

# LANGUAGE & LINGUISTICS IN MELANESIA

Journal of the Linguistic Society of Papua New Guinea ISSN: 0023-1959



**LLM SPECIAL ISSUE 2021**

## **Eight Languages of the Admiralty Islands, Papua New Guinea**

**Sketch 2: BIPI**

**Robert Blust**  
University of Hawai'i

## Sketch 2: BIPI

**2.1. INTRODUCTION.** Bipi is spoken on Bipi and Sisi, two small islands about fifteen kilometers from the westernmost point of Manus. It is unknown how long it has been in its present location, but comparative linguistic evidence shows that it subgroups with languages of eastern Manus, apparently most closely with Loniu, spoken on Los Negros island, as has long been claimed without evidence (Healey 1976:360, Hamel 1994:3). Since arriving at the western end of Manus it has borrowed a considerable amount of vocabulary from Lindrou, and undergone several structural adaptations to the languages of this part of the main island. The language was in vigorous use among teenagers when I collected data for it in late February-early March, 1975. Data collection was spread over three days, and totalled about 10 hours.

It is noteworthy that none of the three speakers with whom I worked (Anthony Sipos, age 16, Manuel Joseph, age 18, Luke Sihamou, age 15) claimed knowledge of any other language apart from English and Tok Pisin, despite the obvious heavy influence of Lindrou, implying a long history of bilingualism.

**2.2. PHONOLOGY.** Bipi has a rather asymmetric consonant system, as shown in Table 2.1:

**Table 2.1:** The consonant phonemes of Bipi

p	pw	t	(c)	k		
			j			
		s		x	h	
m	mw	n	ñ	ŋ		
		l				
		(r)				
		dr				
w				y		

All consonants occur as onsets, but only the following occur as codas: *k*, *s*, *x*, *h*, *m*, *n*, *w*, *y*. In addition, *-p* was recorded in *lapanap* ~ *lapanam* ‘spider; showing an optional final labial stop which apparently has survived the general transformation of final labial stops in the language.

The phonemes /p/, /pw/, /t/, and /k/ are voiceless unaspirated stops made at bilabial, labiovelar, postdental and velar places of articulation. /pw/, which is made with lip-rounding, not lip-spreading as in some Nuclear Micronesain languages, contrasts with /pu/ in *pwe* ([pweʔ]) ‘general negator’ vs. *puey* ([púwej]) ‘crocodile’, or *sapwen* ([sápwen]) ‘kind of white sea bird’ vs. *sapuen* ([sapúwen]) ‘wet’. Although it was not generally noticed that /t/ differs in place from /s/, /n/, /l/ and /dr/, my transcription of /tek/ ‘to walk’ notes specifically that /t/ was heard as postdental rather than alveolar. An invariant voiceless affricate /c/ is found in *cu* ‘1SG’, which appears in a number of sentence examples, but without support from any other morpheme. It is written as /c/ in the accompanying vocabulary, but its phonemic status remains questionable.

A comment is required on /t/, which normally appears as a voiceless unaspirated postdental or alveolar stop both initially and intervocalically. In a few instances this phoneme was recorded alternatively as [r] in intervocalic position. In eliciting kin terms, for example, I was given [nátuʔ] ‘my child’, but [nàrupá:pu] ‘grandchild’, where /paapu/ was glossed ‘grandfather’, but is perhaps more appropriately labeled ‘lineal consanguine of alternate generation’. Similarly, what I write in the vocabulary as *mata liŋis* ‘jealous, envious’ was recorded as [màraliŋis], despite the fact that it probably contains the morpheme /mata/ ‘eye’. Other words that were transcribed with an [r] that may not exist as a phoneme in Bipi (or did not in 1975), are [maráɟu] ‘rippling of water’, [màrakáxax] ‘sky’, [móromwak] ‘sea snake’, [pàrakálay] ‘jellyfish’, [páram] ‘fathom’, [parápux] ‘white sea snake with black spots’, and [tarákay] ‘to run’, all of which are assumed to contain an underlying /t/ that surfaced sporadically as an alveolar trill. This data suggests that /t/ may vary between postdental and alveolar position, since the rhotic variant is more likely to have developed from an alveolar stop than from a postdental one. In addition, [r] also appears in a few Tok Pisin loanwords such as *kuru* ‘brain’, or *renbo* ‘rainbow’, but these are treated as part of loan phonology that has not been integrated into the native system.

