

# THE BINANDERE LANGUAGE FAMILY

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## 0. INTRODUCTION

The Binandere language family is a non-Austronesian language group extending along the East coast of the island of New Guinea from the Maiama river in the Morobe District to the vicinity of Tufi in the Northern District. The exact number of member languages is not yet known, as there are numerous dialects, especially in the larger languages. I have found very little in print about the languages or histories of these coastal people, though they have had contact with Europeans for many years. There are at present two missions working in the area: the Lutheran Mission in the Territory of New Guinea, and the Anglican Mission in Papua. Capell (1962a:148) said that the Binandere family is comparable to the Romance language family of Europe in the relationship between member languages. A sample cognate count shows that some neighbouring languages are from 52 to 86 per cent cognate with one another.

That such a state-of-knowledge paper as this is necessary is indicated

by the fact that no one has ever listed the Suena and Yekora languages as members of the Binandere family, whereas Mawai, a dialect of Zia, has been treated for years as a separate language.

This paper summarizes what is already known about the Binandere languages in order to facilitate further linguistic and anthropological studies among these languages by others. Readers' comments and corrections are most welcome.

## 1. MEMBER LANGUAGES

As no one has made a comprehensive study of the Binandere family, it is impossible to say just how many languages are involved. The following listing, which includes both dialects and languages, will serve as a state-of-knowledge listing and should help to clarify the discrepancies found in the older literature in regard to names. The author has not personally investigated all languages here listed, but has compiled this list from a variety of sources both published and unpublished, as indicated below.

The languages are listed in a North to South order, together with the approximate number of speakers, where known. Older names are included in brackets.

Suena (Yema)	1,400	} (Wilson, "Field Notes")
Yekora	300	
Zia (Tsia)	2,800	
Mawai	500	
Binandere of Ioma	3,000	
Ambasi (Tain-daware)	--	
Aeka (Aiga)	--	
Orokaiva (many dialects)	25,000	(Rimoldi, 1966:3)
Hunjara (Koko)	--	
Notu (Ewage)	10,000	(Dance, 1963)
Yega of Gona	900	(Dakeyne, 1966:29)
Bareji	--	
Gaina	--	
Baruga	--	
Yega (Okeina)	--	
Korape (Koraf1, Kwarafe, Okeina)	--	

Overlooking minor variations in spellings, language names still differ considerably, especially in the older *Annual Reports*, where the names given seem to be as much village or clan names as actual tribal names.

An extreme case is that of the Orokaiva of the Mt Lamington area. The term "mountain Orokaiva" has been used recently by Rimoldi (1966:4, 104-106), who lists the following names for that group: Wasida or Waseta or Waseda (a village name), Jegasi Sarahu (two clans), Periho or Berepo ("bush people", a term by which they are known to the coastal peoples), and Kombu Sangara ("mountain Sangara", the name which the people use in referring to themselves). The term "Orokaiva" itself was introduced by the Europeans (Rimoldi 1966:3).

The term "Yega" seems to be applied to two geographically separate groups. One group just inland from Gona is growing cocoa in a project referred to as the "Yega Scheme" (Dakeyne 1966:29). Another group, near Cape Nelson, also refer to themselves as "Yega". Perhaps "Yega" is a former clan. Suena has a similarly named clan, known as "Yewa".

In the older lists a "Yema" tribe is referred to which is the present Suena tribe. Although the migration story of the Yema given by Chinnery and Beaver is in conflict with the Suenas' own migration story, the Suenas' story may be a compressed version of several older migration stories and thus still allow for the Chinnery-Beaver version. In any case the Yema-Yarawe word list given by Chinnery and Beaver is certainly Suena.

The term "Ewage", which literally means "salt water talk", is the term applied to the Notu living on the coast. The Notu living inland reject this term for themselves, and Richter of Gospel Recordings has related in conversation how heated arguments have broken out in his presence when the term "Ewage" has been used. It therefore seems best to use the term "Notu" for this language area.

In speaking of these languages, Voegelin (1965:4) has stated a policy which might well serve as a basis for further work regarding the names for these languages:

"We do not attempt to include all of the names listed in the older literature on New Guinea languages; we have omitted those found in earlier sources, as Ray, and those found in Wurm's earlier work, which are not identifiable in terms of more recent, more comprehensive surveys of the same areas."

Other language names used in the area include: Paiawa - a Guhu Samane village on the coast, Tahari - Guhu Samane of the mid-Waria, Muri - Mawai term for Guhu Samane, Bia - Suena term for Guhu Samane.

## 2. VILLAGE LISTS

Names given in brackets for Suena, Yekora, and Zia are spellings used by the people. All other names are Government spellings.

