

# AN OVERVIEW OF KWERBA VERB MORPHOLOGY

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## 1. INTRODUCTION

The Kwerba language<sup>1</sup> is spoken by approximately 1500 people in north-central Irian Jaya, inland from the coastal town of Sarmi in the Pantai Barat district (*Kecamatan*) of the Jayapura regency (*Kabupaten*).<sup>2</sup>

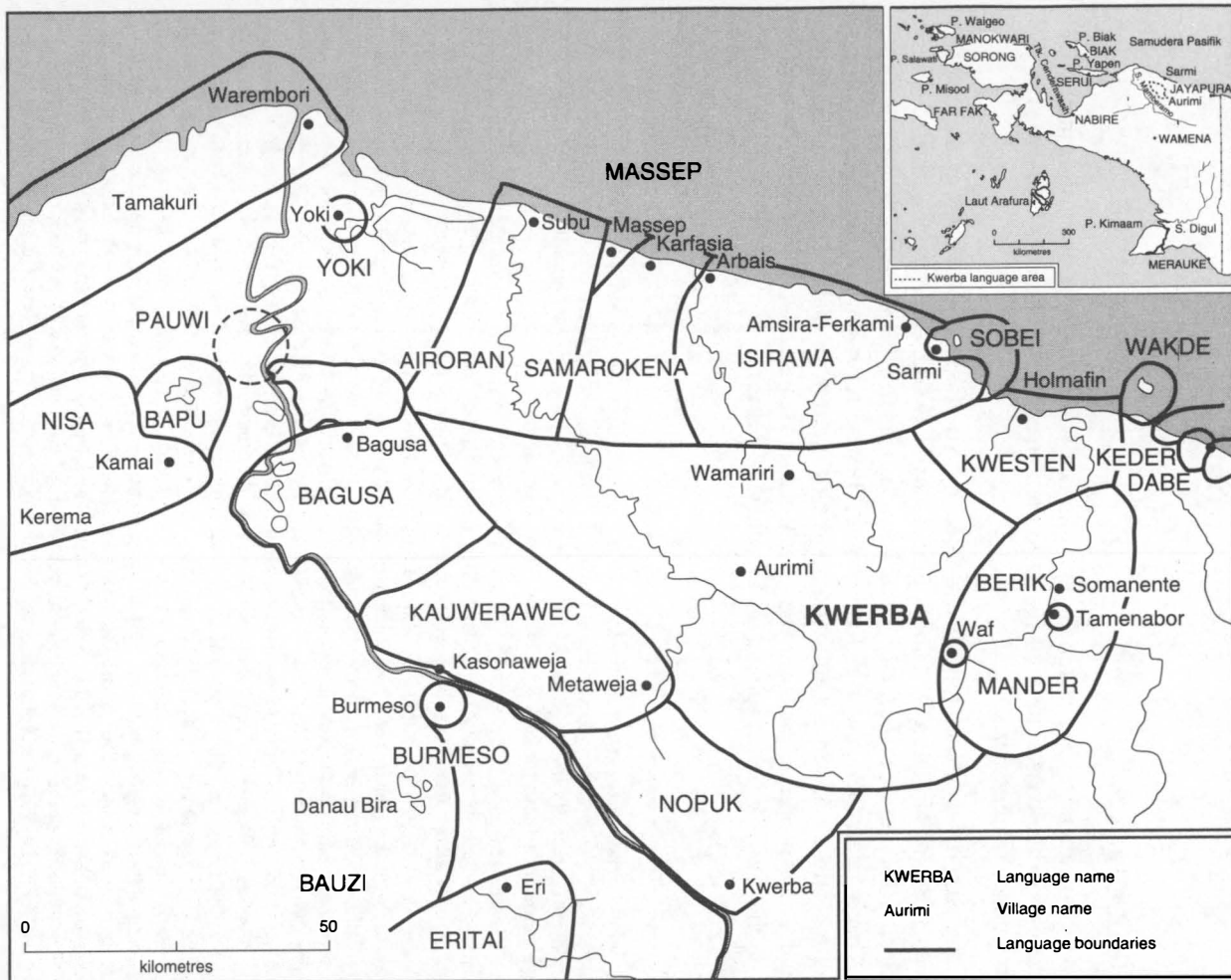
The language has been tentatively classified by Voorhoeve (1975:400) as part of the Dani-Kwerba Stock, Northern Division, of the Trans-New Guinea Phylum<sup>3</sup> (see also Wurm and Hattori, 1981; and the *Index of Irian Jaya Languages*, Silzer and Clouse ed. 1991: 25,59). Closely related languages include Nopuk, Bagusa, Kauwerawec, and Airoran (Silzer and Clouse 1991:25). Kwerba itself is composed of three main dialects: Kwerba, Airmati-Sarje, and Airmati-Sarma. Sasawa and Segar are also dialects of Kwerba. This paper focuses on the Kwerba dialect spoken in the village of Aurimi.

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- <sup>1</sup> We would like to express our gratitude to Yakobus Serikenam, Sardis and Yoel Samokari, and many others who have patiently been teaching us their language, and answering our many questions. We would also especially like to thank Kenneth Gregerson for his comments on a very early draft of this paper and Linda Jones for her comments on more recent drafts.
- <sup>2</sup> The Kwerba language is being studied under the auspices of the Universitas Cenderawasih and the Summer Institute of Linguistics (UNCEN-SIL) Cooperative Project. The language is spoken in the interior of Northern Irian Jaya, Indonesia, between the Memberamo and Tor Rivers.
- <sup>3</sup> Voorhoeve (1971:66-70) initially included Naidbedj (a former village of the Airmati-Sarma dialect of Kwerba) with the Upper Tor River languages in the Tor stock (footnote 2 p.66) of the North Papuan Phylum. Later, however, Voorhoeve (1975:400) tentatively classified the Kwerba family of languages as forming a part of the Northern Division of an united Dani-Kwerba Stock within the Trans-New Guinea Phylum. Wurm (1982:149) followed this tentative classification (see also Wurm and Hattori 1981; and the *Index of Irian Jaya Languages*, Silzer and Clouse ed. 1991:21,59). Although there are a few cognates between the Great Dani Family and the Kwerba Family, there are many cognates between the Kwerba family and the Upper Tor languages. More complete word lists that have been taken over the last few years indicate that there is a lexical cognate relationship of about 24% between the Kwerba and Berik languages. To date, there has been very little comparative work done on the Northern Division of the Dani-Kwerba stock. Further comparative research needs to be undertaken with the data that is now available. The possibility that there might be a stock level relationship between the languages of the Northern Division with the Upper Tor Languages needs to be investigated. Voorhoeve (1975:411) classified the Tor languages as being part of the Tor-Lake Plain Stock of the Northern (or Border-Tor-Lake Plain) subphylum level Super-Stock of the Trans-New Guinea Phylum (see also Wurm 1982:191ff.).

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Like many other non-Austronesian languages of the island of New Guinea, Kwerba expresses precise meanings by the process of agglutination (Foley 1986:12) and the use of verbal auxiliaries.

The major constituents of verbal sentences are: SUBJECT, OBJECT, INDIRECT OBJECT and VERB. Nominals have post-clitic case markers. Although these nominal case markers allow some syntactic freedom in word order, the major constituents usually occur in a SOV pattern. These may occur with the peripheral constituents LOCATION, TIME and INSTRUMENT in the positions indicated in Figure 1.<sup>4</sup>

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4 The following is a list of symbols and abbreviations as used in the examples:

1PL	first person plural subject	MUL	multiple action
2PL	second person plural subject	NCPROG	noncompletive progressive aspect
3PL	third person plural subject	NEG	negative
ABL	abilitive modal	NEGF	negative future mood
ADV	adverb	NEGP	negative past mood
AUG	augmentative size (object or intransitive subject)	NG	negative agreement
AUX	auxiliary	NITR	protracted noniterative habitual aspect
CER	certainitude (emphatic modal)	NOM	nominaliser
CL	compound link	NONC	noncompleted progressive aspect
DAT	dative	OBJ	object position
DDF	deictic of definiteness	PERF	perfect aspect
DF	definite	PERM	permissive modal
DIM	diminutive size (object or intransitive subject)	PL	plural
DIR	directional	PRES	present tense
DIS	distal action	PRFV	perfective aspect
DLEV	different level	PROG	general progressive aspect
DU	dual (subject or object)	PROH	prohibitive mood
DVD	deictic of very definiteness	PROX	proximal action
EXH	exhortative (suggestive imperative) mood	PRPF	present perfective aspect
FAR	far distance action	QM	question marker interrogative mood
FP	far past tense	RBK	recent background information subordinator
FPBK	far past background information subordinator	RL	realis status
FUT	future tense	RP	recent past
GSUB	general subordinator	S	subject
IMM	immediate past tense	SG	singular subject
IMPP	polite imperative mood	SID	side action
IMPS	strong imperative mood	STAT	stative aspect
INCP	inceptive aspect	TADV	time adverb
IND	indefinite	TIME	time
INS	instrument	TR	transitional auxiliary <i>-ra</i>
INT	intent modal	TSUB	time subordinator
IO	indirect object	UNFIL	unfulfilled intention modal
IRR	irrealis status	V	verb
ITR	iterative habitual aspect	VDF	very definite
LOC	locatives	?	unknown, uncertain gloss

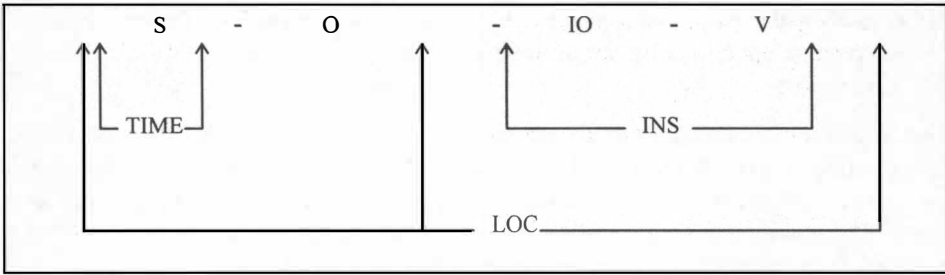


FIGURE 1: KWERBA CLAUSE STRUCTURE

The following examples<sup>5,6</sup> illustrate some of the variants of the major clause types:

- (1) Transitive: TIME-S-O-V  
*Maramarion co ukwabo kwa awaric.*  
 yesterday I dog PRFV see  
 Yesterday I saw the dog.
- (2) Transitive with Instrument: S-O-V-INS  
*Co kamasabo bona kwiem barasi-awe.*  
 I cassowary TADV cut knife-INS  
 I cut the cassowary with a knife.
- (3) Intransitive with Locative: S-V-LOC  
*Ninamoraba wire batanyam iraua-bar.*  
 child PROG runs field-there  
 The child is running in the field.
- (4) Bi-Transitive: S-O-IO-V  
*Co tabunabo inun-te cara entis.*  
 I axe him-DAT PERF give  
 I have given the axe to him.

Other clause types are stative and equative:

- (5) Stative:  
*Masua-ma nokonam.*  
 cloth-DVD red  
 This cloth is red.

<sup>5</sup> The phonemes of Kwerba are: a, b, bw, c{ɛ}, e, i, i{1}, k, kw, m, mw, n, ng, ny, o, r, s, t, u, w, y, ai, au, oi, eu. For a phonemic analysis see Silzer 1976.