It would be comforting to simply assume that [r] in native words is invariably a free variant of /t/. What makes it difficult to do this, however, is the appearance of [r] in the plural marker [ro] ~ [row] and [ru] ~ [ruw] in nearly all recorded instances of the personal and possessive pronouns. The sole exception in my data is *hitow tah* (3PL plant) ‘They planted (something)’, as against *i le walum irow* (3SG PROG look 3PL.) ‘He is looking at them’, and other examples of the plural marker which show an invariant [r]. Given this pattern I write [r] in the phonemic orthography I use for the language, even though it was marginal in 1975. A current survey of the language may well show that /r/ is now well-established as a phoneme in certain forms (in particular, the pronouns).

Finally, a single phonological alternation was recorded for *t* and *k* in *xamok* ‘to vomit’, but *xamut-ay* ‘vomitus, what is vomited’, suggesting a synchronic rule  $t > k / \_ \#$ . This pattern of  $*t > t$  as syllable onset, and  $*t > k$  as syllable coda is seen in historical changes, and may be more common in the synchronic phonology, but was noted too late to allow testing.

/j/ is a voiced palatal affricate which appears to be an island in the phonological system since, with one minor exception to be noted momentarily, no other voiced obstruents were recorded. It occurs without variation in nine recorded morphemes, always in initial position, and was transcribed in free variation with /y/ and the problematic voiceless affricate /c/ in /cahay/ ~ /jahay/ ~ /yahay/ ‘west; west monsoon’. The only other voiced obstruent in my data is [bw], seen in the single form *bweha* ‘last-born child, youngest child’. Given its uniqueness it is assumed to be a loan from neighboring Lindrou, and not part of Bipi phonology.

The phonemes /s/, /x/ and /h/ are voiceless alveolar, velar and glottal fricatives that do not differ markedly from standard values for these sounds in other languages. In rapid speech the medial /x/ of *tixix* ‘to cut or carve’ was heard as voiced, although this was not noted for other forms.

All nasals have canonical values: /m/ is the nasal counterpart of /p/, /mw/ the nasal counterpart of /pw/, and /n/, /ñ/ and /ŋ/ are alveolar, palatal and velar nasals respectively. The labiovelar nasal

contrasts with the phoneme sequence /mu/ or /mo/ before a vowel, as in [mwan] ‘fire’ vs. [mówan] ~ [múwan] ‘bad’. Bipi is unusual in having more robustly-supported place features for nasals than for stops, although the two series are equal in onset position when the relatively rare /j/ is included. However, in coda position nasals outnumber stops, with /m/ and /n/ vs. /k/.

There are two liquids, /l/ and /dr/. The first of these is an alveolar lateral and the second a prenasalized alveolar trill [ndr], similar to the *dr* of standard Fijian. In many languages of central and eastern Manus *dr* is paired with the voiced bilabial trill *br*, as in Leipon *brudr* ‘banana’. However, Bipi altered the latter to *p*.

There are also two glides /w/ and /y/ which appear either as onsets or as codas (although /y/ is rare as onset, and can vary with an affricate, as noted above). As codas the glides /w/ and /y/ are distinguished from the corresponding high vowels by the presence (after vowels) or absence (after glides) of an automatic glottal stop. Unlike some languages of Manus, Bipi does not allow final homorganic vowel-glide sequences such as *-iy* or *-uw*, although it does allow *-ey* and *-ow*.