- Suena: Eware, Mo (Mou), Bospaira (Bosadi), Gori, Amoa (Amua),  
Maiama (Mayama).
- Yekora: Sapa, Ana, Posei (Pose).
- Zia: Pema, Popoi, Siu, Zare, Putaira (Potara), Okaire, Ainse,  
Saigra (Saigara), Dona, Kobo, Bau, Auno, Sowara, Eia  
(Eya).
- Mawai: Yema, Gobe, Agotame, Pepeware.
- Binandere: Kurereda, Datama, Iaudare, Barara, Wai'e, Sia, Taututu,  
Deboin, Mambatutu, Manau, Kotaure, Jingada, Tubi, Tabara,  
Taire, Ainsi, Wade, Osako, Borogasusu, Nindewari, Wagadare,  
Ewore, Bovera, Mataire, Tave, Boke, Dabari.
- Ambasi
- Aeka
- Orokaiva
- Hunjara
- Notu: Buna, Gona, etc.
- Yega of Gona: Surilai, Kanaunje, Basabugo, Banumo, Gombe, Beporo,  
Gona, Konje, Otobejare, Mumburada, Ononda, Binjapada,  
Jamberoda, etc.
- Bareji: Nembari, etc.
- Gaina: Iwuji, etc.
- Baruga: Embesa, etc.
- Yega of Cape Nelson: Angorogo, etc.
- Korape: Orotoaba, Katokato, etc.

### 3. PHONOLOGY AND GRAMMAR

The following observations are based mainly on the six northern members of the family.

#### 3.1. PHONOLOGY

In general, the phonemics are quite simple. Syllable patterns are usually V and CV, with VV and VVV not uncommon. No consonant clusters CC or closed syllables VC or CVC occur except those involving nasals and pre-nasalized stops. The five vowels, a, e, i, o, u are common to all members, as are the stops, nasals, s, w, and r. But the phones l, h, dz, y, and ɣ vary from language to language. The phone (l) may be

a variant of /r/ and not another phoneme. Suena and Yekora prefer final /a/. Other languages prefer final /o/. There are few morphophonemic changes: in Zia and Binandere /r/ becomes /n/ after nasals; Binandere prenasalized stops become simple nasals in certain environments; verb stem consonant /m/ becomes /p/ in certain tenses. Although separate phonemes, /u/ and /w/ may be morphophonemic alternates in certain verbs. Suena awlnoya 'he is resting', and au 'rest'. Tone is separate from stress and may well be phonemic. The phoneme /w/ usually has two allophones, [w] and [b]. The phones [t] and [s] may be allophones; also [dz] or [j] and [d], and [d] and [r]. In Suena, Zia, Mawai, and Yekora the phone [dz] is symbolized as z. In Binandere, Notu, and Orokaiva [dz] is symbolized as j, and [b] is symbolized as v. The velar nasal [ŋ] and the prenasalized stops [mb], [nd], and [ŋg] occur mostly in the southern half of the family.

Despite the presence of phonemic tone there seem to be many homophones. Suena /ni/ has eight distinct meanings.

#### Chart of Phones

All nine languages for which word lists were available have the following phones:

p, t, k	voiceless bilabial, interdental, and velar aspirated stops
b, d, g	voiced bilabial, alveolar, and velar stops
m, n	voiced bilabial and alveolar nasals
s	voiceless alveolar grooved fricative
r	voiced alveolar flap
a, e, i, o, u	voiced oral vocoids.

In addition to the 15 phones listed above, all nine languages charted have additional phones as charted overleaf:

Description	Phone	S u e n a	Z i a	Y e k o r a	M a w a i	B i n	O r o	A e k a	N o t u	K o r a p e
velar nasal	ŋ						ŋ	ŋ	ŋ	
vd. alveolar affricate	dz	dz	dz	dz	dz	dz	dz		dz	dz
vd. bilab. fricative	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ
vd. bilab. semi-vowel	w	w	w	w	w	w	w	w	w	
vl. velar semi-vowel	h				h		h	h		
vd. alv.-pal. semi-vowel	y	y	y		y	y				
vd. alveolar lateral	l				l	l		l		l
prenasalized stops	mb			mb		mb	mb	mb	mb	mb
	nd		nd	nd		nd	nd	nd	nd	nd
	ŋg			ŋg	ŋg	ŋg	ŋg	ŋg	ŋg	ŋg
vd. velar fricative	ɣ						ɣ		ɣ	
glottal stop	ʔ					ʔ	ʔ	ʔ		
vl. bilab. fricative	ɸ						ɸ		ɸ	
nasalized vocoids	ĩ								ĩ	ĩ
	ẽ		ẽ	ẽ						
	ã		ã	ã	ã					
	õ		õ	õ	õ	õ	õ	õ	õ	õ
	ũ		ũ	ũ	ũ	ũ	ũ	ũ	ũ	ũ

Those who are not native speakers have trouble hearing the /ae/ /ai/ distinction, and this has led to various spellings. Another difficult phone is the double /u/ of the abrupt imperative. Suenam *'come'* (sing.), muu *'come'* (plural). Also, /o/ and /a/ have sometimes been written as /ɔ/, but it is doubtful if there is a three-way contrast.