<sup>6</sup> Examples vary as to the degree of detail shown when affixation on the verb is in focus in the discussion. In some examples the complete constituent structure of the verb is shown. If the surface form of the verb differs from the underlying structure, then the former is given on the first line of the example. The underlying structure is then presented on the next line. Phonemes that are assimilated by morphophonemic processes are surrounded by parentheses in the examples.

- (6) Equative:  
*Caba com taman.*  
 that mine house  
 That is my house.

## 2. VERB PHRASE

The VERB (V) forms the nucleus of a verb phrase (VP). There are three meaningful segments (slots) in the VP. Although the slot preceding the V is not an obligatory constituent of the VP, it is almost always filled by an auxiliary (AUX) or an adverb (ADV), but not both. Optionally there may also be a negative (NEG). The VP is summarised as follows:

$$\text{VP} = \pm\{\text{ADV}\} + \text{V} \pm\text{NEG} \\ \{\text{AUX}\}$$

Aspect, mood and mode are indicated by words that occur in the AUX slot preceding the verb. It is important to note that these separate categories do not usually co-occur in Kwerba. In the occasional instance when there is no aspect, mood, modal or verbal adverb, the pre-verbal slot is usually filled by a transitional syllable *ra*. *Ra* is a weakly stressed syllable attaching itself as a postclitic to the word preceding the verb. This is the case regardless of whether the previous word is a modifier within the verb phase or whether it is a nominal. In certain situations, such as when the preceding word ends with an unstressed syllable, the *ra* tends to be absorbed and is not pronounced.

- (7) *Co bar bo-ra ti' tini*  
 I there that-TR think I foot-with-TR go  
 Then I thought, I will go on foot.

### 2.1 ADVERBS

Since adverbs are not the focus of this paper, we will mention only a few of the common ones. The adverb *bona* 'at that time' signifies that the event occurred at the same general time as the previous event. It can occur with either the realis status or irrealis status, as in the following:

- (8)a. *Co bona (a)-kot-ri-s.*  
 I TADV SG-cut-AUG-RL  
 At that time I cut it. (with realis)
- b. *Co bona (a)-kot-ri-m.*  
 I TADV SG-cut-AUG-IRR  
 At that time I will cut it. (with irrealis)

The adverb *mate* indicates 'until':

- (9) *Anaba barukwe inyo mate banokw.*  
 people all fear till become  
 All the people became afraid.

The adverb *ori* preceding the verb indicates that the subject almost executed the action. This adverb must co-occur with the present tense and the realis status.

- (10) *Co ori b-itamon-Ø.*  
 I almost PRES-fall-RL  
 I almost fell down.

2.2 FINITE VERB

The INDEPENDENT FINITE VERB itself is fairly complex, as shown by Figure 2.

+TEMPORAL DEIXIS #1	+SUBJ AGREEMENT	+VERB STEM	±OBJ MODIFIER	±SPATIAL DEIXIS	+TEMPORAL DEIXIS #2	±BACKGROUND MARKER
TENSE				LOCATION	STATUS	
				DIRECTION	(REALIS vs IRREALIS)	
+ Obligatory Slots		± Optional Slots				

FIGURE 2: FINITE VERB STRUCTURE

The VERB STEM is the core. It is preceded by the SUBJECT AGREEMENT MARKER, and followed by the OBJECT MODIFIER. Following the object modifier is the spatial deixis, which consists of LOCATIONALS and DIRECTIONALS as suffixes. TEMPORAL DEIXIS consists of TENSE which occurs as a prefix and STATUS which occurs as a suffix. The final position can be occupied by a BACKGROUND MARKER.

The DEPENDENT VERB consists of an independent verb with a subordinator attached as a final suffix.

Dependent Verb = + Independent Verb + Subordinating Marker

As an example of an independent finite Kwerba verb, consider the following sentence:

- (11) *Co icabo wire bakotararianam.*  
*Co ic-abo wire b-a-kot-ara-ri-an-am.*  
 I wood-obj.marker PROG PRES-SG-cut-MUL-AUG-DIS-IRR  
 I wood-OBJ am cutting.there  
 I am cutting a piece of wood over there.

The verb phrase *wire bakotararianam* may be further analysed as follows:

ASPECT	TEMPORAL	SUBJ.NO.	ROOT	OBJ.NO.	SPATIAL	STATUS
AUXILIARY	DEIXIS	MARKING		MARKING	DEIXIS	
General	Present	singular	'cut'	multiple	distal	irrealis
Progressive	Tense			action-pl.obj.		
<i>wire</i>	<i>b-</i>	<i>a-</i>	<i>kot</i>	<i>-ara-ri</i>	<i>-an</i>	<i>-am</i>

FIGURE 3: ANALYSIS OF AN INDEPENDENT FINITE VERB

### 3. VERBAL AUXILIARIES

In the remainder of the paper, we will sketch an outline of the systems that underlie this structure. The order of presentation of the various parts of the verb will be as follows: aspect, mood, modals, temporal deixis of tense and status, subject marking, object marking, spatial deixis of location and direction, verb stem, subordination, backgrounding, and nominalisation.

#### 3.1 ASPECT

Aspect refers to the ‘contour’ or ‘shape’ of an event through time. Aspect contrasts with tense, which ‘locates’ an event in time.

In Kwerba there are a number of optional aspect auxiliaries which reflect various fine-grained distinctions. These aspect auxiliaries occur immediately preceding the verb. There are three broad aspectual categories in Kwerba: perfect, perfective, and imperfective. Further, there are a number of subcategories within the imperfective. The aspectual system is represented in the following two diagrams.

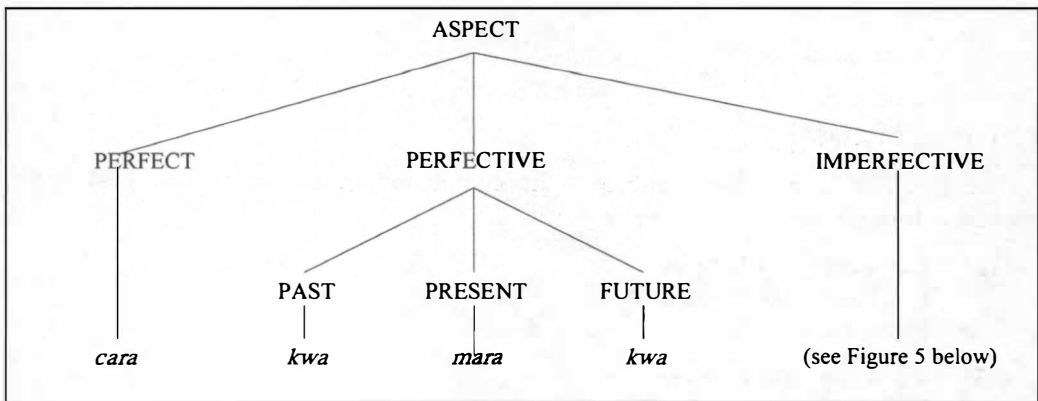


FIGURE 4: OVERALL SCHEMA OF KWERBA ASPECTS

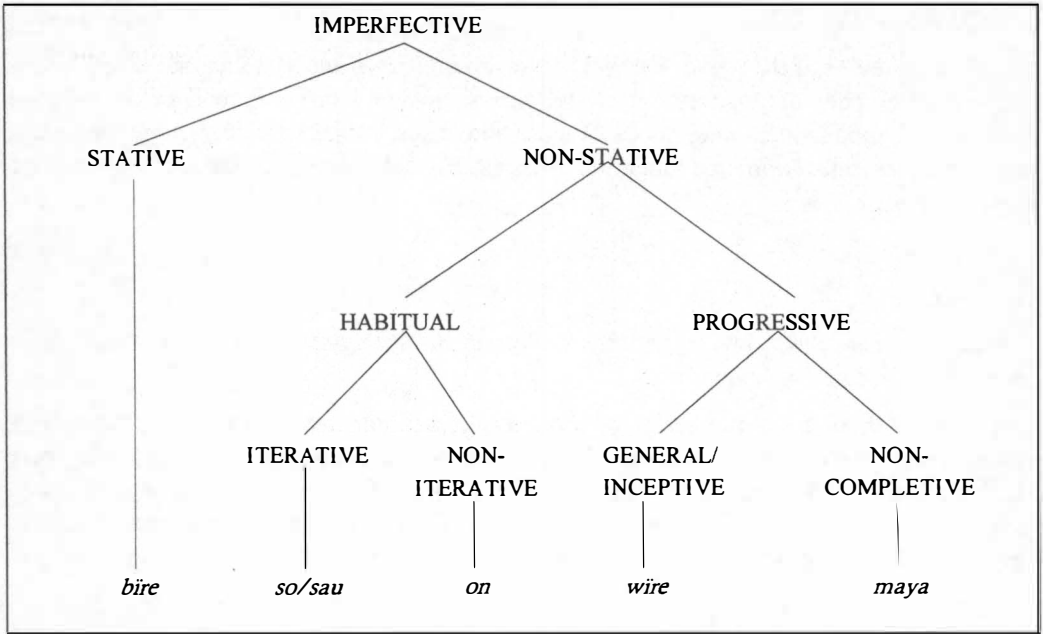


FIGURE 5: KWERBA IMPERFECTIVE ASPECT

### 3.1.1 PERFECT ASPECT

The PERFECT aspect *cara-* indicates the completion of an action that has current relevance, for example:

(12) *Co cara (a)-kot-ri-s.*  
 I PERF SG-cut-AUG-RL  
 I have cut it.

(13) *Co cara (a)-nan-Ø.*  
 I PERF SG-eat-RL  
 I have eaten.

### 3.1.2 PERFECTIVE ASPECTS

PERFECTIVE is distinct from perfect aspect. The nature of a perfective is to refer to an event in a holistic manner. The event is viewed in its entirety but not expounded on. In Kwerba the past perfective is *kwa*:

(14) *Nino beno bir ec-e-sar-ara-ri bar kasano kwa warian.*  
 we from in RP-IPL-enter-MUL-AUG-RL there bananas PRFV cooked  
 From there we entered (into the house), there (he) cooked bananas.

*Nino bo kwa ec-e-nan-Ø.*  
 we that PRFV RP-IPL-eat-RL  
 We ate them (the bananas).



Actually *kwa* is not just past perfective. Since it can also refer to events that will occur later, it may be analysed as a non-present perfective. In the following example *kwa* has a future perfective meaning.

- (15) *Co kwa (a)ku-m.*  
 I PRFV SG-go-IRR  
 I shall go.

The present perfective aspect is indicated by *mara*. This aspect is used for events that occur very close to the moment of speaking. Thus it fittingly co-occurs with the present tense and the realis suffix. In narrative discourse, the present perfective is often used at the very peak of an episode.

- (16) *Came-bo mara b-a-kot-ri-s.*  
 (Name)-obj.marker PRPF PRES-SG-cut-AUG-RL  
 Straight away he cut Came.

### 3.1.3 STATIVE ASPECT

The stative aspect marker, *-bire*, refers to states rather than actions that are still ongoing.

- (17) *Com tat bire b-a-mon-am.*  
 my father STAT PRES-SG-sit-IRR  
 My father is still alive.