Finally, the glottal stop is one of the most common consonants in the language, but its distribution is fully predictable. All words that would otherwise end with a vowel instead terminate with glottal stop: /mwi/ = [mwiʔ] ‘dog’, /xu/ = [xuʔ] ‘dugong’, /dre/ = [ndrɛʔ] ‘feces’, /puko/ = [púkoʔ] ‘mushroom’, /tamana/ = [tamánaʔ] ‘dance’. Minimal pairs such as /so/ ‘to shoot’ and /sow/ ‘bed’ are distinguished as [soʔ] vs. [sow], increasing the phonetic distance needed to keep them clearly apart. A small number of examples suggest that the automatic glottal coda is dropped in phrasal context, as with /me/ = [mɛʔ] ‘to come’, but /me ko/ = [mɛ koʔ] ‘come home’. In addition, it was noted that in very careful speech in which each syllable is articulated without a normal transition to the next, a glottal stop is inserted to mark the syllable boundary: /draliŋe-w/ = [ndraliŋew] or [ndraʔliŋew] ‘my ear’, /ñañaw/ = [ñañaw] or [ñáʔñaw] ‘widow(er)’, /xamat/ = [xámat] or [xáʔmat] ‘person, human being’. Since there are two sites in which an inserted emphatic glottal onset could occur in the word for ‘my ear’, but only one is used, it is possible that this feature of syllabification occurs only after a low vowel.

Bipi has a classic Oceanic five-vowel system, with high vowels \*i and \*u, mid-vowels \*e and \*o and a low vowel \*a. Orthographic double vowels, as in *paapi* ‘beach’, *paapu* ‘grandfather’, or *waatu* ‘to recognize’ are long, and not rearticulated. Very few of these were recorded, and all but one (*sisiw* ‘oyster’) are the low vowel /a/, and occur in the penult. The most notable allophony is seen with /e/, which nearly always surfaces as the lax vowel [ɛ] in both open and closed syllables: /lehe-w/ = [léhew] ‘my tooth’, /me/ = [mɛʔ] ‘to come’, /tehi/ = [téhiʔ] ‘to stab’, /nime-w/ = [nímɛw] ‘my hand’, /nime-m/ = [nímɛm] ‘your hand’, /nime-n/ = [nímɛn] ‘his/her hand’, /xek/ = [xɛk] ‘to grow’, /kies/ = [kíjɛs] ‘outrigger boom’, /matex/ = [mátɛx] ‘to sleep’, /kamie/ = [kamíjɛʔ] ‘to taste, try’. The only environment in which laxing and lowering of /e/ is not found is before *-y/*: /drekey/ = [ndrékej] ‘small wooden bowl’, /ŋaxey/ = [ŋáxɛj] ‘story’, /wiwey/ = [wíwej] ‘mango’, etc. It is noteworthy that, unlike /e/, /o/ never laxes or lowers.

The only other vowel that was recorded with allophonic variation is /i/, which optionally lowers or laxes in most closed syllables, but is unchanged in open syllables, or before final glottal stop (perhaps because such syllables are underlyingly open), or *-h.*: /salin/ = [salin] ~ [salɪn] ‘right

hand', /pihin/ = [pihiŋ] 'female; woman', /api/ = [apiʔ] 'sago palm', /pisi/ = [pisiʔ] 'bird', /sih/ = [sih] 'one', /tuih/ = [tuwih] 'to chew betel nut'.

Unlike the foregoing cases, in which allophony is phonologically conditioned, /a/ and /e/ appear to vary freely in some forms: /la/ ~ /le/ 'to go', /tarákay/ ~ /terekay/ 'to run'. However, this variation correlates with tense or pronominal number in other forms where a syntactic context is available (see below), so the full range of variation of /a/ and /e/ remains to be determined.