### 3.2. VERBS

The verbs are highly developed, especially medial verbs, to show aspect. Verbs change root to indicate tense. Suenam *suzawia* *'he goes'*,

bamia 'he went'. There are both simple and compound (complex) verbs, but they function alike. Compound verbs consist of a free form plus an auxiliary verb. Verbs are pluralized by reduplication of initial syllable, though more so in Orokaiva than in Suena. Verbs (and adjectives) are intensified by a poetic shift of vowel. Suena weso wai 'to persist', weso waso wai 'to really persist'. All verbs are Active only and are marked for Mood by the final vowel. Typical vowels are: -a Indicative, -e Hortative, -o Dependent, -i Interrogative. Though Orokaiva verbs are not always marked for person, Suena verbs are, except for the negative. There are three classes of stems, ending in either -e, -i, or -u. These are found by examining either the abrupt imperative or the Far Past (Remote) tense.

Dependent (Medial) verbs of the same subject as the following verb are more developed in Suena and Binandere than in Orokaiva. Imperatives in most cases are limited in tense and person. In Suena there are five types of command: Abrupt Imperative, Polite Imperative, Future, Hortative, and Quotative. They are limited to Present and Future tense, but the Future, Hortative, and Quotative include all eleven persons, not just the normal second person. Negatives show no person or tense, and the actual constructions vary greatly from language to language. The infinitive has a wide range of usages: noun, adjective, verb. It is characterized by the suffix -ai or -ari. In some languages it is morphologically similar to the auxiliary verb 'to do', but in Suena the two are clearly separate: /-ai/ infinitive, /wai/ 'to do'.

Verb morphology is not easily analyzed: (a) because the root/stem changes for tense; (b) because not all suffixes are obligatory, and rarely do all occur together. To devise rules for root changes is difficult, and I have found it easier to memorize the roots than the rules. Generally speaking, there are three or four suffixes, indicating Tense, Person, Mood, and Number in that order. Suena verbs sometimes have six suffixes beyond the stem. The Far Past (Remote) tense has fewer person endings than other tenses.

### 3.3. NOUNS

There is no gender or inflection of nouns. The plurals are formed in any one of several ways: reduplication, parataxis of synonyms, affixation. Plurals of kinship terms are usually affixed, but the resultant form may not be predictable.

### 3.4. ADJECTIVES

Like nouns, adjectives reduplicate for plural but the resultant form is not usually predictable. Suena kiaka 'little' (sing.), kikinaka

'little' (pl.). Like verbs, they have a vowel shift for intensification. Suena zewai 'strong', zewai zawai 'very strong'.

### 3.5. RELATORS

Postposition words are a vital part of the syntax of most member languages, and in form may resemble Demonstratives or Conjunctions. These relator-axis phrases indicate Subject, Object, Indirect Object, Instrument, Time, etc., and function on both the clause and sentence levels.

### 3.6. CLAUSES

The medial verb form for punctiliar sequence action (Suena -ro, Binandere -do, Orokaiva -to) may function as a compound verb, but is best treated as two separate clauses, since each may take separate modifiers.

Suena anumuro itera 'they are seated'  
Binandere anumbedo itero 'they are seated'

Both of these are literally: 'having sat down they are remaining'.

This medial form (-ro, -do, -to) may also function as an adverb in these languages which have few free form adverbs.

Suena puro mai 'bring'  
Binandere kundo gumbari 'bring'

Both of these are literally: 'take (it) and come'. Here the action is no longer sequence but a manner in which the person is to come.

### 3.7. CONTRACTIONS

In rapid speech the final vowel is often dropped in favour of the first vowel of the following word.

Suena na bua-re are... 'I have work to do so...'  
I work-with so

becomes: na buarare

### 3.8. WORD ORDER

Word order of possessive phrase differs from North to South.

Suena be nuso  
mouth his

Notu uso be  
his mouth



Korape nunda beuka  
his mouth

#### 4. PREVIOUS LINGUISTIC WORK

##### 4.1. A. CAPELL

Dr A. Capell of Sydney University has done considerable work in the Binandere language family but his work is as yet unpublished.