### 3.1.4 THE TWO HABITUAL ASPECTS

There are two types of HABITUAL aspect in Kwerba. Both types refer to an action that occurs over an extended period of time. While all the other aspects occur as aspect auxiliaries preceding the verb, the two habitual aspects occur as suffixes. Thus it is possible for the habitual aspects to co-occur with the aspectual auxiliaries. Comrie (1976:30ff.) states that "Habituality is in principle combinable with various other semantic aspectual values, namely those that are appropriate to the kind of situation that is prolonged or iterated". He describes habituality as possible in "any situation that can be protracted sufficiently in time or that can be iterated a sufficient number of times over a long enough period." Kwerba has two habituals: NONITERATIVE, indicating an action that takes place over a period of time and ITERATIVE, indicating repetitive action over a period of time. The table below illustrates how the two types of habituals interact with the status categories of realis and irrealis.

TABLE 1: KWERBA ITERATIVE ASPECT

		ASPECT	
		ITERATIVE	NONITERATIVE (protracted)
STATUS	REALIS	<i>-son/-sau</i>	<i>-on</i>
	IRREALIS	<i>-so-m</i>	<i>-on-am</i>

The iterative aspect indicates repetitive action over a period of time. When status is realis, the form is either *-son* or *-sau* (example (18)), while with irrealis, the form is *-so-m* (example (19)).

- (18) *Co bo-ra b-a-nitie-son-Ø.*  
 I that-TR PRES-SG-hear-ITR-RL  
 I kept on hearing. *or* I have continually (again and again) heard about it.
- (19) *Co Aurim-be-ra b-a-mon-so-m.*  
 I Aurimi-at-TR PRES-SG-sit-ITR-IRR  
 I usually live at Aurimi.

The non-iterative aspect is used to describe an event that has been prolonged over a period of time.

- (20) *Nino bituabo kwa ec-e-rat-on-Ø.*  
 we water PRFV RP-1PL-come-NITR-RL  
 We continued to come following the river.
- (21) *Siraba wire b-a-sakan-on-am.*  
 fire PROG PRES-SG-burn-NITR-IRR  
 The fire continues to burn on.

### 3.1.5 PROGRESSIVE ASPECTS

There are two PROGRESSIVE markers in Kwerba. One marker, *wire*, has two somewhat different meanings: an ongoing activity of an action (PROGRESSIVE meaning), or the beginning of an action or series of actions (INCEPTIVE meaning). Both of these aspectual meanings are strongly imperfective and contrast sharply with the perfective aspect. Consider example (22):

- (22) *Co wire b-a-kot-ri-m*  
 I PROG PRES-SG-cut-AUG-IRR  
 I am cutting it. *or* I am beginning to cut it.

In narrative discourse, *wire* is often used to indicate the beginning of a series of events. Thus it gives the setting and overview of the events that follow.

- (23) *Nino Weim-be wīre ec-e-betiri-c.*  
 we Weim-at PROG RP-1PL-follow-RL  
 We began following the Waim river.

After the narrator made the statement of (23) in his discourse, he elaborated on the various details and events of his trip on the Waim.

The other progressive category marker is *maya*, NONCOMPLETIVE PROGRESSIVE, used to indicate continuous ongoing action. It has the flavour of ‘still verb-ing’ in English where there is focus on the fact that the action has not yet been terminated.

- (24) *Co maya b-a-korie-m.*  
 I NCPROG PRES-SG-write-IRR  
 I am still writing.

### 3.2 MOOD

The following mood forms may be identified in Kwerba verb morphology:

TABLE 2: MOOD

		AFFIRMATIVE	NEGATIVE
DECLARATIVE		∅	<i>kwai</i>
INTERROGATIVE		<i>-ta</i>	<i>-o baye</i>
IMPERATIVE	STRONG (immediate)	<i>bakwa</i>	<i>kwe</i>
	WEAK (polite)	<i>akwa</i>	
	SUGGESTIVE	<i>wira</i>	
	EXHORTATIVE	<i>wirere</i>	

#### 3.2.1 DECLARATIVE MOOD

As in most languages, DECLARATIVE Kwerba is the unmarked MOOD. Grammatically, it has no unique morpheme to distinguish it. There are a number of adverbs that occur only with the DECLARATIVE MOOD.

#### 3.2.2 IMPERATIVE MOOD

The STRONG IMPERATIVE mood is marked by *bakwa*, and must co-occur with the realis status. For example:

- (25) *Am bakwa (a)-kot-ri-s!*  
 you IMPS SG-cut-AUG-RL  
 You cut it!

The WEAK (POLITE) IMPERATIVE is *akwa*. This is a more polite form than *bakwa*, appropriate when addressing adults. It does not as strongly express immediate action as *bakwa*. This form is also used to indicate permission, such as in leave taking.



- (31) *Co kotrimo baye.*  
*Co kot-ri-m-o baye*  
 I cut-AUG-IRR-NG NEGP  
 I did not cut it.

### 3.2.5 INTERROGATIVE MOOD

The INTERROGATIVE may co-occur with aspectual prefixes. It is regularly indicated by the morpheme *-ta* which functions as a polarity device expecting a ‘yes’ or ‘no’ answer. The interrogative morpheme *-ta* attaches to the pre-verbal auxiliary as a postclitic. This is illustrated in sentences (32) and (33) below:

- (32) *Am tato bire-ta b-a-mon-am?*  
 your dad STAT-QM PRES-SG-sit-IRR  
 Is your father still living?
- (33) *Am cara-ta beri-c?*  
 you PERF-QM married-RL  
 Are you already married?

Occasionally, this interrogative postclitic *-ta* functions as a component of a content question by attaching to the word that is being questioned, as in sentence (34) below:

- (34) *Am awe-ta naia anan?*  
*Am awe-ta naia a-nan-Ø*  
 you else-QM what RP-eat-RL  
 What else did you eat?

### 3.3 MODALS

There are several modals in Kwerba which reflect qualifiers of intention, ability, and so forth on the performance of an action. Some of the most common modals are described below.

The modal of INTENT, *abara*, is used to declare a person’s intention to carry out an action in the future.

- (35) *Co abara (a)-co-m.*  
 I INT SG-come-IRR  
 I will come.

There is also an EMPHATIC modal, *kwera*, which indicates that the speaker certainly plans to carry out the action.

- (36) *Co kwera (a)-co-m.*  
 I CER SG-come-IRR  
 I certainly will come.

These two modals can be combined to produce a very emphatic statement. This is an exception to the general rule stated in §2 that two auxiliaries cannot co-occur.

- (37) *Co abara kwera (a)-co-m.*  
 I INT CER SG-come-IRR  
 I most certainly will come.

The ABLATIVE modal *bo* indicates the ability to do something.

- (38) *Co bo (a)-kot-ri-m.*  
 I ABL SG-cut-AUG-IRR  
 I can cut it.

The modal of UNFULFILLED INTENTION, *kaita*, indicates that although the speaker has not yet undertaken a specified action, he definitely intends to do so. This modal co-occurs with the realis status, which perhaps certifies the seriousness of the intention.

- (39) *Co kaita b-a-kot-ri-s.*  
 I UNFIN PRES-SG-cut-AUG-RL  
 I have not yet cut it (but I intend to).

The PERMISSIVE modal, *kaia*, indicates the speaker is giving permission for someone to carry out an action.

- (40) *Am kaia (a)-kot-ri-s.*  
 you PERM SG-cut-AUG-RL  
 You may cut it.

- (41) *Iinim*  
 he PERM SG-go-RL  
 He may go now.

#### 4. VERBAL AFFIXES

Events involve participants in time and space. The Kwerba verb reflects these concepts in its affixation. Participant actors are reflected in subject marking prefixes (§4.2), while objects acted upon may be modified using certain suffixes (§4.3). The crucial dimension of time is represented by tense prefixes working in tandem with status suffixes (§4.1.2), while space is represented by various locational and directional suffixes (§4.4).

##### 4.1 TEMPORAL DEIXIS: TENSE AND STATUS

In Kwerba, tense categories function together with status categories to express the total spectrum of temporal deixis. Tense is marked with verbal prefixes, while status is marked by verbal suffixes.

###### 4.1.1 TENSE

In example (11) above, in which the verb is *wire* the tense morpheme is *b-*, which locates the action of cutting in temporal relation to the speaker's declaration. In the following discussion of the Kwerba tense morphemes, one must keep in mind that there is a close interrelationship of tense and status, which was discussed in §3.1.3. The tenses are listed below:

- b* Present Tense (speech act time). The event referred to in the verb occurs **at the same time** that the speaker is speaking. The present tense can co-occur with either the realis or irrealis status, depending on the aspectual auxiliary used.
- ac* Recent Past Tense. The event occurred some time **prior to the day of speaking but within the memory of the speaker**. For example, an old man might use the recent past morpheme when referring to an event that occurred when he was a young man. The recent past co-occurs with the realis status except with negatives which take an irrealis status.
- ∅ Immediate Past Tense. The event occurred **prior to the time of the speech act** and is marked for realis status.
- ∅ Distal Tense. Events that occurred **in the far past and events that might occur in the future** also have a ∅ tense morpheme (unmarked). However, since the irrealis status must also be used, this tense is readily distinguishable from the immediate past tense. Since the events of the far past or of the future are so far removed from the current situation, they are in effect tenseless.

There are certain morphophonemic processes that occur when the recent past tense morpheme *ac-* co-occurs with the singular subject morpheme *a-*.

Portmanteau:  $ac + a \rightarrow ac$

C-deletion:  $c \rightarrow \emptyset / \_ \text{Consonant initial verb root}$

In the first rule above, the recent past tense morpheme *ac-* merges with the singular subject marker *a-* to become a portmanteau morpheme *ac-*. In the second rule, the *c* of the *ac-* portmanteau morpheme is deleted preceding a verb root which begins with a consonant.

Furthermore, when the recent past tense morpheme *ac-* co-occurs with the first person plural *e-*, vowel harmony results and the vowel morpheme *inac-* harmonises to the first plural *e*, producing *ec-*.

Vowel harmony:  $ac + e \rightarrow ec + e$

#### 4.1.2 STATUS

Status is usually signalled as a broad opposition of REALIS versus IRREALIS. As defined by Foley (1986:158) status “expresses the actuality of the event, whether it has been realised or not. The basic distinction here is a binary one, realis versus irrealis.” This type of distinction is very prominent in Kwerba. All events that have actually occurred in recent time are marked in the verb as realis. Events that have not happened or that are going to happen in the future are marked in the verb as irrealis. It is interesting to note that in Kwerba events of the far past which occurred before the speaker’s lifetime and events of the mythical past also take the irrealis suffix, a usage that has been noted in other languages of New Guinea (for example Yimas, Foley:1986). The opposition of realis versus irrealis may be seen in the following two examples:

- (42)a. *Co abara (a)-kot-ri-m.*  
 I INT SG-cut-AUG-IRR  
 I will cut it.

- b. *Co cara (a)-kot-ri-s.*  
 I PERF SG-cut-AUG-RL  
 I have cut it.

The unmarked form for the realis status is *-c*, but it is subject to the following morphophonemic rules.

In an environment following a high front vowel, the *-c* becomes *-s*.

Sibilantisation  $c \rightarrow s / i \_$

Following a consonant, the *-c* becomes assimilated resulting in a  $\emptyset$  morpheme.

C-deletion  $c \rightarrow \emptyset / C \_$

4.1.3 INTERACTION OF TENSE AND STATUS

There is a systematic interaction between status and tense in Kwerba as summarised by Table 3 and illustrated in examples (43a)-(43e).