Stress is generally penultimate, with some apparent exceptions. During the beginning stage of elicitation it was recorded as final in [xuwóh] 'two', [talóh] 'three', [androsíh] 'nine', and [saŋón] 'ten', but as penultimate in [límeħ] 'five', and [wónoh] 'six'. Subsequently, where it was recorded, it was indifferently penultimate or final, with an apparent preference for final stress in citation forms. In words of over three syllables stress placement depends upon the morphological composition of the word. In words with two free morphemes such as [xùwikapétew] 'my ribs' each morpheme (/xui/, /kapete/) is stressed on the penult. In monomorphemic words exceeding three syllables, which are quite rare, primary stress appears to be penultimate, with secondary stress on alternating syllables to the left, as in [kàlakálo] 'taro with purple leaves', or [màlisáwo] 'my brother-in-law/sister-in-law'.

One other feature of vowels that was clearly marked in a single form is nasalization after /h/ (rhinoglottophilia), which was recorded in [hũk] 'to sniff, smell' and the homophone meaning 'to wake someone up'. My notes indicate that the vowel that I heard in this form was strongly nasalized, but nothing similar was recorded in other words that begin with /h/.

**2.3. GRAMMAR.** Given limited contact hours with the language, and the focus on phonology and lexicon as part of a survey intended to determine genetic relationships, grammatical information in my fieldnotes is limited. The categories covered are 2.3.1. the counting system, 2.3.2 personal pronouns, 2.3.3. possessive pronouns, 2.3.4. demonstratives, 2.3.5. locatives and directionals, 2.3.6. questions, 2.3.7. causatives, 2.3.8. the attributive suffix, 2.3.9. reciprocals and reflexives, 2.3.10. imperatives, 2.3.11. tense/aspect, and 2.3.12. miscellaneous (a catch-all for other bits and pieces that do not fit into the earlier categories).

**2.3.1. The counting system.** Like other languages of the eastern Admiralties, and unlike those of the Western Islands (Wuvulu-Aua and Seimat), the Bipi counting system is decimal. However, like nearly every other language of the eastern Admiralties, and Yapese of western Micronesia, Bipi has replaced the POC numerals for seven, eight and nine by subtractive forms. The basic numerals used in serial counting are shown in Table 2.2:

**Table 2.2:** Bipi numerals used in serial counting

sih	one
xuoh	two
taloh	three
hah	four
limeh	five
wonoh	six

adritaloh	seven
adroxuoh	eight
adrosih	nine
saŋon	ten
saŋon sih	eleven, etc
xuŋon	twenty
xuŋon sih	twenty one, etc.
tuluŋon	thirty
haŋon	forty
limeŋon	fifty
wonoŋon	sixty
adrotuluŋon	seventy
adroxuŋon	eighty
adrosaŋon	ninety
saŋak	one hundred
xuŋek	two hundred
tuluŋek	three hundred
haŋak	four hundred
limeŋak	five hundred
wonoŋak	six hundred
adrotuluŋek	seven hundred
adroxuŋek	eight hundred
adrosaŋak	nine hundred
sapwaw	one thousand

Only one complex number between these landmarks was recorded: *xuŋek e tuluŋon* ‘230’, a result that is fully predictable except for the linking element *e*, which presumably means ‘and’.

As just noted, the most striking feature of the Bipi numeral system, and one that is widely shared with other languages of the eastern Admiralties, is the use of a subtractive strategy in forming the numerals 7-9. Although *adri-*, *adro-* was not otherwise noted during the short contact I had with speakers of the language, its meaning must be something like ‘take away’, with an implicit reference to the target numeral ‘ten’ upon which the entire system is based.

