na 1
<i>egg</i>	tā kò	sunul 1	sur 1	suiŋ, suir 1	suul 1	suk 1	tu 1
<i>excrements</i>	am	am 1	asa 1	ekoko	igob 2	- 2	
<i>eye</i>	lutò	najo 1	nondor	nof 1	nop 1	rugok 1	now 1
<i>FAR</i>	habà	mesil 1	-	ani bwəfər 1	awkəla	-	-
<i>fat, grease</i>	-	joop 0	-	nombe 1	nambul 1	-	-
<i>father</i>	ái, re 2)	aju 1	aiwa 1	pasi ³⁾ asa ⁴⁾ 1	alal	aja 1	aja 1
<i>fell tree</i>		ka-	-	sampaŋ, kos ⁵⁾	hɛ(w)	-	-
<i>fire</i>	ra 1	tao 1	dow 1	saw 1	sue 1	sue 1	tow 1
<i>fish</i>	möö	o 1	oa 1	wo 1	tambukua	so	war 1
<i>to fly</i>	-	-	-	-	-	efuguh 1	-
<i>foot, leg</i>	táɛ	malke 1	təka 1	mogor 1	mongola 1	mingak 1	monla 1
<i>fruit</i>	ri tò 1	ti tol 1	dor 1	tfoŋ, tfor 2	mobol 2	pok 2	lo 1 fu_ 2
<i>full</i>	-	fiŋa	-	-	-	-	-
<i>give</i>	-	tano	-	ja 1	řao 1	pai	djau 1
<i>good</i>	-	fange	-	entow ente	besel	mapenem	jenik
<i>hair</i>	ta 1	jento, ta ⁶⁾ 1	bakta, tar ⁶⁾ 1	ta 1	tea 1	mog-tše 1	-
<i>arm</i>	no	kenie 1	tur 1	kaŋkŋa 1	engəla 1	nengak	angla 1
<i>hand</i>	no-bero						

Footnotes: 2) Terms of address and reference respectively. 3) my father. 4) his father. 5) With sg. and pl. object respectively. 6) hair of head, bodyhair respectively.

English	Sawa	Amgotro	Mongowar	Jafi	Dubu	Molof	Usku	Tofamna	Kaure
<i>earth</i>	mo	1 kəbo	3 gəwou	3 abər	tedə	aitman	ta	jai	siŋ
<i>eat</i>	to	2 tato-	2 hede-	fer	ne	1 ne	1 kepo	sembe	ganasi
<i>egg</i>	suŋun	1 dogomda	2 tugabola	2 sen	alani	le	3 kle	3 taili	wale
<i>excreta</i>	seləŋ	-	-	-	-	-	-	-	-
<i>eye</i>	naf	1 kumba- kwada	2 kamba- gala	2 dji	3 ei	3 lom	nifi	1 jei	3 gewe
<i>far</i>	-	gada	-	-	-	-	-	-	-
<i>fat, grease</i>	wimbil	ganowe	ula	weli	jani	limo	ndai	ruku	kaldja
<i>father</i>	tele	aja	1 -	ap	-	-	-	-	-
<i>fell tree</i>	towae	jogode-	-	zek	-	-	-	-	-
<i>fire</i>	bət	kai	2 kai	2 dau	1 we	3 tombe	jo	we	3 sareŋ
<i>fish</i>	ŋgles	dabona	2 spola	2 -	ambla	feuti	əŋkeu	tekakle	bi
<i>to fly</i>	-	-	dukape-	2 fuk- takwape	1 fuk- war	1 wantea	kiese	rila	kalataru
<i>foot, leg</i>	pokəs	idu	2 aseru	2 fuŋi	3 puŋwa	3 fu	3 nafu	3 wanta	dowe
<i>fruit</i>	baklan	nomo gemda	-	dju	-	-	-	-	-
<i>full</i>	-	-	-	-	-	-	-	-	-
<i>give</i>	bənaŋ-	tatawa	1 sebi	2 tipi	2 ta'a	1 tua	1 aseloti	ne	hambakwa
<i>good</i>	amsan	amani	1 -	kiap	pani	1 talie	uwa'a	mesi	sepa
<i>hair</i>	nimbias	nananda	2 nenale	2 mepai	məndini- teke	ela	flekle- kunda	kemblem- na	hai
<i>hand, arm</i>	səkəs, səksan	wada	2 wala	2 djai	3 fəro	2 lai	3 mesa	lonta	watuabe