TABLE 3: THE SYSTEM OF STATUS AND TENSE

irrealis <i>-m</i>	realis <i>-c (-s/-∅)</i>		irrealis <i>-m</i>	
$\emptyset$ far past time	recent past tense <i>ac-</i> recent past time	immediate past tense $\emptyset$ earlier in the day time	present tense <i>b-</i> present moment of speaking	$\emptyset$ future time
<i>∅-ku-m</i> went (in a story or myth)	<i>ac-ku-∅</i> went	<i>∅-ku-∅</i> went (earlier today)	<i>ba-ku-m</i> am going	<i>∅-ku-m</i> will go

Note that columns 2 and 3 usually represent events in time that have been actualised in the lifetime experience of the speaker. Note that columns 1 and 5 usually represent events in time that are 'distant' from the present experience of the speaker. The far past and future tenses are events that have not been actualised in the speaker's experience. Far past irrealis *-m*, unrealised present and unrealised future irrealis *-m* are the same as defined in the paper. This might be confusing to a new expatriate speaker of Kwerba, but the whole analysis is based on this distinction.

- (43)a. Far past tense (FP) co-occurs with irrealis status:  
*Iinembwano bona (∅)-ang-ku-m taman-abate.*  
 them.two TADV FP-DU-go-irrealis house-to  
 At that time long ago they (two) went to the house.
- b. Recent past tense (RP) co-occurs with realis status:  
*Iinembwano bona ac-ang-ku-(∅) taman-abate.*  
 them.two TADV RP-DU-go-realis house-to  
 At that time they (two) went to the house.



c. Immediate past tense (IMM) co-occurs with realis status:  
*linembwano cara (Ø)-ang-ku-(Ø) taman-abate.*  
 them.two PERF IMM-DU-go-realis house-to  
 They (two) have already gone to the house.

d. Present tense (PRES) co-occurs with irrealis status:  
*linembwano wire b-ang-ku-m taman-abate.*  
 them.two PROG PRES-DU-go-irrealis house-to  
 They (two) are going to the house.

e. Future tense (FUT) co-occurs with irrealis status:  
*linembwano abara (Ø)-ang-ku-m taman-abate.*  
 them.two INT FUT-DU-go-irrealis house-to  
 They (two) will go to the house.

4.2 SUBJECT PERSON-NUMBER MARKING

Referents of the major grammatical relations, subject and object, receive a registration in the verb in Kwerba. The person and number of the subject is indicated by an obligatory (henceforth the ‘subject prefix’), and that of the object by a suffix (henceforth the ‘object suffix’, as reflected in Figure 3 above.

It will be useful, before discussing the subject prefixes, to give the set of free pronouns in the nominative case. They are as follows:

TABLE 4: FREE PRONOUNS OF NOMINATIVE CASE

		SINGULAR	DUAL	PLURAL
1st person	exclusive	<i>co</i>	<i>nano'</i>	<i>nino</i>
	inclusive		<i>na'no</i>	<i>neno</i>
2nd person		<i>am</i>	<i>nono</i>	<i>nom</i>
3rd person		<i>inim</i>	<i>inembwano</i>	<i>inembwa</i>

4.2.1 SUBJECT PREFIX CLASSES

Kwerba subject prefixation defines five classes of verbs. For ease of reference, we will number and label these classes in terms of subject prefix form as follows:

- I. THIRD PLURAL NASAL CLASS
- II. DUAL-PLURAL NASAL FINAL CLASS
- III. ALL PLURAL NON-NASAL
- IV. INTRANSITIVE MOTION PLURAL -r- CLASS

Class I is composed mostly of transitive verbs, while classes II and III are composed of mostly intransitive verbs, and class IV is specifically intransitive verbs. Classes I and II are predominant, accounting for about 85% of the data.

The basic forms for the subject prefixes are given in the paradigm tables that follow. There are also alternate forms for many of these prefixes, which result from morpho-

phonemic processes. The morphophonemic rules are spelled out in §3.2.2. In the examples following each chart, letters in parentheses correspond to phones of the basic forms which are lost through the application of morphophonemic rules.

Subject prefixes which occur with verbs of class I may be summarised as follows:

TABLE 5: CLASS I VERBS: THIRD PLURAL NASAL

	SINGULAR	DUAL	PLURAL
1st person	<i>a</i>	<i>ac</i>	<i>ec</i>
2nd person	<i>a</i>	<i>ac</i>	<i>ac</i>
3rd person	<i>a</i>	<i>ac</i>	<i>naN</i>
(N = morphophonemic assimilation of the nasal to the point of articulation of the following consonant.)			

This set of verbs is unique in that it has a final consonant *c*- in both the dual and plural subject markers. This final *c*- is deleted preceding a consonant-initial verb root. When this happens, the subject prefix forms are identical for singular and dual forms. However, the third plural form never loses the final nasal. Hence, the essential distinguishing feature for this verb class is the final nasal of the third person plural.

Examples of class I verbs are given below:

	SG	DU	PL
(44) <i>orec/oret</i> to carry			
1st	<i>wire b-(a)-orec-am</i>	<i>wire b-ac-oret-am</i>	<i>wire b-ec-oret-am</i>
2nd	<i>wire b-(a)-orec-am</i>	<i>wire b-ac-oret-am</i>	<i>wire b-ac-oret-am</i>
3rd	<i>wire b-(a)-orec-am</i>	<i>wire b-ac-oret-am</i>	<i>wire b-(n)an-oret-am</i>
(45) <i>kot</i> to cut			
1st	<i>wire b-a-kot-ri-m</i>	<i>wire b-a(c)-kot-ri-m</i>	<i>wire b-e(c)-kot-ri-m</i>
2nd	<i>wire b-a-kot-ri-m</i>	<i>wire b-a(c)-kot-ri-m</i>	<i>wire b-a(c)-kot-ri-m</i>
3rd	<i>wire b-a-kot-ri-m</i>	<i>wire b-a(c)-kot-ri-m</i>	<i>wire b-(n)ang-kot-ri-m</i>
(46) <i>ben</i> to drink			
1st	<i>wire b-a-ben-am</i>	<i>wire b-a(c)-ben-am</i>	<i>wire b-e(c)-ben-am</i>
2nd	<i>wire b-a-ben-am</i>	<i>wire b-a(c)-ben-am</i>	<i>wire b-a(c)-ben-am</i>
3rd	<i>wire b-a-ben-am</i>	<i>wire b-a(c)-ben-am</i>	<i>wire b-(n)am-ben-am</i>
(47) <i>ikwaric</i> to put into (with negative <i>kwai</i> , did not put into)			
1st	<i>kwai-(a)-ikwaric-am</i>	<i>kwai-ac-ikwaric-am</i>	<i>kwai-ec-ikwaric-am</i>
2nd	<i>kwai-(a)-ikwaric-am</i>	<i>kwai-ac-ikwaric-am</i>	<i>kwai-ac-ikwaric-am</i>
3rd	<i>kwai-(a)-ikwaric-am</i>	<i>kwai-ac-ikwaric-am</i>	<i>kwai-nan-ikwaric-am</i>

	SG	DU	PL
(48)	tum w to plant		
1st	wire b-a-tumw-an-eem	wire b-a(c)-tumw-an-eem	wire b-e(c)-tumw-an-eem
2nd	wire b-a-tumw-an-eem	wire b-a(c)-tumw-an-eem	wire b-a(c)-tumw-an-eem
3rd	wire b-a-tumw-an-eem	wire b-a(c)-tumw-an-eem	wire b-(n)an-tumw-an-eem

Classes II, III, and IV are basically intransitive verbs. However, there are some verbs that seem to be transitive which follow the pattern of classes II and III. The description that follows will be limited to intransitive verbs.

The size of the subject is reflected in the singular subject marker prefixes of all intransitive verbs. We refer to this as MAGNITUDE. Lesser magnitude (small objects) is termed DIMINUTIVE while greater magnitude (large objects) is termed AUGMENTATIVE.

Table 6 displays the basic forms of Class II subject prefixes. This class comprises the major intransitive verb class as most intransitive verbs take this set of prefixes.

TABLE 6: CLASS II INTRANSITIVE VERBS: DUAL/PLURAL NASAL FINAL

	SINGULAR DIMINUTIVE	SINGULAR AUGMENTATIVE	DUAL	PLURAL
1st	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>eN</i>
2nd	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>aN</i>
3rd	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>naN</i>

Notice that the first person plural form uniquely manifests a front vowel, just as the corresponding free form plural pronouns, *nenó* and *nino*. Also, the second person plural, as with class I earlier, has the same form as the duals (except in a few verbs with irregular characteristics). Magnitude of the subject referent is reflected in affix choice for the singular subject. Just as dual is of a lesser magnitude than plural, so 'small' is of lesser magnitude than 'large'. It is interesting to note the similarity in the form for singular diminutive, *naN*, and dual *aN*. Both of these lesser forms are often identical in the surface structure due to changes imposed by the morphophonemic rules. (The morphophonemic variants will be treated in §4.2.2.) The diminutive form is typically used when a very small child is the subject of the clause. It can also be used when the subject is a very small animal, for example butterfly, or for a thing that is light and of the size that could be easily held in the hand, for example, a stick. There are however, a few exceptions to this rule. For example, a canoe and an aeroplane are referred to with the diminutive form.

The distinguishing feature of this class of verbs is that the subject prefixes of both the dual and plural forms end in a nasal. In fact, only the singular augmentative forms lack a final nasal.

The following verb paradigms illustrate the Class II subject prefix pattern:

	SG-small	SG-large	DU	PL
(49)	<i>sakan</i> to burn			
1st	<i>wire b-(n)an-sakan-am</i>	<i>wire b-a-sakan-am</i>	<i>wire b-an-sakan-am</i>	<i>wire b-en-sakan-am</i>
2nd	<i>wire b-(n)an-sakan-am</i>	<i>wire b-a-sakan-am</i>	<i>wire b-an-sakan-am</i>	<i>wire b-an-sakan-am</i>
3rd	<i>wire b-(n)an-sakan-am</i>	<i>wire b-a-sakan-am</i>	<i>wire b-an-sakan-am</i>	<i>wire b-(n)an-sakan-am</i>

	SG-small	SG-large	DU	PL
(50)	<i>kasian</i> to cough			
1st	<i>wire b-(n)ang-kasian-am</i>	<i>wire b-a-kasian-am</i>	<i>wire b-ang-kasian-am</i>	<i>wire b-eng-kasian-am</i>
2nd	<i>wire b-(n)ang-kasian-am</i>	<i>wire b-a-kasian-am</i>	<i>wire b-ang-kasian-am</i>	<i>wire b-ang-kasian-am</i>
3rd	<i>wire b-(n)ang-kasian-am</i>	<i>wire b-a-kasian-am</i>	<i>wire b-ang-kasian-am</i>	<i>wire b-(n)ang-kasian-am</i>

	SG-small	SG-large	DU	PL
(51)	<i>boro</i> to roll			
1st	<i>wire b-(n)am-boro-n-am</i>	<i>wire b-a-boro-n-am</i>	<i>wire b-am-boro-n-am</i>	<i>wire b-em-bor-ar-am</i>
2nd	<i>wire b-(n)am-boro-n-am</i>	<i>wire b-a-boro-n-am</i>	<i>wire b-am-boro-n-am</i>	<i>wire b-am-bor-ar-am</i>
3rd	<i>wire b-(n)am-boro-n-am</i>	<i>wire b-a-boro-n-am</i>	<i>wire b-am-boro-n-am</i>	<i>wire b-(n)am-bor-ar-am</i>

	SG-small	SG-large	DU	PL
(52)	<i>isa-kat</i> to slip (plus negative <i>kwai</i> did not slip)			
1st	<i>kwai nan-isa-kat-im</i>	<i>kwai (a)-isa-kat-im</i>	<i>kwai an-isa-kat-im</i>	<i>kwai en-isa-kat-im</i>
2nd	<i>kwai nan-isa-kat-im</i>	<i>kwai (a)-isa-kat-im</i>	<i>kwai an-isa-kat-im</i>	<i>kwai an-isa-kat-im</i>
3rd	<i>kwai nan-isa-kat-im</i>	<i>kwai (a)-isa-kat-im</i>	<i>kwai an-isa-kat-im</i>	<i>kwai nan-isa-kat-im</i>

Subject affixes for class III verbs are summarised in the following chart:

TABLE 7: CLASS III INTRANSITIVE VERBS: ALL PLURAL NON-NASAL

	SINGULAR DIMINUTIVE	SINGULAR AUGMENTATIVE	DUAL	PLURAL
1st	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>e</i>
2nd	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>a</i>
3rd	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>a</i>

In this minor class of verbs, there is a final nasal in the singular diminutive and dual forms. If the singular diminutive is paired with the singular augmentative, and the dual with the plural as a lesser-to-greater relationship in magnitude, then the generalisation is that the lesser member of each pair has a final nasal, while the greater member lacks it. Class III subject prefixes have no nasals in any of the plurals, which distinguishes it from classes I and II. Hence, the name for the class is “All Plural Non-nasal”.