Other noteworthy aspects of this system are the allomorphy of the base for ‘hundred’, which is *-ŋek* when preceded by the non-derived numerals ‘two’ and ‘three’, and *-ŋak* when preceded by any other non-derived numeral (‘one’, ‘four’, ‘five’, ‘six’). Likewise, *taloh* ‘three’ alternates with *tulu-* in combination forms, and the final *-h* of ‘two’, ‘four’, ‘five’ and ‘six’ alternates with zero in higher numbers based on these. Apart from these minor comments there is not much else to say about numeration in Bipi, since it appears to lack the rich system of numeral classifiers found in its closest relative Loni (cf. Hamel 1994:54-60, who describes at least 30 numeral classifiers). Rather, all nouns that I tested were counted in the same way, namely NOUN + NUMERAL (*sih*, *xuoh*, *taloh*, etc.):

wum sih	one house
niw huoh	two coconuts
ni taloh	three fish

drapunah hah	four children
ki limeh	five trees'

With collectivities a variant form of the numeral is prefixed to what might be called a numeral classifier, although only one example was recorded, namely *puk* for bunches of things that usually do not occur singly: *tiken sa-puk* 'one bunch of betel nuts', *tiken xu-puk* 'two bunches of betel nuts', *tiken tulu-puk* 'three bunches of betel nuts'. The same system of counting by bunches was also recorded for *niw* 'coconut'.

**2.3.2. Personal pronouns.** As in other languages of the Admiralties, Bipi personal pronouns occur in singular, dual and plural numbers. Bipi differs from Seimat and most other languages of the Admiralties in distinguishing non-singular subject pronouns from object pronouns by a change of the last vowel of the stem from *u* to *o*, as shown in Table 2.3 (subject forms precede the slash and object forms follow; in addition, morpheme boundaries are marked here, but not in subsequent examples):

**Table 2.3:** Bipi personal pronouns

	1IN	1EX	2	3
SG		cu	wow/wo	i
DL	ta-xu/ta-xo	u-xu/u-xo	a-xu/a-xow	i-xu/i-xow
PL	ta-ru/ta-ro	u-ru/u-ro	a-ru/a-row	i-ru/i-row

It is apparent from these forms, which are displayed as they were transcribed, that the marker of dual or plural number for object pronouns can occur either with or without *-w*: *xo/xow*, *ro/row*. Examples of usage appear in the following sample sentences:

- 1)   cu    le           walum    i  
     1SG  PROG       look       3SG  
     'I am looking at him/her'
  
- 2)   i     le           walum    cu  
     3SG  PROG       look       1SG  
     'S/he is looking at me'
  
- 3)   wow  le    walum    i  
     2SG  PROG look       3SG  
     'You are looking at him/her'
  
- 4)   i     le    walum    wow  
     3SG  PROG look       2SG  
     'S/he is looking at you'
  
- 5)   taxu           le    walum    i  
     1DL.IN.NOM  PROG look       3SG  
     'The two of us are looking at him/her'
  
- 6)   i     le    walum    taxo

- 3SG PROG look 1DL.INACC  
‘S/he is looking at the two of us’
- 7) uxu le walum i  
1DL.EX.NOM PROG look 3SG  
‘The two of us (but not you) are looking at him/her’
- 8) i le walum uxu  
3SG PROG look 1DL.EX.ACC  
‘S/he is looking at the two of us (but not at you)’
- 9) axu le walum i  
2DL.NOM PROG look 3SG  
‘The two of you are looking at him/her’
- 10) i le walum axow  
3SG PROG look 2DL.ACC  
‘S/he is looking at the two of you’
- 11) ixu la/le walum i  
3DL.NOM PROG look 3SG  
‘The two of them are looking at him/her’<sup>1</sup>
- 12) i la/le walum ixow  
3SG PROG look 3DL.ACC  
‘S/he is looking at the two of them’
- 13) taru le walum i  
1PLin.NOM PROG look 3SG  
‘All of us are looking at him/her’
- 14) i le walum taxo  
3SG PROG look 1DL.IN.ACC  
‘S/he is looking at the two of us’
- 15) uru le walum i  
1PLex.NOM PROG look 3SG  
‘We (but not you) are looking at him/her’
- 16) i le walum uro  
3SG PROG look 1PLex.ACC  
‘S/he is looking at us (but not you)’
- 17) aru le walum i  
2PLNOM PROG look 3SG

---

<sup>1</sup> For the difference between *la* and *le* cf. sections 3.10 and 3.11.