##### 4.2. SUMMER INSTITUTE OF LINGUISTICS

Darryl and Lael Wilson began work in Suena on September 1, 1964, and have at present a phoneme statement, a tentative grammar, extensive texts, a dictionary of about 3500 entries, and a concordance of 18,000 words made on the IBM 1410 computer at the University of Oklahoma by the Linguistics Information Retrieval Project and sponsored by Grant GS-270 of the National Science Foundation. They have surveyed the Mawai, Zia, Yekora, and Suena languages and have taken lengthy word lists in each.

##### 4.3. LUTHERAN MISSION

The Lutheran Mission established a station at Zaka (Saga) near the mouth of the Waria river about 1910 and began work in the Zia language. They produced a manuscript grammar and published a book of Bible stories before giving up the vernacular for the use of Kâte. Kâte has since been replaced by English. The following is an evaluation of the Zia grammar, entitled *Grammatik der Zia Sprache*. The manuscript, now in Lae, was written in German about 1928. The material was gathered by the resident missionary, K. Mailänder, but the grammar was organized and written by Pilhofer. It is 84 pages in length including a 6-page inter-linear text. The manuscript is typed with hand written corrections. It contains copious examples, but its usefulness is limited because: (a) it is in German; (b) there is only one copy in existence; and (c) there is no tone analysis and only a note on stress.

##### 4.4. ANGLICAN MISSION

To the author's knowledge the Anglican Mission have done linguistic work in only three of the Binandere languages. One of these, Rev. Henry Holland's grammar and dictionary of Orokaiva, was destroyed in the War. I find no record of the linguistic work which presumably preceded the translation into Notu. The other work is the *Grammar and Dictionary of Binandere, Mamba river*, by Copland King, co-founder of the Anglican

Mission in New Guinea. He worked for nineteen years in the area, from 1900 to 1918, but he left only a manuscript which he felt was not "sufficiently advanced to have the book printed". S.H. Ray suggested some rearrangements and wrote a foreword, but the actual writing was done by King's nephew, Mr Elder, who had learned another dialect. King had studied the dialect at Ave and Ambasi. The work was printed in 1927 in Sydney and consisted of 76 pages: pages 6-28 grammar, 29-53 Binandere to English dictionary, and 54-76 English to Binandere dictionary. In his preface Bishop Henry of New Guinea wrote: "There is much work still to be done on the Binandere language, but it is hoped that this grammar and dictionary will be a good starting point for future work". It should be noted that:

a. the work is not phonemic. A quick glance through the dictionary reveals the following allophones:

[j] and [d]	[j] before [i] [d] before [a], [e], [o], [u]
[w] and [v]	[w] before [a] and [o] [v] before [e], [i], and [u]
[t] and [s]	[s] before [i] [t] before [a], [e], [o], [u]

King mentioned in his introduction that after many years he could still not get the people to distinguish between [t] and [s].

b. There is no tone or stress analysis. In the dictionary /ewa/ is listed as meaning both 'ocean' and 'mango', whereas these are two separate words, a minimal pair of stress/tone.

#### 4.5. S.H. RAY

Ray (1907) included a brief (nine pages plus text) note on the Binandere language grammar in his report on the Cambridge Expedition to Torres Straits. He has followed a Latin format. His note was superceded by King's *Grammar and Dictionary*.

#### 4.6. ANNUAL REPORTS

In the *Annual Report* for 1910-11 Dr Strong has given word lists for Waria (Zia and Suena), Mambara, Waseda, Koko, Dobadura, Okeina, Baruga, and Korapi. In the *Annual Report* for 1914-15 E.W.P. Chinnery and W.N. Beaver wrote an article entitled, "The Movements of the Tribes of the Mambare, Division of Northern Papua". It includes maps of dialect areas and movements and a comparative vocabulary of about 200 words for English, Binandere, Yema-Yarawe, Mawai, Tahari, Aiga. Subsequent pages include

lists for Yega, Tain-Daware, Jegasa Sarau, Jauwa-Dobodura, and Hunjara. Anyone wishing to refer to this article should be aware that the report contains several typographical errors, notably in the spelling of language names.

## 5. PUBLICATIONS IN BINANDERE LANGUAGES

Zia materials by Lutheran Mission:

*Biblische Geschichte: Anutura Ungweng tang*, Rev. Mailänder, 1917, Saga, 119pp. [Bible stories]

Binandere materials by Anglican Mission:

*Prayers, Psalms, Hymns, Catechism* in the language of Binandere, River Mamba, Papua. Sydney, 1912.

*Atutumbari Embomai Da Book*, a Manual of Devotion for Communicants.