The verbs below exemplify the class:

	SG-small	SG-large
(53)	<i>mica</i> to return	
1st	<i>wire b-(n)a(N)-mic-nye-bom</i>	<i>wire b-a-mica-nye-bo-m</i>
2nd	<i>wire b-(n)a(N)-mic-nye-bom</i>	<i>wire b-a-mica-nye-bo-m</i>
3rd	<i>wire b-(n)a(N)-mic-nye-bom</i>	<i>wire b-a-mica-nye-bo-m</i>

	DU	PL
1st	<i>wire b-ana-mīca-nye-bo-m</i>	<i>wire b-e-mīca-ri-bo-m</i>
2nd	<i>wire b-ana-mīca-nye-bo-m</i>	<i>wire b-a-mīca-ri-bo-m</i>
3rd	<i>wire b-ana-mīca-nye-bo-m</i>	<i>wire b-a-mīca-ri-bo-m</i>

+ see morphophonemic rule No.II.

	SG-small	SG-large	DU	PL
(54) <i>aria/sar</i> to enter				
1st	<i>wire b-(n)an-aria-n-am</i>	<i>wire b-(a)-aria-n-am</i>	<i>wire b-an-aria-n-am</i>	<i>wire b-e-sar-ar-am</i>
2nd	<i>wire b-(n)an-aria-n-am</i>	<i>wire b-(a)-aria-n-am</i>	<i>wire b-an-aria-n-am</i>	<i>wire b-a-sar-ar-am</i>
3rd	<i>wire b-(n)an-aria-n-am</i>	<i>wire b-(a)-aria-n-am</i>	<i>wire b-an-aria-n-am</i>	<i>wire b-a-sar-ar-am</i>

	SG-small	SG-large	DU	PL
(55) <i>kwa</i> to cry				
1st	<i>wire b-(n)ang-kwa-n-am</i>	<i>wire b-a-kwa-n-am</i>	<i>wire b-ang-kwa-n-am</i>	<i>wire b-e-kwa-s-am</i>
2nd	<i>wire b-(n)ang-kwa-n-am</i>	<i>wire b-a-kwa-n-am</i>	<i>wire b-ang-kwa-n-am</i>	<i>wire b-a-kwa-s-am</i>
3rd	<i>wire b-(n)ang-kwa-n-am</i>	<i>wire b-a-kwa-n-am</i>	<i>wire b-ang-kwa-n-am</i>	<i>wire b-a-kwa-s-am</i>

Verbs of Class IV take as subject prefixes the following forms:

TABLE 8: CLASS IV VERBS (INTRANSITIVE MOTION): PLURAL *-r*-CLASS

	SINGULAR	SINGULAR	DUAL	PLURAL
1st	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>era</i>
2nd	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>ara</i>
3rd	<i>naN</i>	<i>a</i>	<i>aN</i>	<i>ara</i>

This class of verbs is composed entirely of intransitive motion verbs. Its distinguishing characteristic is that it manifests a morpheme *-r* in the plural. Below are some sample paradigms:

	SG-small	SG-large	DU	PL
(56) <i>ku</i> to go				
1st	<i>wire b-(n)ang-ku-m</i>	<i>wire b-a-ku-m</i>	<i>wire b-ang-ku-m</i>	<i>wire b-era-ku-m</i>
2nd	<i>wire b-(n)ang-ku-m</i>	<i>wire b-a-ku-m</i>	<i>wire b-ang-ku-m</i>	<i>wire b-ara-ku-m</i>
3rd	<i>wire b-(n)ang-ku-m</i>	<i>wire b-a-ku-m</i>	<i>wire b-ang-ku-m</i>	<i>wire b-ara-ku-m</i>

	SG-small	SG-large	DU	PL
(57) <i>cu~t</i> to come				
1st	<i>wire b-(n)an-cu-m</i>	<i>wire b-a-cu-m</i>	<i>wire b-an-cu-m</i>	<i>wire b-era-t-am</i>
2nd	<i>wire b-(n)an-cu-m</i>	<i>wire b-a-cu-m</i>	<i>wire b-an-cu-m</i>	<i>wire b-ara-t-am</i>
3rd	<i>wire b-(n)an-cu-m</i>	<i>wire b-a-cu-m</i>	<i>wire b-an-cu-m</i>	<i>wire b-ara-t-am</i>

	SG-small	SG-large	DU	PL
(58) <i>itamo/muyo</i> to fall				
1st	<i>wire b-(n)an-itamo-n-am</i>	<i>wire b-(a)-itamo-n-am</i>	<i>wire b-an-itamo-n-am</i>	<i>wire b-er-era-muyo-m</i>
2nd	<i>wire b-(n)an-itamo-n-am</i>	<i>wire b-(a)-itamo-n-am</i>	<i>wire b-an-itamo-n-am</i>	<i>wire b-ar-ara-muyo-m</i>
3rd	<i>wire b-(n)an-itamo-n-am</i>	<i>wire b-(a)-itamo-n-am</i>	<i>wire b-an-itamo-n-am</i>	<i>wire b-ar-ara-muyo-m</i>

## 4.2.2 SUBJECT PREFIX MORPHOPHONEMICS

The basic forms of the subject prefixes, to which the morphophonemic rules below apply, have the following syllable shapes:

- V: *a, e*  
 VC: *ac, ec, aN, eN*  
 nVN: *naN*

The processes which generate the variant surface allomorphs from these forms are:

- Rule 1: nasal assimilation  
 (a) to consonants  
 (b) to vowels  
 Rule 2: *a*-epenthesis  
 Rule 3: *a*-deletion  
 Rule 4: *C'*-deletion  
 Rule 5: *N*-deletion

## Rule 1: Nasal assimilation

## (a) Assimilation to consonants

The final nasal consonant of the subject marker assimilates to the initial segment of the following verb root.

VN	→	V	<i>m</i> <i>n</i> <i>ng</i>		—	labial front lingual back lingual	(initial consonant of verb root)
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The following examples illustrate this rule:

- (59) *Nano wire b-ang-ku-m.*  
 we.2 PROG PRES-DU-go-IRR  
 We two are going. (Class IV, dual)<sup>7</sup>
- (60) *Nano okwabo wire b-am-boro-n-am.*  
 we.2 rock PROG PRES-DU-roll-AUG-IRR  
 We two are rolling the rock. (Class II, dual, 2nd/3rd plural)
- (61) *Iinembwa kasanabo wire b-an-tumw-an-am.*  
 they bananas PROG PRES-3PL-plant-AUG-IRR  
 They are planting bananas. (Class I, 3rd plural)

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Class type notations allow the reader to correlate the examples to the tables to see how the example fits into the larger context of verb classes.

## (b) Assimilation to vowels

VN → vn / \_\_\_ V (vowel initial verb root)

The following example illustrates this rule, in which *an* and *en* appear preceding the vowel initial root *omwo* 'to call':

	SG	DU	PL
(62)	<i>omwo</i> to call (Class II)		
1st	<i>wire b-(a)-omwo-n-am</i>	<i>wire b-an-omwo-n-am</i>	<i>wire b-en-omw-ar-am</i>
2nd	<i>wire b-(a)-omwo-n-am</i>	<i>wire b-an-omwo-n-am</i>	<i>wire b-an-omw-ar-am</i>
3rd	<i>wire b-(a)-omwo-n-am</i>	<i>wire b-an-omwo-n-am</i>	<i>wire b-(n)an-omw-ar-am</i>

Rule 2: *a*-epenthesis

When a subject prefix ends with a nasal, and the verb begins with an initial nasal, an epenthetic *-a-* occurs between the two nasals, that is:

VN → vna / \_\_\_ Nasal-initial root

The epenthesis process is illustrated in the class I prefixes below, as an *a* has been inserted between the final nasal of the prefix and the initial nasal of the root.

(63)	<i>me</i> to step on (Class III)		
	SG	DU	PL
1st	<i>wire b-a-me-an-am</i>	<i>wire b-ana-me-an-am</i>	<i>wire b-ena-me-an-am</i>
2nd	<i>wire b-a-me-an-am</i>	<i>wire b-ana-me-an-am</i>	<i>wire b-ana-me-an-am</i>
3rd	<i>wire b-a-me-an-am</i>	<i>wire b-ana-me-an-am</i>	<i>wire b-(n)ana-me-an-am</i>

(64)	<i>mireret</i> to submerge (Class III)		
	SG	DU	PL
1st	<i>wire b-a-mireret-am</i>	<i>wire b-ana-mireret-am</i>	<i>wire b-ena-mireret-am</i>
2nd	<i>wire b-a-mireret-am</i>	<i>wire b-ana-mireret-am</i>	<i>wire b-ana-mireret-am</i>
3rd	<i>wire b-a-mireret-am</i>	<i>wire b-ana-mireret-am</i>	<i>wire b-(n)ana-mireret-am</i>

Rule 3: *a*-deletion

The singular subject prefix *a-* is deleted if it is contiguous to another vowel, as in the following examples. Parentheses (*a*) mark the deleted element:

- (65) *Co kwai (a)-ben-am.*  
I NEGF SG-drink-IRR  
I won't drink it.
- (66) *Co kwai (a)-o-re-c-am.*  
I NEGF SG-bring-AUG-FAR-IRR  
I won't bring it to there.
- (67) *Co wire b-(a)-iri'ai-am.*  
I PROG PRES-SG-slice-IRR  
I am slicing it.