‘All of you are looking at him/her’

18) i                    le        walum            arow  
 3SG                    PROG look            2PLACC  
 ‘S/he is looking at all of you’

19) iru                    le        walum            i  
 3PLNOM                PROG look            3SG  
 ‘They are looking at him/her’

20) i                    le        walum            ixow  
 3SG                    PROG look            3DL.ACC  
 ‘S/he is looking at the two of them’

Although these sentences show no difference between the subject and object forms of singular pronouns, I was told briefly that *co* can occur as the first-person singular pronoun, and is used when ‘I’ is used in isolation, as in the interrogative form ‘Me?’.

As already noted for Seimat, and as is true of many other Oceanic languages, a conjoined subject that contains both a noun and a pronoun is expressed with the first person dual exclusive pronoun followed by the nominal subject, as shown in sentences 22-24):

21) John                le/la                wan  
 John                PROG                eat  
 ‘John is eating’

22) uxu                John le/la        wan  
 1DL.EX.NOM John PROG eat  
 ‘John and I are eating’

23) uxu                John na-nih            Momote        xak  
 1DL.EX.NOM John to            Momote        tomorrow  
 ‘John and I will go to Momote tomorrow’

24) uxu                John la            Momote        nabeje  
 1DL.EX.NOM John go            Momote        yesterday  
 ‘John and I went to Momote yesterday’

Although only two examples were recorded, if the conjoined subject contains two nouns rather than a noun and a pronoun, the 3DLpronoun is *exu*, both in both nominative and accusative:<sup>2</sup>

<sup>2</sup> While sentence 26) is surely grammatical, as seen from the sentences immediately following Table 2.3, what I actually recorded was *cu le John* ‘I see John’, and *cu le John exu Mary* ‘I see John and Mary’, both of which use only the progressive aspect marker to signal the action, with an implied verb ‘see’. Whether this was a transcription error on my part, or a genuine feature of the grammar in which the verb ‘to see’ can be signalled implicitly by the aspect marker remains to be determined. However, sentence 23) also lacks an explicit verb for ‘to go’, suggesting what is perhaps a more general pattern of optionally omitting verbs where these can be supplied from context by the

- 25) John exu Mary le/la wan  
 John 3DL.NOM Mary PROG eat  
 ‘John and Mary are eating’
- 26) cu le walum John exu Mary  
 1SG PROG see John 3DL.ACC Mary  
 ‘I see John and Mary’

**2.3.3. Possessive pronouns.** My data on Bipi possessive pronouns is confined largely to words that typically belong to the category of suffixed, or inalienably possessed nouns. Unlike the majority of Oceanic languages, Bipi does not have possessive classifiers (more on this below). All possession, then, is ‘general’ possession, with no distinction of edible, drinkable and so on. Nonetheless, there are two possessive constructions: 1. those that take pronominal suffixes, and 2. those that take independent postposed possessive markers. In the singular most body part terms, and apparently all kin terms are in Class 1. What is surprising is that some body part terms are in Class 2, and hence are possessed like nouns that typically are ‘alienable’ in many other Oceanic languages. Table 2.4, Class 1 shows a representative sample of nouns that take possessive suffixes, while Class 2 shows all examples of body-part terms in my fieldnotes that take independent postposed possessive markers. Bases that were recorded only in possessed form have a hyphen, while those that occur as free forms, allowing, but not requiring a possessive marker, do not:

**Table 2.4:** The two types of possessive construction in Bipi

CLASS 1: Possession by suffixation

Base	1SG	2SG	3SG	gloss
kaka-	(-a > o)	-m	-n	foot/leg
kaxa-	(-a > o)	-m	-n	name
mata-	(-a > o)	-m	-n	eye
nana-	(-a > o)	-m	-n	pus
ŋohota-	(-a > o)	-m	-n	breath
pala-	(-a > o)	-m	-n	head
ate-	-w	-m	-n	heart
nime-	-w	-m	-n	hand
pose-	-w	-m	-n	shoulder
pue-	-w	-m	-n	vagina
sali-	-w	-m	-n	body
kali-	-w	-m	-n	mother’s brother
malio-	-o	-m	-n	shadow/reflection
natu-	-u	-m	-n	child
pulu-	-u	-m	-n	spouse

listener. Also unclear from want of sufficient data is whether the replacement of *u-xu* by *e-xu* generalizes to other persons and numbers.

tama-	-a	-m	-n	father
tine-	-e	-m	-n	mother

CLASS 2: Possession with independent postposed possessive markers

Base	1SG	2SG	3SG	gloss
dre	ayo	awow	ai	feces
lok	ayo	awow	ai	boil, abscess
mimin	ayo	awow	ai	urine
naŋo	ayo	awow	ai	penis
ñamus	ayo	awow	ai	sweat, perspiration
pises	ayo	awow	ai	liver
sus	ayo	awow	ai	female breast
xay	ayo	awow	ai	blood

Attention to the data in this table shows some significant surprises. The first one is that body-part terms, which in most Oceanic languages must be inalienably possessed, fall into both noun classes. There is a certain logic to this division in that most bodily products which are clearly separable fall into Class 2 (feces, urine, sweat, blood). However, this is not true of ‘pus’, or ‘breath’ which are possessed like the majority of body parts. More seriously, ‘penis’, ‘liver’ and ‘female breast’ all belong to Class 2. In each case the noun in question can occur in unpossessed form (*naŋo*, *pises*, *sus*). The logic of this classification is opaque, since ‘vagina’ and ‘heart’ are in Class 1, but are neither more nor less alienable than ‘penis’ or ‘liver’.

The second thing to note is that the possessive marking of Class 1 nouns is constant for the 2SG and 3SG forms, but varies for the 1SG depending upon the last vowel of the underlying stem: stems that end with *-a* change this vowel to *-o*, stems that end with a front vowel add *-w*, and stems that end with a rounded vowel have zero marking (as will be seen below, this is clear, since Bipi contrasts final vowels, which are automatically followed by a glottal stop coda, with final glides after rounded vowels, thus /o/, /u/ = [oʔ], [uʔ], but /ow/, /uw/ = [ow], [uw]). While this is the general pattern for 1SG Class 1 nouns, it is notably suspended in the words for ‘mother’ and ‘father’, both of which depart from the expected pattern for their phonemic shape, and instead take zero-marking. A further exception to the general pattern of alternation in possessed nouns is seen in the singular paradigm for ‘grandmother’: *wilio*, *wilie-m*, *wilie-n*, where the expected form of ‘my grandmother’ would be *\*\*wilie-w*.

I have said that Bipi lacks possessive classifiers, yet close attention to the ‘possessive pronouns’ of Class 2 shows that the 2SG and 3SG forms can be decomposed into *a-wow*, and *a-i* respectively, showing a host morpheme *a-*. However, unlike languages which have productive possessive classifiers, this host element has no known semantic function, and the decomposition of the 1SG form into *a-yo* yields a postposed shape that does not correspond to any attested form of the first person singular pronoun. Moreover, in languages that have true possessive classifiers the suffixed classifier precedes the head noun rather than following it like the markers for inalienable possession, yet here both types of possessive marking follow the possessed noun. Despite the clear morphological analysis of the 2SG and 3SG Class 2 possessive markers, then, it

seems best for the present to treat *-ayo*, *-awow* and *-ai* as unitary possessive pronouns for Class 2 nouns.