*Genese* by Copland King, 1903, Mission Press, Bartle Bay, 16pp. [a few chapters of Genesis]

*Prayer Book with Scripture Readings*, 1907.

*Book of Common Prayer*, 1912.

*Luke Kotopu*, Sydney, 1912, BFBS 1949. [Gospel of St Luke]

*School Readers*.

Notu materials by Anglican Mission:

*Prayer Book in Ewa Ge*.

*Mark and John Kotopu, the Gospels in Ewa Ge*, BFBS, 1952.

Orokaiva materials by Anglican Mission:

*Haveni*. [Hymns in the Orokaiva language]

*Mark Otohu Ta Evanelia*, BFBS, 1956. [Gospel of Mark]

*Collects, Epistles, and Gospels*.

*Service Book*. [various services]

Suena materials by Summer Institute of Linguistics:

*Suena Yere*. [50 hymns]

*Azimai 1-5*. [Series of 5 primers for literacy]

*Soweni Iwo Nasokai*. [Hygiene booklet]

*Yuda Ema Noisowa*. [Bible background booklet]

*Zenesis*. [Abridgement of Genesis]

*Gospel of Mark*. [currently being prepared]

## 6. COMPARATIVE STUDIES

### 6.1. THE BINANDERE PHYLUM

Voegelin (1965:6) has spoken of the Binandere Phylum as consisting of "one family plus languages of uncertain degree of relationship". Dr Strong, in 1910, had established the Binandere family together with several others in the area, and had suggested that the Upper Musa Group might be distantly related. This still seems quite possible, as a comparison of the Yareba language of the Musa river (Dr Strong's "Bori" is a Yareba clan name) with the Binandere family shows some cognates (22 per cent with Gaina). What this means, then is that the northern and western boundaries of the Binandere family are quite clear, but that at the southern end in the vicinity of Tufi and the Musa river, the boundary of the family is not yet established. The western boundary has been further established by Dutton (1967) in his work on the Koiliarian family.

### 6.2. RELATION OF LANGUAGES

The following percentages of cognates are based on a comparison of 100 words, 57 of which were from the Swadesh list. All 100 were on the standard S.I.L. Survey list. It is felt that these figures, if taken as an indication of mutual intelligibility, would be low because of the "multiple cognate" phenomenon described by Wurm and Laycock (1961:134).

According to the native people, one of the five languages, Yekora, is much more difficult than the others, though it shows a high percentage of cognates. The Yekoras have been subjugated by the Zias and Suenas for many years, and may have borrowed greatly. Suena, Zia, Mawai, and Binandere are to some extent mutually intelligible, but none of the four can understand Yekora. This mutual intelligibility may be what Wurm and Laycock have called "passive bilingualism" (1961:136).

This cognate count is given for only the five languages in which the author has personally taken extensive word lists.

	Suena	Zia	Mawai	Yekora	Binandere
Suena	--				
Zia	67	--			
Mawai	59	86	--		
Yekora	61	68	64	--	
Binandere	59	56	56	52	--

## 6.3. COMPARATIVE WORD LISTS

## SUBJECT PRONOUNS

		Suena	Zia	Mawai	Yekora
Singular	1	na	na	na	na
	2	ni	ni	ni	ni
	3	nu	nu	nu	nu
Dual	1	nato	nato	nato	naete
	2	nito	nito	nito	--
	3	nuto	aŋwoto	agoto	nuete
Plural	1	nakare	nae	nage	nati
	2	nikare	nie	nige	niti
	3	nukare	aŋwo	ago	aŋgara

		Binandere	Notu	Aeke	Orokaiva	Korape
Singular	1	na	na	na	na	na
	2	imo	imo	mo	umo/imo/mo	nĩ
	3	awa/owa	umo	umo	amo/umo	nu
Dual	1	nadade	--	--	--	nangae
	2	imotote	--	--	--	nengae
	3	ima adade	--	--	--	nengae
Plural	1	kaenato	ungona	nako	nango/dago	namane
	2	imomane	ingo	ingo	ingo/ungo	ne
	3	awamane	ungo	ungo	ungo/enana	ne (digari)

*Notes:* 1. King lists many alternate forms of pronouns for Binandere, perhaps because his study covered several dialects.

2. Orokaiva pronouns apparently differ greatly from dialect to dialect.

3. Suena shows 11 persons in pronouns including dual inclusive nage and plural inclusive nakai not shown above. Orokaiva also has the inclusive dual ungae and inclusive plural unгоре.

4. In Suena (and Zia?) there are four degrees of emphasis in pronouns: na 'I', nama 'I' (respectfully), nane 'I' (emphatic), and naka nane 'I' (hyperemphatic).