## Rule 4: C-deletion

Certain consonants may not occur contiguously across certain morpheme boundaries. The boundary between subject prefix and verb root is such a case. The final consonant (C) of the subject prefix is deleted if it would co-occur with an initial consonant of a following verb root (cf. Rule 3 above for vowel deletion counterpart):

$$C \rightarrow \emptyset \quad / \quad \_ \quad C \quad (\text{Consonant initial verb root})$$

As an example, observe the loss of the palatal consonant *c* in the following class I examples (deleted consonant in parentheses):

- (68) *wire* *b-a(c)-kot-ri-m*  
 PROG PRES-DU-cut-AUG-IRR  
 to cut (dual/2nd plural)
- (69) *wire* *b-e(c)-kot-ri-m*  
 PROG PRES-1PL-cut-AUG-IRR  
 to cut (1st plural)
- (70) *wire* *b-a(c)-moka-ri-m*  
 PROG PRES-DU-wash-AUG-IRR  
 to wash (dual/2nd plural)

## Rule 5: N-deletion

The initial nasal consonant *n-* of the underlying third person plural subject prefix *naN* and the singular diminutive *naN* are deleted when they immediately follow a consonant.

$$naN \rightarrow aN \quad / \quad C \quad \_$$

Compare, for example, the deletion of *n* in (71), as opposed to the retention of *n* in (72):

- (71) *Wire* *b-(n)ang-kot-ri-m*.  
 PROG PRES-3PL-cut-AUG-IRR  
 They are cutting.
- (72) *Kwai* *nang-kot-ri-m*.  
 NEGF 3PL-cut-AUG-IRR  
 They will not cut it.

## 4.3 OBJECT MARKING

As previously illustrated (Figure 2), the slot immediately following the verb stem is for the direct object marker in the case of transitive verbs. Referring again to Figure 3 *wire b-a-kot-arari-an-am* 'I am cutting (a piece of) wood over there', the suffix *-arari* marks the object. The object is marked not only for NUMBER, but also for SIZE. To accommodate both of these features, we may say that objects are marked for MAGNITUDE. To illustrate, consider the following examples:



- (73) *kot* to cut  
*Co wire b-a-kot-oari-m.* I cut one small object.  
*Co wire b-a-kot-ri-m.* I cut one large object.  
*Co wire b-a-kot-oari-m.* I cut two objects.  
*Co wire b-a-kot-arari-m.* I cut many objects many times.  
*Co wire b-a-kot-isi-am.* I cut many objects many times.
- (74) *bis* to carry  
*Co wire b-a-bis-in-t-am.* I carry one small object.  
*Co wire b-a-bis-an-t-am.* I carry one large object.  
*Co wire b-a-bis-in-t-am.* I carry two objects.  
*Co wire b-a-bis-an-t-am.* I carry many objects.

In the examples above, small single objects and dual objects are marked the same. In (73) *-oari* marks the singular small or dual, while single large and plural are marked with *-ri*. Thus, the ‘lesser’ degree of magnitude is opposed to the ‘greater’ degree in both size and quantity. The same distinctions are made in example (74), with the verb *bis* ‘to carry’, where the morphemes marking the distinctions are not *-oari* versus *-ri*, but *-in* versus *-an*. These relationships may be illustrated as in Table 9:

TABLE 9: LESSER MAGNITUDE VERSUS GREATER MAGNITUDE

		SIZE		NUMBER
LESSER MAGNITUDE	<i>oari</i>	one small object	<i>oari</i>	two objects
	<i>in</i>	one small object	<i>in</i>	two objects
GREATER MAGNITUDE	<i>ri</i>	one large object	<i>arari</i>	many objects
	<i>an</i>	one large object	<i>an</i>	many objects

Thus, object marking in Kwerba does not specify person or gender, but rather magnitude. Magnitude includes the notion of number and size of the object. Magnitude is also extended to a characterisation of action in terms of its multiplicity or repetitiveness. There can be a shifting of the suffixes used depending on whether the focus is on the number of objects or the repetitiveness of the action. Some verbs have practical semantic constraints on the way in which magnitude is expressed. For example, *wire batoam*, the verb ‘to pour’, does not indicate the amount of the object under normal circumstances since that would be very hard to measure. On the other hand, this verb keeps track of how many times the action took place.

The following paradigm charts display generally the fashion in which the magnitude features (size, number, and repeated action) interact for three verbs, *kot* ‘to cut’, *si* ‘to touch’, and *sok* ‘to break’. The charts reveal a great number of forms for object marking. The Appendix summarises the object marking of several dozen verbs, but focuses only on the features of number of objects, and size in the case of a single object. Even simplified to this extent the system is exceedingly complex. There are possibly classes of verbs which take the same object markers. Further study of the object markers needs to be undertaken.

Object marking<sup>8</sup>(75) *kot* to cut

	SG-small	SG-large	DU-small	DU-large	PL-small	PL-large
SG action	<i>kot-oari-m</i>	<i>kot-ri-m</i>	<i>kot-oari-m</i>	<i>kot-oare-c-am</i>	<i>kot-arari-am</i>	<i>kot-arari-m</i>
DU action	<i>kot-oi</i>	<i>kot-oare-c-am</i>	<i>kot-oari-m</i>	<i>kot-oare-c-am</i>	<i>kot-in-am</i>	<i>kot-arari-m</i>
PL action	<i>kot-in-am</i>	<i>kot-i-m</i>	<i>kot-in-am</i>	<i>kot-iriri-m</i>	<i>kot-iriri-m</i>	<i>kot-arari-m</i>
Extensive PL action	<i>kot-īsi-am</i>			<i>kot-arari-m</i>		<i>kot-ara-si-am</i>
PL action on great quantity of objects						<i>kot-tī-si-am</i>
PL action many times on great quantity of objects						<i>kot-arar-si-am</i>

(76) *sī* to touch

	SG-small	SG-large	DU-small	DU-large	PL-small	PL-large
SG action	<i>sī-kek-oari-m</i>	<i>sī-so-ri-m</i>	<i>sī-kek-oari-m</i>	<i>sī-sok-oari-m</i>	<i>sī-ke-tuk-oari-m</i>	<i>sī-so-tuk-oari-m</i>
DU action	<i>sī-ke-sī-m</i>	<i>sī-so-rai-am</i>	<i>sī-ke-tu-m</i>	<i>sī-so-tu-m</i>	<i>sī-ke-tuk-oari-m</i>	<i>sī-so-tuk-oari-m</i>
PL action	<i>sī-ke-tu-m</i>	<i>sī-so-rai-am</i>	<i>sī-ke-tu-m</i>	<i>sī-so-tu-m</i>	<i>sī-ke-tuk-oari-m</i>	<i>sī-so-tuk-oari-m</i>

NOTE: In this verb, *sī*, the marker *-ke* always indicates small object, while *-so* always indicates a large object. However, magnitude is still also indicated in the following suffix.

(77) *sok* to break

	SG-small	SG-large	DU-small	DU-large	PL-small	PL-large
SG action	<i>sok-oari-m</i>	<i>sok-ri-m</i>	<i>sok-in-am</i>	<i>sok-ari-m</i>	<i>sok-arari-m</i>	<i>sok-ari-m</i>
DU action	<i>sok-in-am</i>	<i>sok-in-am</i>	<i>sok-oari-m</i>	<i>sok-in-am</i>	<i>sok-oari-m</i>	<i>sok-ari-m</i>
PL action	<i>sok-in-am</i>	<i>sok-i-m</i>	<i>sok-in-am</i>	<i>sok-oari-m</i>	<i>sok-ari-m</i>	<i>sok-ereri-m</i>

## 4.4 SPATIAL DEIXIS: LOCATIONALS AND DIRECTIONALS

SPATIAL DEIXIS is indicated by a locational or directional suffix. There are three degrees of distance that may be registered. When there is no overt locational marker, the action is PROXIMAL, taking place near the speaker. DISTAL action is marked by the suffix *-an*, which

<sup>8</sup> Due to the complexity and amount of examples in this section, verbal auxiliaries and prefixes are not shown. The examples all begin with the verb stem and include all normal suffixation.

indicates that the action took place at a nearby location. There is also a FAR DISTAL suffix *-et*, indicating an action that has occurred a considerable distance away from the speaker. Consider the following examples:

- (78)a. *Co cara (a)-kot-ri-Ø-s.*  
 I PERF SG-cut-AUG-PROX-RL  
 I have already cut it here.
- b. *Co cara (a)-kot-ri-an-Ø.*  
 I PERF SG-cut-AUG-DIS-RL  
 I have already cut it over there.
- c. *Co cara (a)-kot-ri-et-Ø.*  
 I PERF SG-cut-AUG-FAR-RL  
 I have already cut it at a far away place.

- (79)a. *Co icabo cara (a)-bisana-Ø-c.*  
 I wood PERF SG-carry-PROX-RL  
 I have carried the wood to here.
- b. *Co icabo cara (a)-bisana-an-Ø.*  
 I wood PERF SG-carry-DIS-RL  
 I have carried the wood from there (point a) to over there (point b).
- c. *Co icabo cara bisant.*  
*Co icabo cara (a)-bisana-et-Ø.*  
 I wood PERF SG-carry-FAR-RL  
 I have carried the wood from far over there (point a) to over there (point b).

Thus, the action, or the goal towards which the action is directed, is located with reference to the speaker in the physical world.

There are some transitive verbs which make further distinctions based on the location in relation to the speaker. In the following example (80) the morpheme *-can* indicates action that has occurred at a place to the side and at the same level as the speaker.

- (80) *Co icabo cara abisanacan.*  
*Co icabo cara (ac)-a-bisana-can-Ø.*  
 I wood PERF RP-SG-carry-SID-RL  
 I have carried the wood over there on the side.

In example (81), the morpheme *-bon* indicates that the action has taken place 'over there' at a different horizontal elevation (higher or lower) than that of the speaker.

- (81) *Co icabo cara abisambon.*  
*Co icabo cara ac-a-bisana-bon-Ø.*  
 I wood PERF RP-SG-carry-DLEV-RL  
 I have carried the wood at an elevation that is different from where I am now standing.

In some verbs of motion there are affixes which indicate direction in relation to the speaker. Note the following examples with the verb root *mica*, 'to return':

- (82)a. *Co wīre b-a-mīca-nye-bo-m.*  
 I PROG PRES-SG-return-?-here-IRR  
 I return to here.
- b. *Co wīre b-a-mīca-nya-Ø-m.*  
 I PROG PRES-SG-return-?-there-IRR  
 I return to there.
- c. *Co wīre b-a-mīca-ri-bo-m.*  
 I PROG PRES-SG-return-AUG-here-IRR  
 I return it to here.
- d. *Co wīre b-a-mīca-si-Ø-am.*  
 I PROG PRES-SG-return-OBJ-there-IRR  
 I return it to there.

## 5. VERB STEMS

### 5.1 CHANGES IN VERB STEMS

Though most of this paper has been devoted to verbal auxiliaries and affixes, perhaps a few comments regarding the verb stem or predicates in general should be added.

Many verb stems in Kwerba, such as *kot* 'cut', are constant in form. However, not all verb stems remain constant. Some intransitive verb stems change in relation to the number of the subjects. Transitive verb stems sometimes change in relation to the number of the objects. Consider the following examples of stem variation depending on the number of objects:

- (83)a. *Co cibicabo abarias wīre bataanam.*  
*b-a-tacan-am*  
 PRES-SG-shoot.1-IRR  
 I pig one PROG shoot  
 I shoot one pig.
- b. *Co cibicabo nenumwano wīre bunim.*  
*b-(a)-u-nī-m*  
 PRES-SG-shoot.2-DIM-IRR  
 I pigs two PROG shoot  
 I shoot two pigs.
- c. *Co cibicabo isini wīre borienam.*  
*b-(a)-orien-am*  
 PRES-SG-shoot.3-IRR  
 I pigs three PROG shoot  
 I shoot three pigs.

### 5.2 COMPOUND VERBS

Compound verb stems are formed when two verb stems combine together or an elevational combines with a verb stem to form a new nucleus. These new verb stems then function as a unit which can take the full range of affixation that other verb stems take.