English	Tumawo	Awji	Taikat	Manem	Waris	Waina	Sengi
<i>head</i>	róbe 1	nangər 1	bagər 1	bagar 1	ku	mosok	repek 1
<i>hear</i>	lö/ru/rö	keato-kærkəri 1	-	-	hələ 1	ege-kep	salo 1
<i>heart</i>	-	nukuānti	-	porfor	unt	-	-
<i>heavy</i>	-	bəsə 0	-	kəne 1	ken 1	-	-
<i>I</i>	ni	ko 1	ka 1	ga 1	kε 1	koa 1	ka 1
<i>kill</i>	-	ro	-	iknom, spuka ⁷⁾	-	-	-
<i>knee</i>	lám̄bi	tumt-kur 1	dobut 1	-	-	mokokek	kumblu 1
<i>leaf</i>	ri hà	ti fi je 1	tofej 1	fre, fra 1	wəliεl 1	-	-
<i>long</i>	ekapé	abra	-	kɲuɲ	tokol	kwek	kukitaman
<i>louse</i>	fi	tu 1	-	-	ku 1	kue 1	ku 1
<i>man</i>	ba, kébanè	kir 1	kir 1	knigiɲ, knigir 1	tənda	owak	du 0
<i>many</i>	-	-	-	ɲomp, moɲomp 1	-	nip 1	dandr
<i>meat</i>	na	kōār 1	skar 1	nigiɲ, nigir 2	nihil 2	sesuweki(?)	nik 2
<i>moon</i>	ke	kunɲəru	use 1	wes 1	wεs 1	wuies 1	wos 1
<i>mother</i>	ma 1	mame 1	mama 1	bai ⁸⁾ afa ⁹⁾ 2	awal 2	ava 2	apa 2
<i>mountain</i>	pe	junu 1	janar 1	or 2	ola 2	aigen(?)	kembere
<i>mouth</i>	lāɲöw	kamu mingir ¹⁰⁾ 2	kamea 1	mosof	meɲk 2	mengeɲk 2	nambetep

Footnotes: 7) With sg. and pl. object respectively. 8) My/your, mother. 9) His mother. 10) 'jaw'.

English	Sawa	Amgotro	Monggowar	Jafi	Dubu	Molof	Usku	Tofamna	Kaure
<i>head</i>	walambiap 0	boda 2	bapale 2	məndai 3	məndini 3	emi	flekle	kemble	plen
<i>hear</i>	sko-	ombodo-	hambili- 2	fau 3	fei 3	ar	jukluse	warke	bogiome
<i>heart</i>	wəfəs	toboa	-	-	-	-	-	-	-
<i>heavy</i>	jewen	emboda	-	-	-	-	-	-	-
<i>I</i>	ka 1	ewo, eo 2	ji 2	nam 3	no 3	mai	ose	niawi	wen
<i>kill</i>	-	-	-	baba	-	-	-	-	-
<i>knee</i>	ambəs	daboda-gemda 1	mokamola	əgli 2	aranggoli 2	tainfu	onkula 2	wokomba	amu
<i>leaf</i>	fəkən	nom təbu 2	səbu 2	bai 1	təfu 2	lai	kunda	pete	kala
<i>long</i>	wəlken	gagadə 1	gaila 1	eligwapo	soronggo	worjomo	pro	ju	hewa
<i>louse</i>	ku 1	manə 2	mave 2	jemar	mi 3	lem	nimi 3	bli	mi 3
<i>man</i>	sisəu	jani-ndia 2	jani 2	arab	tonkwar	lomo 3	mekenja	lame 3	debla
<i>many</i>	-	mawa	buka	kiniai 1	sorbu	kanta	pise	kurina 1	njahin 1
<i>meat</i>	tin	taba 3	saba 3	findi	narmibi	kaitei	kar 1	bemi	hato
<i>moon</i>	məm	amana 2	anam 2	djun̄k	wuluma	ar	mengerne	menti-gaku	gaka
<i>mother</i>	kajaj	mi	-	iam	-	-	-	-	-
<i>mountain</i>	ɲubikin	kəbo-toara	-	abərumbi	kemai	laʔa	ke	bekli	in
<i>mouth</i>	nungap	jabogeda 3	djabaga-gala 3	duomi	kleseri 4	tonble	kosei 4	lotake	moklu