5. Suena has four grammatical categories of pronouns: Subject/Object, Indirect Object, Possessive, and Reflexive.

ENGLISH	SUENA	ZIA	MAWAI	YEKORA	BINANDERE
hair	giti tu	giti ai	zio ai	gibazauru	kopuru tu
head	giti	gitau	zio	gibaza	koporu
mouth	be	be	be	be	be
nose	ena	eno	heno	mena	mendo
eye	giti moka	diti	diti	diti	gisi moka
neck	duba/tuma	tumo	tumo	tuma	tumo
belly	oti/tini	oti	oti	ura	osi
skin	tama/aiso	tāu	ainso	arai	tamo/ainto
knee	bawa	boma	boma	bagazi	banggo
man	ema	emo	emo	emba	embo
woman	bama	bamuno	bamuno	bana	eutu
bird	ni	ndi	ni	ndi	ni
dog	sunā	sino	sino	ina	sino
road	ebata	nagibo	nai	nai	begata
stone	omata/doba	daba	daba	gomba	bangga
big	bamu	baina	baina	zaidimba	bazina
small	kiaka	kaka	kaka	ka	siaka
fire	niao	iao	yao	iāwa	niao
smoke	ibosi	boisa	boisa	imboi	imbosi
ashes	abetu	abetu	abetu	airi	abetu
ear	dana	dāwo	dago	dongara	dengoro
tongue	iwawa	ewawa	ewawa	ibibi	iwawa
tooth	di	di	di	di	di
breast	ami	ami	ami	ami	ami
hand	wana	wāwo	nago	uma	ipa
foot	te	te	te	be	tai
sun	waiko	wari	wari	i	izi
moon	inua	ino	ino	ina	kariga
star	kuna	arasa	arasa	gobu	dabori
cloud	bereze/utu	uditi	bereze	unditi	utu
rain	wa	wa	wa	wa	wa
water	ou	ou	ou	ou	ou/ũ /
tree	ni	i	i	ĩ	ni
root	tatabi	itai	itai	ĩtai	nitai
leaf	ni gi	i gi	gi	ingi	ningi

Notes: 1. The five word lists given here are from the author's own survey notes.

2. Yekora 'dog' and 'moon', ina, ina, are different in tone.

3. Suena oti is *external belly*. tini is *internal organs*.

4. Suena duba is 'throat', tuma is 'nape of neck'.
5. The symbol [z] represents the affricate [dz] throughout these lists.
6. The generic 'cloud' is bereze. uđiti and utu are 'sky'.
7. Wurm and Laycock's theory of multiple cognates is borne out by the Suena terms for 'skin' and 'star'. Suena tama and aiso both mean 'skin', though tama is much more frequent. Suena kuna is 'star', but there are four other terms which show cognate relationships with other languages: dabori 'large star or planet', gobu 'star', yara 'The Pleiades', moroa 'morning star'.

ENGLISH	SAIROPE	DOBODURU	KENDATA	JEGARATA- KAKENDETTA	GAINA
hair	hu	hu	tu	hu	bio
head	ura	poɸoru	hohoru	uha	koɸiri
mouth	pe	pe	pe	pe	beka
nose	bende	mbende	mende	bende	mendo
eye	hiri	tihi	titi	tihi	diti
neck	humo	tupo	tunga	tunga	koma
belly	ori	hini	ure	hini	
skin	ando	ando	hamo	hamo/ndo	
knee	kowa	paunge	paunge	paunge	
man	embo	embo	embo	embo	mandi
woman	pamone	eɸuhu	pamone	eɸohu	eɸetu
bird	ndi	ndi	di	di	
dog	ino	inũ	inõ	inõ	
road	degi	embere	degi	embere	
stone	koro	kaluma	karu/koro	kalu/koro	
big	peni	dombo	peninombo	peni/ndombo	
small	isoko	isapa	isapa	isapa	
fire	i	yia	i	zi	
smoke	ipoi	iposi	iposi	iposi	
ashes	aɸisa	amiga	amisa	amiga	
ear	tengere	onze	onde	oze	deɸoro
tongue	iɸiɸi	iɸiɸi	iɸiɸi	iɸiɸi	aɸeɸa
tooth	ti	ti	ti	ti	
breast	emi	emi	emi	emi	
hand	ingere	ingere	igeni	ingeni	
foot	utu	itu	utu	utu	
sun	izi	iyi	izi	izi	
moon	indua	hariga	hariga	hariga	

ENGLISH	SAIROPE	DOBODURU	KENDATA	JEGARATA- KAKENDETTA	GAINA
<i>star</i>	hunzara	tamana	tarama	huzara	
<i>cloud</i>	zohi	pondizo	zohi	zohi	
<i>rain</i>	wa	ga	ga	ga/ga	
<i>water</i>	umo	umo	umō	umō	
<i>tree</i>	i	zi	i	zi	
<i>root</i>	era	zikebi	i susu	zi susu	
<i>leaf</i>	gigi	zi iki	i gigi	gigi	

*Notes:* 1. Sairope, Doboduru, Kendata, and Jegarata-Kakendetta are all known as Orokaiva. The lists were taken by an S.I.L. survey team. The Gaina list comes from Weimer.