Combinations that can occur together to form a new verb stem are limited. Compound verb stems are based on some common verb stems such as *mon* 'sit', *ku* 'go', *war* 'see'. The verb stems are linked together by the morphemes *ang* or *na*. Sometimes these compounds have a special meaning, such as compounds derived from *ku* 'go', which indicate iterative action. Some examples of compound verbs stems follow:

- (84) *war-a(ng)-muyau-Ø*  
 see-CL-sit-RL  
 look around
- (85) *war-ang-ku-m*  
 see-CL-go-IRR  
 looked around
- (86) *wari-ang-ku-m*  
 cook-CL-go-IRR  
 cook repetitively
- (87) *kot-i-ena-ku-m*  
 cut-AUG-CL-go-IRR  
 cut repetitively

### 5.3 ELEVATIONAL COMPOUNDS

There are three ELEVATIONAL prefixes that occur with some intransitive verbs of motion to form a verb stem. These prefixes distinguish whether the action is moving on a vertical or inclined (ascending or descending) plane. They are shown schematically in Figure 6. Note that the absence of an elevational prefix ( $\emptyset$ ) means horizontal motion.

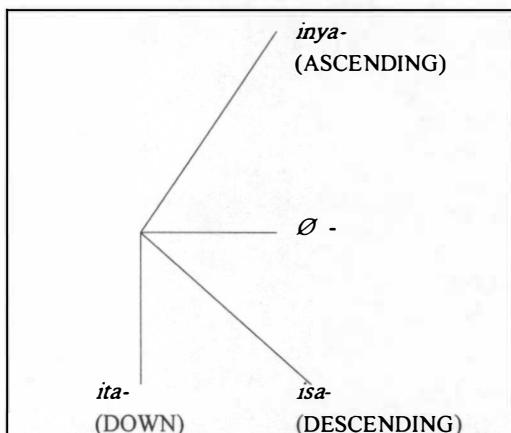


FIGURE 6: ELEVATIONAL PREFIXES

The prefix *inya-* marks a vertical ascending motion, as in:



- b. *Maba ninamoro o-na.*  
 this child IND-is  
 This is a child.

In example (92), *bina* is the equative verb used with the previously referred to subjects. In example (93), *mina* is used for definite subjects. In example (94), *ona* refers to indefinite subjects. It is also interesting to note that the morphemes *bī* and *mī* occur elsewhere with a similar contrast of ‘that’ and ‘the’ (definite).

The second type of predication which takes minimal affixation is one that typically relates to physical or emotional states. Consider the following examples:

- (95) *Co sari-an.*  
 I sick-am  
 I am sick.
- (96) *Co ebis-an.*  
 I hungry-am  
 I am hungry.

## 6. SUBORDINATION

Kwerba has a set of final order suffixes that indicate subordination and are used in dependent clauses. The suffix *-en* is a general subordinator.

- (97) *Co bar bīre mīn abacerisen, nino bota bīri eceric.*  
*a-bac-eri-s-en ec-e-ric*  
 I there STAT having RP-read-OJ-RL-GSUB we that inside RP-IPL-sleep  
 When I had read it (the letter), we slept inside there.

The suffix *-awon*, is used specifically for time subordination. This suffix is often used in the introductory paragraph of the narrative to give the setting.

- (98) *Co cibicabo warian-awon, co abara ora-bo-m.*  
 I pig cook-TSUB I will bring.here-IRR  
 When the pig is cooked, I will bring it here.

## 7. BACKGROUNDING

Kwerba has a pair of final order verbal suffixes which indicate that the activity described in the clause is intended as background information. The information in the clause is not a main event that moves the story forward. The background markers function as discourse subordinators. These markers most frequently occur on speech act verbs and statives.

For example the suffix *-arīn* indicates background information in texts set in far past time. It always follows the irrealis status marker.

- (99) *Muri mīr a-m-arīn, "Baye."*  
 Muri this say-IRR-FPBK no  
 Muri said, "No."

The suffix *-(a)beis* is the corresponding form indicating background information in stories that occurred in recent time. It always follows the realis status marker.

- (100) *Anaba bir a-mon-Ø-beis.*  
 People in RP-live-RL-RBK  
 People were living there.

## 8. NOMINALISED VERBS

Nominals in Kwerba have post-clitic case markers that indicate whether the nominal functions as a subject, direct object, indirect object or instrument in the sentence. Singular, dual and plural as well as deictics are also indicated in these case endings. Note the post-clitic markers on the nominals in the following sentence.

- (101) *Abac-ab-a-no kacatīn-am-acum cara ac-ac-orie-c.*  
 men-DDF-S-DU bird-DVD-PLOBJ PERF-RP-2S-shoot.PL-RL  
 Those two men shot these birds.

Verbs in Kwerba can take the same affixes as nominals. In Kwerba, the nominal case markers are attached to the verb after the irrealis suffix. The verb then becomes nominalised and functions as a nominal. Although the nominalised verb retains its obligatory suffixes, the prefixes become optional. In the following examples, the nominalised verb is the head of a relative clause structure.

- (102) *Kotrim-aba cara es.*  
*kot-ri-m-ab-a cara (a)-es-Ø*  
 cut-AUG-IRR-DDF-S PERF SG-flee-RL  
 The one who cut (her) has fled.
- (103) *Kotrim-abo bakwa orabau.*  
*kot-ri-m-ab-o bakwa (a)-ora-bau-Ø*  
 cut-AUG-IRR-DDF-OBJ IMPS SG-bring-here-RL  
 That which is cut, bring it here.

## APPENDIX

## Table of Object Markers

verb root	definition	SG.dim.	SG.Aug.	DU	PL	Many
<i>mint</i>	crush, step on there	<i>an</i>	<i>er</i>	<i>an</i>	<i>as</i>	<i>akw-ari</i>
<i>me~men</i>	step on	<i>me-an</i>		<i>me-an</i>	<i>men-tas</i>	<i>men-tas</i>
<i>o~et</i>	carry (carry one bunch of arrows away)	<i>o-nc</i>	<i>o-n</i>	<i>o-nc</i>	<i>et-eret</i>	<i>et-eret</i>
<i>o~et</i>	carry (stones)	<i>o-net</i>	<i>o-ret</i>	<i>o-nc</i>	<i>et-eret</i>	<i>et-eret</i>
<i>kwa</i>	lift bucket	<i>n</i>	<i>r</i>	<i>n</i>	<i>arari</i>	Ø
<i>o~s</i>	pick up stones	<i>o-ni</i>	<i>o-ri</i>	<i>o-ni</i>	<i>et-ari</i>	<i>et-ari</i>
<i>wa</i>	see	<i>ni</i>	<i>ri</i>	<i>ni</i>	<i>ngkw-ari</i>	<i>ngkw-ari</i>
<i>be</i>	drink	<i>n</i>	<i>n</i>	<i>n</i>	<i>n-ari</i>	<i>n-ari</i>
<i>maka</i>	cut grass	<i>n</i>	<i>n</i>	<i>n</i>	<i>n-ari</i>	<i>n-ari</i>
<i>memot</i>	wring out	<i>an</i>	<i>eri</i>	<i>an</i>	<i>ari</i>	<i>ari</i>
<i>te</i>	pour (liquid)	<i>n</i>	<i>r</i>	<i>n</i>	<i>ngkw-ari</i>	<i>ngkw-ari</i>
<i>ra</i>	roast (on fire)	<i>en</i>	<i>n</i>	<i>en</i>	<i>ntis</i>	<i>ntis</i>
<i>ko~et</i>	eat meats	<i>et-an</i>	<i>ko-n</i>	<i>et-an</i>	<i>ko-ntis</i>	<i>ko-n-ari</i>



verb root	definition	SG.dim.	SG.Aug.	DU	PL	Many
<i>na</i>	eat non-meats go somewhere and eat a variety of foods go from place to place eating	<i>n</i>	<i>n</i>	<i>n</i>	<i>n-ari</i>	<i>n-ari</i> <i>nanarikum</i> <i>nanarinakum</i>
<i>wa~at</i>	put/place	<i>wa-ny</i>	<i>wa-m</i>	<i>wa-ny</i>	<i>at-esi</i>	<i>at-erina-ku</i>
<i>kame</i>	pat	<i>etu</i>	<i>is</i>	<i>etu</i>	<i>etukw-ari~ari</i>	
<i>mantere</i>	go around	<i>etu</i>	<i>es</i>	<i>etu</i>	<i>etukw-ari</i>	<i>eretu</i>
<i>toba</i>	trick	<i>ari</i>	<i>is</i>	<i>atu</i>	<i>atukw-ari</i>	<i>atukw-ari</i>
<i>takwe</i>	back & forth	<i>etu</i>	<i>esa</i>	<i>etu</i>	<i>etukw-ari</i>	<i>etukw-ari</i>
<i>bara</i>	tie	<i>at</i>	<i>as</i>	<i>at</i>	<i>atukw-ari</i>	
<i>bara</i>	reprimand	<i>atu</i>	<i>as</i>	<i>atu</i>	<i>atukw-ari</i>	<i>atukw-ari</i>
<i>k</i>	help	<i>engku</i>	<i>ais</i>	<i>engku</i>	<i>engkw-ari</i>	<i>engkw-ari</i>
<i>mentie</i>	not understand	<i>engku</i>	<i>es</i>	<i>engku~entum</i>	<i>engkw-ari</i>	<i>engkw-ari</i>
<i>owe</i>	tell story	<i>enu</i>	<i>es/eri</i>	<i>enu</i>	<i>engkw-ari</i>	<i>engkw-ari</i>
<i>ment</i>	squeeze	<i>an</i>	<i>er</i>	<i>an</i>	<i>ari</i>	<i>ari</i>
<i>menta</i>	press down	<i>ari</i>	<i>es</i>	<i>ani</i>	<i>angkw-ari</i>	<i>angkw-ari</i>
<i>wa</i>	watch	<i>ni</i>	<i>s</i>	<i>ni</i>	<i>ngkw-ari</i>	<i>ngkw-ari</i>
<i>tuku</i>	throw, toss	<i>n</i>	<i>esi</i>	<i>n</i>	<i>rar-ari</i>	<i>rarasiam</i>
<i>tuku</i>	throw a ball cast a fishing hook	<i>anu</i>	<i>is</i>	<i>anu~anunaku</i>	<i>ar-ari</i>	<i>ararina-ku</i>
<i>tik</i>	break a small object	<i>kw-oarec</i>		<i>kw-arec</i>	<i>kw-ari</i>	<i>kinac</i>
<i>tik</i>	break a large object		<i>an</i>		<i>ar-ari</i>	<i>kar-ari</i>
<i>ai</i>	turn over	<i>kw-oari</i>	<i>ri</i>	<i>kw-ari</i>	<i>tu</i>	<i>tekw</i>
<i>bora</i>	roll	<i>kw-aric</i>	<i>si</i>	<i>kw-aric</i>	<i>tekw~tu</i>	<i>tekw-(ari)</i>
<i>moka</i>	wash	<i>kw-oari</i>	<i>ri</i>	<i>kw-ari</i>	<i>ar-ari</i>	<i>ar-ari</i>
<i>taka</i>	wash food	<i>kw-ari</i>	<i>ri</i>	<i>kw-ari</i>	<i>ar-ari</i>	<i>ar-ari</i>
<i>kot</i>	cut	<i>oari</i>	<i>ri</i>	<i>oari</i>	<i>ar-ari</i>	<i>arasi</i>
<i>bwak</i>	slit, split up	<i>oari</i>	<i>ri</i>	<i>oari</i>	<i>wari</i>	<i>wis</i>
<i>sok</i>	break	<i>oari</i>	<i>ri</i>	<i>oari</i>	<i>ari</i>	<i>ari</i>
<i>tarab</i>	hang out clothes	<i>oari</i>	<i>ai</i>	<i>oari</i>	<i>an</i>	<i>ari</i>
<i>kwamo</i>	hide something in a bag	<i>oari</i>	<i>r</i>	<i>oari</i>	<i>ari</i>	<i>ari</i>
<i>sibot</i>	open a door		<i>i</i>	<i>i</i>	<i>n</i>	<i>n</i>
<i>ati</i>	close a door		<i>n</i>	<i>n</i>	<i>ri-ri</i>	
<i>ki</i>	put up a roof		<i>n</i>	<i>n</i>	<i>c-ari</i>	
<i>si</i>	sew	<i>en</i>	<i>enca</i>	<i>en</i>	<i>er-eri</i>	<i>er-eri</i>
<i>tataw</i>	scratch (multiple action)	<i>en</i>	<i>ai</i>	<i>en</i>	<i>er-eri</i>	<i>ai</i>
<i>mut</i>	crinkle up	<i>in</i>	<i>in</i>	<i>in</i>	<i>erer</i>	
<i>mutiti</i>	crinkle	<i>en</i>	<i>em</i>	<i>en</i>	<i>ari</i>	<i>er-eri</i>
<i>itatie</i>	fix	<i>n</i>	<i>e</i>	<i>in</i>	<i>ri</i>	<i>ri</i>
<i>ewi~ekwar~eba</i>	follow	<i>ekw-oarec</i>	<i>ewi-si</i>	<i>ekwar-ec</i>	<i>eba-si</i>	<i>eba-si</i>
<i>bari(k)</i>	open	<i>oaric</i>	<i>isi</i>	<i>ki-oari</i>	<i>ari</i>	<i>arina-ku</i>
<i>bw</i>	pick coconuts off trees	<i>in</i>	<i>ai</i>	<i>in</i>	<i>en</i>	<i>en</i>
<i>bw</i>	pick coconuts off one tree	<i>ati</i>	<i>eri</i>	<i>ati</i>	<i>en</i>	<i>ai</i>
<i>tab</i>	make	<i>at(i)</i>	<i>ar(i)</i>	<i>at(i)</i>	<i>ar-ari</i>	<i>ari~ar-ari</i>
<i>kob</i>	crack open	<i>(ar)</i>	<i>ari</i>	<i>ati</i>	<i>ar-ari</i>	<i>ar-ari</i>
<i>kirib</i>	stab	<i>ati</i>	<i>eri</i>	<i>ati</i>	<i>ari</i>	<i>ari</i>
<i>swengk</i>	cut down a stalk of bananas	<i>ati</i>	<i>iiri</i>	<i>ati</i>	<i>ari</i>	<i>wie</i>
<i>tik</i>	pick (break off) flower	<i>ati</i>	<i>eri</i>	<i>ari~aras</i>	<i>eri</i>	<i>eri</i>