English	Tumawo	Awji	Taikat	Manem	Waris	Waina	Sengi
<i>nail</i>	noobe	təbaiki 1	kəŋkəki 1	-	engəla woska	nengak kek 1	note
<i>name</i>	-	-	-	-	nabae	unha	-
<i>near</i>	lalapalele 1	faŋgājē	-	nafanana 1	murupata	-	-
<i>neck</i> (nape)	-	uŋkur 1	-	-	waŋka 1	waŋk 1	-
<i>new</i>	nəto	nōmō 1	-	bogar	nəmeɪ 1	nemik 1	nim 1
<i>night</i>	rampal	jaburoa 1	eabur 1	süomp	sinim	inaikim	se
<i>nose</i>	ha	nubru	nakan	paf	lomus	bosok	peŋe
<i>not</i>	-	mako	-	-	mane	owai	moine
<i>rain</i>	ifo 1	mu 1	mow 1	pu 1	po 1	po 1	fowek 1
<i>red</i>	öle	keanewa	-	kaŋka	ambul 1	ambu 1	sumba(?)
<i>road,</i> <i>path</i>	-	məŋgir 1	meo 2	monofu 2	muna 2	mna 2	mona 2
<i>root</i>	rikālē	ti waker 1	səri 2	ŋante prante 3	plal 3	bəgak 3	sambəla
<i>rope</i>	pö	wor 1	wor 1	-	we 1	kuo	was 1
<i>round</i>	-	-	-	-	-	mok	mofan
<i>sand</i>	ható	ukas	pas	pefjis	-	engek 1	seŋger 1
<i>say,</i> <i>speak</i>	pi leile	fi tantoro	-	mosof oŋ-	isho	-	-
<i>see</i>	fo, fū 2	najo tai	-	naŋk, neŋke ¹¹⁾ 1	nəŋg- 1	nuk wokem 1	nefo 2
<i>sit</i>	mölekō	kurə tai	-	ogokon	ɔfa	abogo	-
<i>skin</i>	nō rɔ	fəker 1	fager 1	tofno, tofro 2	towol 2	lopok	kep 3

Footnote: 11) With sg. and pl. object respectively.

English	Sawa	Amgotro	Mongowar	Jafi	Dubu	Molof	Usku	Tofamna	Kaure
<i>nail</i>	fan	bebe- gopeda 2	bebeapru 2	gæmendi	toko	laitaf	nekrefi	lonke	wagi
<i>name</i>	-	-	dia 1	djei 1	kini	ti	-	emi	nokomne
<i>near</i>	-	kabodo	-	-	-	-	-	-	-
<i>neck (nape)</i>	watkəm	japogam- gemda	-	-	-	-	-	-	-
<i>new</i>	sombən 2	tambəda 2	-	djeki 3	tambo 2	rof	ntabo 2	leki 3	haria
<i>night</i>	janga	tambode 1	ebie	sukur	wəli 2	wosoli 2	mengrik	tifuma	kere
<i>nose</i>	sənpokəp	gutubu	damor	məŋai 1	məndi 1	tonga	mendi 1	məniti 1	gopo
<i>not</i>	ŋgən	nenda	-	-	-	-	-	-	-
<i>old (house)</i>	nangan- sapas	edeba	-	-	-	-	-	-	-
<i>rain</i>	jaipe	kue 2	gəwei 2	ar	kəwei 2	nemei 3	nemblei 3	la	dei
<i>red</i>	kulian	kamburu 1	kamburu 1	mongwai	piai	kaita 2	pu	matokop	katasa 2
<i>road, path</i>	mul 2	bakoda 1	-	mai	fiəa	mef	tra	meka 1	selu
<i>root</i>	sək ban	nom agada	nemo lu	fiŋgu 4	peringu 4	sele 2	nani	lapipi	tisi
<i>rope, rattan</i>	səson	kətam	-	draŋ	-	-	-	-	-
<i>round</i>	-	-	popa	arəgat	parin- ingo	pertomo- kana	totiki	welokama	logo
<i>sand</i>	wus	gədəgə 2	gətia 2	gərək 2	tədər	korofek 2	fasi	nukutili	kuti
<i>say, speak</i>	sū	pabe-	-	-	-	-	-	-	-
<i>see</i>	naf ōni 2	kombada 3	kambai 3	netəlane	aleikie 4	lukia 4	flase	mesmi	kokola
<i>sit</i>	sā	namadə- 1	nomo- 1	raŋk	fraikru	aiterkai	tamela- rose	frumbe	nemaiba
<i>skin</i>	sən	kueda 1	kiaba 3	fou	ser	kant	ninje	jefake	aguli