2. Sairope (Hunjara?) shows interesting relations with Suena on such words as *hair, belly, knee, moon* and *rain*.

3. Some words are open to question. *i susu* probably means '*tree stump*', not '*tree root*'.

4. Sairope is in the Managalasi area; Doboduru is in the Buna census division, as is Kendata; and Jegarata is in the Popondetta census division.

5. Gaina *mandi 'man'* is cognate with Zia *mani 'male child'*.

ENGLISH	NOTU	KORAPE	AEKA	BAREJI	BARUGA
<i>hair</i>	giti	bio	choru		ɸoma
<i>head</i>	kopiri	zirc	kiti tu		agu
<i>mouth</i>	be	beka	pe		b'e
<i>nose</i>	mendo	mendo	mende		mendo
<i>eye</i>	diti	diti	kiti		diti
<i>neck</i>	dubo	dubo	tumo	tumo	tumo/manze
<i>belly</i>	tini	tini	oti	tini	desini
<i>skin</i>	tamo	tamō	tamo	tamo	tamo/andoro
<i>knee</i>	baingo	kaubo	pange	kaubo	kwogo
<i>man</i>	embo	genembo	embo		mendi
<i>woman</i>	eβetu	eβetu	pamine		eβetu
<i>bird</i>	dī	lioka	di	lika	ndi
<i>dog</i>	sino	sino	ino	sino	nino
<i>road</i>	emboro	emboro	deitamo	emboro	darei
<i>stone</i>	ganuma	gamana	atara	siŋoi	sigoi/gembiro
<i>big</i>	nembo	mindapō	ponoro	nembodaba	zozoberi
<i>small</i>	kiambo	koitako	isapa	izoko	mindikoko



ENGLISH	NOTU	KORAPE	AEKA	BAREJI	BARUGA
<i>fire</i>	yiabo	abaraka	zi	ika	ika ibari
<i>smoke</i>	mbosi	imbosi	ipoi	imbosi	gimbori
<i>ashes</i>	abiga	abega	abiga	uotu	ika
<i>ear</i>	dengoro	dengoro	tangere		denoro
<i>tongue</i>	abeba	abiba	ibibi		abibi
<i>tooth</i>	di	diaka	ti	dika	di
<i>breast</i>	emi	ami	emi	ami	
<i>hand</i>	ingo	ungo		ino	ino
<i>foot</i>	te	ata	tei/utu	ata	eka
<i>sun</i>	izi	izi	izi	izi	iri/rako
<i>moon</i>	kariga	inua	hariga	kariga	sekara
<i>star</i>	damana	damana	tapori	damona	damota
<i>cloud</i>	poroga	poroga	poraga	goso	goso/boruma
<i>rain</i>	ga	burizi	ga	boruze	axagorobi/ lasisi
<i>water</i>	umo	ubu	umo	uwu/karaze	ubu/dabara
<i>tree</i>	yi/ri	iaka	ziuhu	ika	sisira
<i>root</i>	yieamei	be sisi	zi susu	durira	riribu/rabisi
<i>leaf</i>	yi igi	ia gi	zi iki	i gi	besumbu

*Notes:* 1. The Notu and Korape lists were taken by an S.I.L. survey team. The Aeka list was furnished by Capell. The Bareji and Baruga lists are from Weimer.

2. Korape adds a final -ka to *mouth, bird, fire, tooth, and tree.*

3. Notu, Korape, and Aeka '*cloud*' may be a specific type: cf. Suena poroga '*thunderhead*'. Likewise for Korape '*rain*': cf. Suena boruza '*heavy rain*'.

## 7. MIGRATIONS

**SUENA.** The Suenas have a tradition that their ancestors came from the Opi and Kumusi river area of the Northern District, about 30 miles NW of Popondetta. They left that area because the Binandere, with whom they were living, were cannibalizing the Suena children. Coming north to Morobe (Sinugu), they fought with the Guhu-Samane people and drove these up into the mountains near Garaina. There are still three villages of Guhu-Samane left on the coast, two on the Maiama river and one at Paiawa. There is every reason to accept this tradition as true, and I would date their departure from Papua about 1800. Chinnery and Beaver make allusion to the Iawamuie tribe on the lower Kumusi. This corresponds

to the two major Suena clans, Yewa-Muye. However, Chinnery and Beaver show the Suenas (Yema-Yarawe) as migrating to Morobe from further north than the Suenas' tradition.