verb root	definition	SG.dim.	SG.Aug.	DU	PL	Many
<i>tik</i>	pick (break off) pandanus	<i>ati</i>	<i>eri</i>	<i>ati</i>	<i>an</i>	<i>an</i>
<i>tik</i>	pick vegetables (break off)	<i>ati</i>	<i>erim</i>	<i>ati</i>	<i>aras</i>	<i>aras</i>
<i>erak</i>	carve arrow	<i>ati</i>	<i>eri</i>	<i>ati</i>	<i>ari</i>	<i>ari</i>
<i>kwic</i>	burn off	<i>eti</i>	<i>eri</i>	<i>eti</i>	<i>etekw</i>	<i>etekw</i>
<i>ky(c)</i>	burn down	<i>ky-in</i>	<i>an</i>	<i>ky-in</i>	<i>ari</i>	<i>ari</i>
<i>bos</i>	pull up	<i>at</i>	<i>eri</i>	<i>at</i>	Ø	Ø
<i>mes~mesi</i>	to fix	<i>iatu</i>	<i>eri</i>	<i>iatekw</i>	<i>iatukw-ari</i>	<i>iatukw-ari</i>
<i>bac</i>	read	<i>ekw-ari</i>	<i>eri</i>	<i>ekw-ari</i>	<i>etukw-ari</i>	<i>etukw-ari</i>
<i>war~mis~s</i>	put in	<i>mis-in</i>	<i>wari-an</i>	<i>mi-n(lrg)</i>	<i>sar-ari</i>	<i>sar-ari</i>
<i>buc~bw~ma</i>	cut down tree	<i>bw-in</i>	<i>buc-en</i>	<i>bw-in</i>	<i>mar</i>	<i>mar</i>
<i>tac~u~orien</i>	shoot, kill	<i>u-ni</i>	<i>tac-an</i>	<i>u-ni</i>	<i>orien</i>	<i>orien</i>
<i>bab~tumw</i>	plant, pound, place	<i>bab-in</i>	<i>bab-an</i>	<i>bab-in</i>	<i>tumw-an</i>	<i>tumw-an</i>
<i>sebab</i>	wake up, sit up	<i>on</i>	<i>on</i>	<i>on</i>	<i>seb-na-ku</i>	<i>seba-net</i>
<i>man~kw</i>	divide	<i>ti</i>	<i>ti</i>	<i>ti</i>	<i>ti~kw-Ø</i>	<i>ti</i>
<i>siso(k)</i>	to touch		<i>ri</i>	<i>k-oari</i>	<i>kw-ari</i>	<i>tuk-oari</i>
<i>mes</i>	fix	<i>ukwer</i>	<i>er</i>	<i>ukwer</i>	<i>iat</i>	
<i>wa</i>	read, look	<i>ri</i>	<i>sam</i>	<i>nekw</i>	<i>ngkw-ari</i>	<i>ngkw-ari</i>
<i>kwa</i>	carry water	<i>r</i>	<i>ri</i>	<i>m</i>	<i>m</i>	<i>m</i>
<i>kwa</i>	to dip water	<i>ri</i>	<i>riny</i>	<i>ri</i>	<i>m</i>	<i>ari</i>
<i>warian~mesen</i>	cook	<i>mesen</i>	<i>warian</i>	<i>mesen</i>	<i>warian</i>	<i>warian-tis</i>
<i>taba</i>	cut many items	<i>tekw</i>	<i>ri</i>	<i>tekw</i>	<i>t-ari</i>	<i>rin(aku)</i>
<i>kar</i>	start a fire	<i>an</i>	Ø	<i>an</i>	<i>as-atu</i>	<i>atu</i>
<i>mocak~mocik</i>	tear	<i>in</i>	<i>ie</i>	<i>in</i>	<i>ari</i>	<i>ari</i>
<i>sib</i>	scrape, shave	<i>an</i>	Ø	<i>an</i>	<i>ari</i>	<i>ari</i>
<i>misik</i>	split wood	<i>in</i>	<i>i</i>	<i>in</i>	<i>ari</i>	<i>aria</i>
<i>ab</i>	pound nails	<i>in</i>	<i>i</i>	<i>in</i>	<i>er-eri</i>	<i>er-eri</i>
<i>kwi</i>	cut up meat	<i>en</i>	<i>e</i>	<i>en</i>	<i>eri</i>	<i>eri</i>
<i>tow</i>	tie up	<i>in</i>	<i>ie</i>	<i>in</i>	<i>ri</i>	<i>ri</i>
<i>ser</i>	tell, say	<i>in</i>	<i>i</i>	<i>in</i>	<i>eri</i>	<i>eri</i>
<i>bwak</i>	chop firewood		<i>i</i>	<i>in</i>	<i>ar</i>	
		<i>wari</i>	<i>ri</i>	<i>wari</i>	<i>ari</i>	<i>ari</i>
<i>ti</i>	give food		Ø	<i>en</i>	<i>er</i>	
		<i>en</i>	<i>e</i>	<i>en</i>	<i>eri</i>	<i>eri</i>
<i>kor</i>	write, carve	<i>en</i>	<i>ie</i>	<i>en</i>	<i>er-eri</i>	<i>er-eri</i>
<i>tow</i>	fill with water	<i>an</i>	Ø	<i>an</i>	<i>ar-ari</i>	<i>ar-ari</i>
<i>kak</i>	carve	<i>an</i>	Ø	<i>an</i>	<i>ar-ari</i>	<i>ar-ari</i>
<i>was~ab</i>	hit	<i>was-in</i>	<i>was-an</i>	<i>was-in</i>	<i>ab-er</i>	<i>ab-erina-ku</i>
	go hitting	<i>was-ina-ku</i>	<i>was-ana-ku</i>		<i>ab-erana-ku</i>	
<i>ca</i>	chase	<i>an</i>	Ø	<i>an</i>	<i>ar-ari</i>	
<i>ca</i>	chase away	<i>an-ku</i>	<i>a-ku</i>	<i>an-ku</i>		
<i>warint</i>	place flooring		Ø	<i>wanyet</i>	<i>aterita</i>	
<i>kor</i>	lick	<i>en</i>	<i>ai</i>	<i>en</i>	<i>eri</i>	<i>eri</i>
<i>en</i>	sharpen	<i>in</i>	<i>ai</i>	<i>in</i>	<i>er-eri</i>	
<i>bor</i>	roll a potato	<i>r</i>	<i>r</i>	<i>ran</i>	<i>ar-ari</i>	<i>ar-ari</i>
		<i>ekw-aric</i>	<i>asi</i>	<i>ekw-aric</i>	<i>atuw-ari</i>	<i>atukw-ari</i>
<i>iri</i>	cut back and forth		<i>ai</i>	<i>n</i>	<i>etukwar</i>	

## REFERENCES

Comrie, Bernard, 1976, *Aspect*. London: Cambridge University Press.

Foley, William A., 1986, *The Papuan languages of New Guinea*. London: Cambridge University Press.

- Silzer, Peter**, 1976, A six-week phonemic analysis of Air Mati with a tentative orthography. *From Bauzi to Indonesian*. Cenderawasih University and Summer Institute of Linguistics. Jayapura, Irian Jaya, Indonesia.
- Silzer, Peter and Helja Heikkinen Clouse, ed.**, 1991, Index of Irian Jaya languages. Program Kerjasama Universitas Cenderawasih and Summer Institute of Linguistics. Jayapura, Irian Jaya, Indonesia.
- Voorhoeve, C.L.**, 1971, Miscellaneous notes on languages in West Irian, New Guinea. *Papers in New Guinea linguistics No.14*, 47-114. *PL*, A-28.
- 1975, Central and Western Trans-New Guinea Phylum languages. In Wurm, S.A., ed. *New Guinea area languages and language study vol. 1. Papuan languages and the New Guinea linguistic scene*, 345-459. *PL*, C-38.
- Wurm, S.A.**, 1982, *Papuan languages of Oceania*. *Ars Linguistica* 7. Tübingen: Gunter Narr.
- Wurm, S.A. and Shirô Hattori, eds**, 1981, *Language atlas of the Pacific area, part 1. New Guinea area, Oceania, Australia*. Canberra: Australian Academy of the Humanities, in collaboration with the Japan Academy. *PL*, C-66.