English	Tumawo	Awji	Taikat	Manem	Waris	Waina	Sengi
<i>sleep</i>	lu-wele	neni tit 1	-	nof skea	nitha 1	nun 2	ru 2
<i>small</i>	hápo	antoma 1	-	ntopa 1	awsel	wisuk(?)	tak
<i>smoke</i>	rapõ	tuti 1	nunggute	suis 1	suwul 1	suwek 1	tukur 2
<i>stand</i>	-	tiwe 1	-	soboŋ	-	kelekio 2	pulu
<i>star</i>	há	mase 1	mase 1	manman	tae	bagimop 2	temar
<i>stone</i>	wũ	ser 1	sər 1	suk 1	hon 2	xun 2	kwondr 2
<i>sun</i>	rāá	mentao	kwom 1	usam	okumba 1	okomba 1	pola
<i>swim</i>	-	-	-	-	-	buse 1	tenao
<i>tail</i>	-	waenge	-	-	ebndet	tetable	sok 1
<i>that</i>	-	-	-	-	-	snok	aməna
<i>this</i>	-	-	-	-	mamba	ohe	ana
<i>thou</i>	me	kebe	-	sa 1	die 2	ne 2	ra 2
<i>tongue</i>	-	marie 1	-	mte 1	minde 1	melik 1	ro
<i>tooth</i>	kõ	ka 0	kaembi	so	lelo 1	-	nunalk 1
<i>tree</i>	ri	ti 1	di 1	ti 1	ti 1	-	ti 1
<i>two</i>	hĩto	[nanger] ¹²⁾ 1	-	sampaŋ 2	sambla 2	sambaga 2	tambla 2
<i>one</i>	all	[mangua] 1	[ŋgoa] 1	gueno 1	muŋasel 1	mongoir 1	mongau 1
<i>walk, go</i>	-	nena	-	-	boboha	ehuakep	-
<i>warm</i>	eti	pabə 1	kotər	pabaŋ 1	sue pəb 1	jonusu	pap 1
<i>water</i>	pa	wobio 1	obeə 1	pu 2	po 2	poa 2	po 2
<i>we</i>	ne	jebe	-	kiŋ ta	pi 1	koa-negelk	duka

Footnote: 12) Items between square brackets have been taken from Galis' list.

English	Sawa	Amgotro	Mongowar	Jafi	Dubu	Molof	Usku	Tofamna	Kaure
<i>sleep</i>	sis 1	apo 3	apo 3	amb 3	wamo 3	ur 2	tianise	jutunge	hei
<i>small</i>	bəlian- tan	takə- nawej 2	takawi 2	kwarəgə- məlok 2	satumi	fentana	brene	mokom	tenehel
<i>smoke</i>	bas	togoemo 3	tekəmo 3	tur 2	pəfar	kolor	ju	wemi	sabu
<i>stand</i>	kəfnango	dukwa 1	-	felp 3	kalkalo 2	iselei	fleitalse	felke 3	katula
<i>star</i>	waf	tunu- amenda	mopi 2	pururumi	terpu	takea	armafu	luiti	kolipaple
<i>stone</i>	səpat	nəmai 3	nimi 3	andrur	kwola 2	le	pane	klo 2	tisi
<i>sun</i>	ninaf	kəbu 1	gəfu 1	djəmar	mā' a	nei 2	nei 2	jaku	hafei
<i>swim</i>	-	-	-	djilk	kokewaje	inseai	ailesase	nembasu- weke	wabi
<i>tail</i>	kən	tenda 2	sela 2	kweli	tumu	sok 1	mesekele	muntuo	aeidja
<i>that</i>	-	kaena 1	akani 1	səma	pəso	-	kene 1	see	mutju
<i>this</i>	-	danu 1	dani 1	maman	pabe	nijena	ndar 1	wamtini	hato
<i>thou</i>	so 1	te 2	tje 2	nem 2	fro	ni	-	-	-
<i>tongue</i>	məsən, məs	tabu 2	tep 2	metaləp	klemalbo	ai	bra	gongogok	sremu
<i>tooth</i>	an	jabo- gemda 2	djabo 2	djuritai	kle	te	nekle 1	geme	sbeje
<i>tree</i>	sək	nomo, namo	agala	war 2	wejalgi 2	woar 2	weli 2	kili 2	te 1
<i>two</i>	-	imbu 2	jimbal 2	anənggar 1	kre	ateti	narna 3	neni 3	trapi
<i>one</i>	-	mano ngguadu 1	mamu 2	ənggetəwam	kərowali	kwasekak	kisifaini	kenano	gogotia
<i>walk</i>	gale	pe- 1	pe- 1	kwape	polo	slai	toflikse	woma	matapo
<i>warm</i>	wəbnan 1	kəbua 2	gogobu 2	nenjap	nafo- faklei	-	nemintit	meren- eike	hari- sapri
<i>water</i>	wətəl	kue 3	gəwei 3	djewek	ai 4	jat	ei 4	basu	gomesi