NOTU. Apparently two ancestors came to the present Notu area: one from Korape (Tufi) going to Gona area, and one from the Bariji river going first to Dombada village south of Gona and then on to the Aivi Creek area north of Gona.

BINANDERE, ZIA, MAWAI. For a detailed account of the movements of these tribes, see Chinnery and Beaver, 1914-15.

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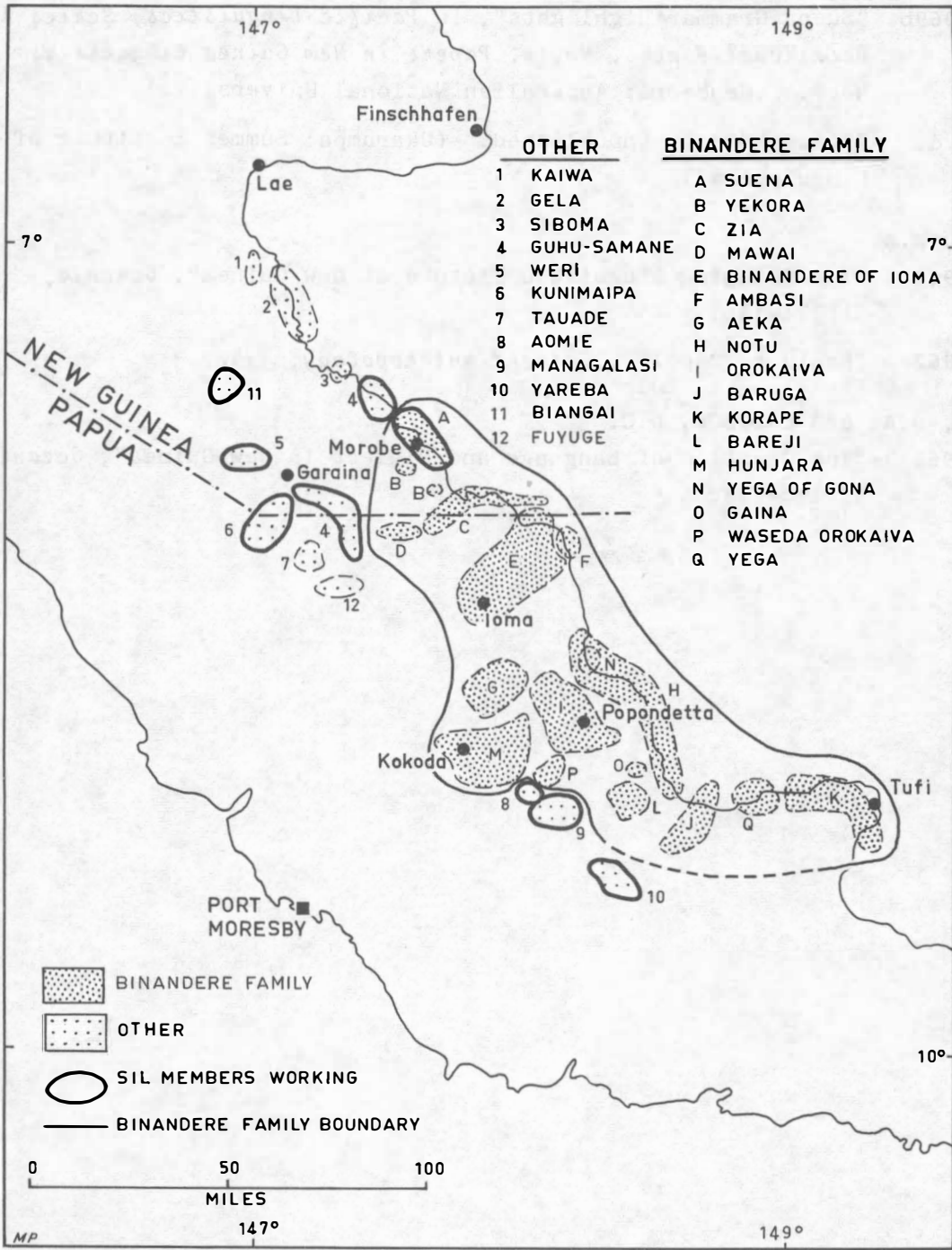
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9. LANGUAGE MAP