English	Tumawo	Awji	Taikat	Manem	Waris	Waina	Sengi
<i>what</i>	-	-	-	-	mane 1	mak	matel 1
<i>white</i>	tóto	kamsowa	-	jumpo 1	dumbal 1	busuk	jamba 1
<i>who</i>	-	-	-	-	aan 1	manek	ani 1
<i>woman</i>	pemè	kuru 1	koraha 1	jaman 2	nguabe 3	unwabe 3	jemena 2
<i>yellow</i>	tāle 1	-	-	jampa	soal 1	sawea 1	-
<i>you pl.</i>	e	kebe	-	kirsa	dieta 1	-	dura 1
<i>banana</i>	inɔ̃	wafe 1	wafe 1	maju	ubue	konk	fo
<i>bamboo</i>	pú	kut 1	gut 1	-	wohena	-	-
<i>breadfruit</i>	-	ni	tenk 1	-	lp 2	if 2	ten 1
<i>sago</i>	hö	nu 1	na 1	ni (tree) 1 amp 2 (flour)	naul 1	amba 2	na (tree) 1 na tiep
<i>cassowary</i>	tārù	kuji 1	kwije 1	egue 1	wama	kwai 1	kui 1
<i>crocodile</i>	mönö	wongo 1	wanogwa 1	wakamante (1)	wewa	-	-
<i>hornbill</i>	tāú	moj- tibar 1	netbar 1	-	pela	misa	-
<i>housefly</i>	lū	koabane 1	kaap 1	-	amptete	alpa 2	anhop 2
<i>mosquito</i>	le	ngi 1	niŋ 1	-	pata	uhuk	kles
<i>pig</i>	pále 1	wot 1	wot 1	aŋ,ar 1	mi	ogtse	sar mejan 2
<i>snake</i>	i	kaskai 1	wobe 2	-	saihola	soanbene	djemok
<i>door</i>	-	jamaku	mebi	-	tup	-	-
<i>hole</i>	-	mini 1	-	me 1	me 1	-	nandr
<i>house</i>	pá	ju 1	ja 1	juf 1	deb 2	jup 1	jaga

English	Sawa	Amgotro	Mongowar	Jafi	Dubu	Molof	Usku	Tofamna	Kaure				
<i>we</i>	kam	igoa	-	nin	2	numu	2	inte-kule	pu	1	wone	hati	
<i>what</i>	-	nague	2	nakun	2	abən	tepate	3	tafe	3	namne	temanu	gwai
<i>white</i>	pantan	ode	2	gongwa	weli	2	teli	sowikana	leikle	kosei	wako		
<i>who</i>	-	danebo	2	daniep	2	waunap	mate	mife	namuke	nameno	-		
<i>woman</i>	sao	kuadedebo	3	kolbake	3	elim	keke	anale	jomia	ale	dae		
<i>yellow</i>	-	amatuda	2	amatera	2	saŋwii	3	tukər	jokana	arse	ritokop	sambi	3
<i>you pl.</i>	səm	te	-	-	-	-	-	-	-	-	-	-	
<i>banana</i>	ɲufɛl	1	tambe	-	mbut	-	-	-	-	-	-	-	
<i>bamboo</i>	wəskəs	adogwa wambea	-	bum	-	-	-	-	-	-	-	-	
<i>breadfruit</i>	mu	batebu	-	kwak, ju	-	-	-	-	-	-	-	-	
<i>sago</i>	be	2	banu	3	ban	3	ban	3	-	-	-	-	
<i>cassowary</i>	wiskis	koange	-	pasi	-	-	-	-	-	-	-	-	
<i>crocodile</i>	wəŋgu	1	-	-	gərindrub	-	-	-	-	-	-	-	
<i>hornbill</i>	sau	duwabo	-	səmbok	1	-	-	-	-	-	-	-	
<i>house fly</i>	em	emopabo	2	mapap	2	bai	3	wajani	3	foiwale	jesra	bimsine	ali
<i>mosquito</i>	sabas	amu	kenene	djəŋkar	mimi	karse	amsi	tek	jabo				
<i>pig</i>	wo	1	wadə	1	-	sər	2	-	-	-	-	-	
<i>snake</i>	ufke	tandarə	akuave	2	əmbrub	wauli	woske	1	plak	lambla	hei		
<i>door</i>	jap	nabo	-	matabmei	-	-	-	-	-	-	-	-	
<i>hole</i>	-	mbea	1	-	mi, mei	1	-	-	-	-	-	-	
<i>house</i>	jə	1	odo	-	nab	2	-	-	-	-	-	-	

APPENDIX II: languages of south West Irian, COMPARATIVE WORD LISTS.

The Sawuj list represents the Fajit-Kronkel dialect; the Sjiagha list has been taken from Drabbe 1959, and the Jakaj list from Drabbe 1954.

English	Kaugat	Kajgir	Tamagario	Sawuj	Sjiagha	Warkaj	Jakaj
<i>all</i>	papitanem 1	miap 2	oraratap 3	auwa:t 4	monoxo 5	-	dom 6
<i>ashes</i>	icicip 1	ererep 1	ererep 1	idirip 1	senagoto 2	pepkade 3	pop 4
<i>belly</i>	kape 1	kaap 1	kaap 1	mujo 2	mudu 2	kadäm 3	kandom 3
<i>big</i>	xame 1	tapur 2	pokura 3	fara:n 4	binige 5	ka asbu 6	arepakat 7
<i>bird</i>	wakem 1	səpam 2	towpam 2	e:r 3	ji ¹⁾ 3	ebep 4	petakaw 5
<i>black</i>	sakum 1	sakum 1	takum 1	boko:n 2	boxo 2	tokor 3	otop 4
<i>blood</i>	wis 1	jes 1	jet 1	esa:x 1	goŋ 2	kap 3	kab 3
<i>bone</i>	nömöp 1	namop 1	nomop 1	kwoteba:r 2	boge 3	imähä 4	ia 5
<i>breast</i>	ötöm 1	-	erem 1	a:m 2	ome 2	abur 3	abur 3
<i>burn</i>	-	-	-	fam 1	raru-d 2	oxon 3	parade 4
<i>cloud</i>	imip 1	imom 1	taam 1	ideir 2	-	piduas 3	-
<i>cold</i>	namaxanip 1	inip 2	namu 1	torko:n 3	toru 3	ba'ar 4	kok 5
<i>come</i>	xae 1	-	kae 1	sar- 2	mode-d 3	au 4	nam 5
<i>cry(ing)</i>	nice 1	neir 1	neir 1	səsa:r 2	efe ro-nd 3	nemar 4	nama-pin 4
<i>dead, die</i>	kanikin 1	kapnepe 2	-	xomen 3	ku-nd 4	-	kuruk 5
<i>dog</i>	upoc 1	epe(re) 1	epe 1	si:r 2	se 2	äis 3	kake 4
<i>dry</i>	saseme 1	sokorap 2	taptəken 3	rod- 4	kera 5	arəhä 6	apopen 7
<i>ear</i>	icoxop 1	iripam 1	ipiram 1	seda:p 2	toro 3	kebərə ar 4	mono 5
<i>earth</i>	upkem 1	mep 2	mep 2	seba:r 3	moka 4	ebär 3	mokon 4
<i>eat</i>	owp 1	xapri 2	kapri 2	fan- 3	e-nd 4	noáe 5	baé 6
<i>egg</i>	mapiam 1	mapiaxam 1	mapiakam 1	mugo 2	gena 3	meju 4	moka 2

Footnote : 1) The links are: Kaeti et, Wambon jet.

English	Kaugat	Kajgir	Tamagario	Sawuj	Sjiagha	Warkaj	Jakaj
<i>excreta</i>	ane 1	-	ana 1	a:r 1	or 1	nä 1	nao 1
<i>eye</i>	saam 1	saxam 1	sakam 1	ko:d 2	kero 2	ki:t 2	kind 2
<i>far</i>	karumkos 1	uru 2	wasu 3	argi:r 4	xaxa 5	-	makon-pe 6
<i>fat, grease</i>	weep 1	wuup 1	-	waud 2	kepe 3	ixi 4	beke 3
<i>father</i>	aí 1	jet 1	aj 1	nabo 2	aje 1	adi 3	e 4
<i>fire</i>	acu 1	aru 1	aru 1	jood 2	jindo 2	usa 3	reka 4
<i>fish</i>	peten 1	jakam 2	jakam 2	-	axae 3	na'i 4	jank 2
<i>foot, leg</i>	apir 1	apir 1	apir 1	kini:b 2	kitu 2	kamdi 3	ramu 4
<i>fruit</i>	ja'am 1	weam 1	jakam 1	i:r 2	ro 3	-	mbaj 4
<i>full</i>	kipakorom 1	-	kaimataur 2	-	toxobo-d 3	-	kopdak 4
<i>give</i>	kawe- 1	xarape- 1	kai- 1	aidi 2	ede-d 2	-	panokon 3
<i>good</i>	xaip 1	naimap 2	roxae 1	de:r 3	xagoio 4	dawe 5	bV-endVp 6
<i>hair</i>	upm 1	owpm 1	upm 1	a:t 2	moxo 3	saker 4	taker 4
<i>hand, arm</i>	japm 1	jep 1	jep 1	i'ft 2	bedo 3	idäp 4	marap 5
<i>head</i>	tikem 1	toxom 1	tokom 1	ase:m 2	xeiba 3	muu 4	muku 4
<i>hear</i>	jica'ap 1	-	jirəkap 1	dar- 2	da-d 2	-	bokoke 3
<i>heart</i>	-	-	umur 1	-	dibo 2	-	akemok 3
<i>heavy</i>	kacum 1	xarim 1	karim 1	xateme:r 1	bodi ke-d 2	unəhu 3	jendakaw 3
<i>I</i>	naxa 1	nax 1	nak 1	nogo 1	no 1	no 1	anok 1
<i>knee</i>	kupm 1	kupiam 1	kupiakam 1	obəxa:n 2	bokin 2	jabur 3	jambu 3
<i>leaf</i>	kajepm 1	xap 1	kap 1	mo:x 2	anamo 3	isip 4	iri 4
<i>lie down</i>	-	apsaxam 1	-	dax- 2	re-d 3	-	poara 4
<i>long</i>	kupiaxaram 1	woro 2	maneāt 3	jagu:r 4	pere 5	petaxaram 6	jearp 7

English	Kaugat	Kajgir	Tamagarío	Sawuj	Sjiagha	Warkaj	Jakaj
<i>louse</i>	numu 1	so:m 2	-	amur 1	go 3	nabun 1	nambun 1
<i>man</i>	mapirie 1	jo 2	jo 2	riga:p 3	yo-butu 4	kae 5	rade 6
<i>many</i>	papitanem 1	-	oraratap 2	auwa:t 3	naxaba 4	-	-
<i>meat</i>	woxom 1	jakoxom 2	wokom 1	fa:t 3	kodo 4	kade 4	jaeketek 5
<i>moon</i>	ka'aram 1	xaxaram 1	kakaram 1	oxa:r 2	afe 5	kämä 4	kamo 4
<i>mother</i>	ini 1	anu 1	owp 2	nae 3	wini 1	apu 4	vu 4
<i>mouth</i>	moop 1	mowp 1	mowp 1	xadaxa:d 2	xate-to 2	tä 3	mem ²⁾ 4
<i>nail</i>	ənəm-üp 1	jep-wop 1	je-wop 1	kosəra:x 2	doxo 3	tereir 4	ri 5
<i>name</i>	-	-	-	fui 1	fi 1	erakai 2	eke 2
<i>near</i>	karu mame 1	-	-	-	kataxaia 2	-	-
<i>neck</i>	cini 1	beriaxam 2	biriakam 2	torko:t 3	mu-boge 4	tebegen 5	rob 6
<i>new</i>	em 1	wameasap 2	wamatap 2	xare 3	noxongo 4	nem 5	nokok 4
<i>night</i>	isi 1	esi 1	ete mowp 1	besogui 2	asiu 2	usam 3	rira 4
<i>nose</i>	opom 1	jup 2	jup 2	joko:p 3	sji 4	semä 5	tamank 5
<i>not</i>	mame 1	meme 1	-	-	boxoda 2	-	bVrakaV 3
<i>old</i>	ow 1	ojasap 2	owatap 2	taraw 3	jaxa 4	ahaj 4	makati 5
<i>one</i>	papriaxap 1	paxamu 2	pakamok 2	paidəra:p 3	-esja 4	adihir 5	kajaga- maere 6
<i>rain</i>	mene 1	muna 1	muna 1	xaurax ³⁾ 2	a 2	dedaha 3	akaid 4
<i>red</i>	merem 1	koper 2	pipəre 3	sawa:r 4	kango 5	kese 6	kabokob 7
<i>road</i>	sepmop 1	xami 2	kame 2	-	-	-	-
<i>rope</i>	perom 1	orom 1	-	kege:n 2	tere 3	arup 1	rup 4
<i>sand</i>	-	-	tiniberen 1	-	getepoporo 2	-	gem akakaj ³⁾
<i>say</i>	kep 1	-	keep 1	sien ⁴⁾ ro:x ⁵⁾ 2 3	roxoxo-roxo-d 3	-	tumi pak

Footnotes: 2) The cognate with Warkaj *tä* is Jakaj *ete lip*. 3) *xaur-ax sky water*; compare Sjiagha *xotu*, Pisa *xow*, Kaeti *kut sky*. 4) 'language'. 5) 'sound, voice'.

English	Kaugat	Kajgir	Tamagario	Sawuj	Sjiagha	Warkaj	Jakaj
<i>see</i>	sa'ap 1	saxape 1	takape 1	naxad- 2	fete-d 3	wokomsan 4	madi 5
<i>sit</i>	ce- 1	tei- 1	tei- 1	popad- 2	bo-d 2	sebehä 3	pindok 4
<i>skin</i>	piep 1	pip 1	pip 1	aba:g 2	xa 3	tahap 4	rumb 5
<i>sleep</i>	afin 1	-	apun 2	kene:p 3	kono re-d 3	terän 4	kindanpoén ⁵
<i>small</i>	motərep 1	tapəreax 2	tapəreak 2	pakəre 3	kasede 4	paxatän 3	rambakae 5
<i>smoke</i>	aca'ap 1	ererip 1	aruarip 1	sumsu:r 2	oru 3	wanur 4	aku 5
<i>stand</i>	-	-	wapi erum 1	farad- 2	e-d 3	-	ira 4
<i>star</i>	supüp 1	supkup 1	tupup 1	xauti:m 2	mi 3	marep 4	mind 5
<i>stone</i>	iki 1	kakup 2	maitu 3	jakae 1	sengeboge 4	jaka 1	kor 5
<i>sun</i>	teme 1	taam 1	taam 1	ata:p 1	sera 2	jawi 3	tapak 1
<i>swim</i>	-	-	kipkup 1	-	oxori ki-nd ²	-	bokowk 3
<i>tail</i>	-	kafie 1	kapm 2	-	mini 3	kedehe 4	kende 4
<i>that</i>	pokom 1	omaro 2	omar 2	one 3	ewere 4	-	-
<i>this</i>	pekem 1	-	-	ene 2	nerere 2	-	-
<i>thou</i>	axa 1	ax 1	ak 1	go,go:p 1	go 1	-	ox 1
<i>tongue</i>	menaxaram 1	marap 2	marap 2	se:p 3	fagè 4	enem 5	inem 5
<i>tooth</i>	ukoxom 1	oxom 1	ukom 1	toro:k 2	tare 2	tadehe 2	manger 3
<i>tree</i>	wim 1	wom 1	wom 1	toxod 2	ji 3	ose 4	de 5
<i>two</i>	coopm 1	tosigi 2	totigi 2	nauri 3	okomo 4	isa'ain 5	diakand 6
<i>walk</i>	jor 1	mane 2	onom 3	xa 4	xo-d 4	nua- 5	riakak 6
<i>water</i>	oxom 1	oxom 1	okom 1	a:x 1	oxo 1	adia 2	mi 3
<i>we</i>	nipi 1	nep 1	nep 1	nigi:p 1	noxo 2	-	indok 2
<i>what</i>	-	-	takane 1	-	kenaxa-de 2	-	-

English	Kaugat		Kajgir		Tamagario		Sawuj		Sjiagha		Warkaj		Jakaj	
<i>white</i>	kopor	1	koprap	1	koprap	1	korai	2	xajo	2	iwa'em	3	waju	3
<i>who</i>	-		-		-		xae	1	ekaxa	2	-		-	
<i>woman</i>	enepe	1	onop	1	onop	1	iwa:r	2	finigi	3	ina'ut	4	taw	5
<i>you pl.</i>	a'ani	1	axan	1	akan	1	gi:p	2	goxo	3	-		eox	1
<i>banana</i>	səmi	1	xaer	2	kaer	2	xoro:b	3	tu ⁶⁾	1	nawer	4	naper	4
<i>bamboo</i>	supu	1	sopo	1	tupu	1	sobo	1	sumbe	1	fe	2	opok	3
<i>sago</i>	ma'am	1	maxam	1	makam	1	du	2	do	2	bä	3	baj	3
<i>cassowary</i>	umuis	1	kue	2	kujo	2	kuje	3	sawari	3	kojä	2	kuju	2
<i>crocodile</i>	xow	1	xo	1	-		paero	2	saxambo	3	noxo	4	nango	4
<i>hornbill</i>	akis	1	oxais	1	-		airo	2	-		ea	3	-	
<i>housefly</i>	mörö	1	more	1	more	1	arwe:r	2	obusiri	3	komneim	4	kumburum	4
<i>mosquito</i>	iri	1	ni	1	ni	1	-		sjimpere	2	nikir	3	nangit	3
<i>pig</i>	wakum	1	wakum	1	wakum	1	tui	2	wi	2	basi	3	batik	3
<i>snake</i>	ikor	1	jekor	1	ekor	1	xaud	2	wuti	2	wami	3	ra	4
<i>door</i>	amenopm	1	enemowp	1	-		ajwa:d	2	abità	2	maha	3	jangor	4
<i>hole</i>	poxop	1	poxop	1	pokop	1	ta:p	2	to	2	pe'ep	1	kop	1
<i>house</i>	wow	1	wuw	1	wowk	1	a:p aboxaim ⁷⁾	2 3	afoxai	3	ami	4	wuri	5

Footnotes: 6) The links are: Pisa su, Aghu sjü, Kati (Ok Family) jum. 7) 'village'.