The last thing to mention in connection with the limited data collected for the Bipi possessive system (no information is available, for example, on nominal as opposed to pronominal possession), is that Class 2 nouns include not just separable bodily substances and some body parts, but also all nouns that in canonical Oceanic languages are alienable. This is shown in Table 2.5 with the full possessive paradigms for ‘coconut’, next to which I have placed a Class 1 noun to show that the non-singular number is constant across both noun classes. A possessive construction was recorded for three other nouns that are typically alienable in Oceanic languages, namely *samen* ‘knife’, *wum* ‘house’, and *kalakalo* ‘taro’, which predictably fall into Class 2:<sup>3</sup>

**Table 2.5:** Possessive paradigms for /mata/ ‘eye’ and *niw* ‘coconut’

	/mata/ ‘eye’	<i>niw</i> ‘coconut’
SG		
1	mato	<i>niw ayo</i>
2	mata-m	<i>niw awow</i>
3	mata-n	<i>niw ai</i>
DL		
1IN	mata taxu	<i>niw taxu</i>
1EX	mata uxu	<i>niw uxu</i>
2	mata axu	<i>niw axu</i>
3	mata ixu	<i>niw ixu</i>
PL		
1IN	mata taru	<i>niw taru</i>
1EX	mata uru	<i>niw uru</i>
2	mata aru	<i>niw aru</i>
3	mata iru	<i>niw iru</i>

If there is anything else to add it is perhaps that Bipi and Seimat agree -- contrary to the general pattern in Oceanic languages -- in allowing some body-part terms to occur as alienably possessed nouns, but neither language allows this for any kinship term that was recorded, whether these describe consanguineal or affinal relationships. It is unclear how to interpret this difference, but it appears to suggest counterintuitively that relations of kinship and marriage are considered less alienable than body parts.

**2.3.4. Demonstratives.** The Bipi demonstrative system appears to be very simple (possibly because I did not record it in full in the limited time I spent with speakers of the language). The relevant forms appear in sentences 27-30:

<sup>3</sup> For the first person dual inclusive form I actually recorded *taxo* rather than *taxu* for both ‘eye’ and ‘coconut’. However, this violates the general pattern by which the non-singular possessive pronouns correspond to the nominative forms of the personal pronouns (*taxu*, *taru*, etc.) as opposed to their accusative counterparts (*taxo*, *taro*, etc.). I assume that this was a transcription error, since I recorded the data in Table 2.2 together, with the second noun being essentially a ‘ditto’ of the first in the non-singular possessive markers, and a departure from expectation in a single form should always be questioned in relation to a general pattern.

27)	tama-Ø father-my	xay-tua ?-this/here			‘This is my father/My father is here’
28)	kalakalo taro	ayo my	xay-tua ?-this/here		‘This is my taro/My taro is here’
29)	samen knife	ayo my	xay-tua ?-this/here		‘This is my knife/My knife is here’
30)	samen knife	ayo my	xay-tewa ?-that/there		‘That is my knife/My knife is there’

In answer to my questions about the distal deictic I was told that there is no distinction between ‘that/there (close to hearer)’ vs. ‘that/there (far from both speaker and hearer)’. There thus appears to be a simple proximal/distal distinction of distance in the demonstrative pronouns and the homophonous adverbs. The one thing that might occasion some surprise is that that proximal member of the pair has a back vowel corresponding to a front vowel in the distal member, reversing the common crosslinguistic correlation between vowel frontness and relative distance.

**2.3.5. Locatives and directionals.** A small number of sentences was recorded with locative or directional prepositions (some of these, as *mara* and *mwen* may actually be nouns) indicating the position or movement of a referent in relation to its surroundings. These appear below:

31)	mwi dog	le PROG	su/yen COP?	mara front	wum house	‘A dog is in front of the house’
32)	mwi dog	le PROG	su COP?	mwen rear	wum house	‘A dog is behind the house’
33)	pisi bird	le PROG	su COP?	tehitah on top	wum house	‘A bird is on top of the house’
34)	mwak snake	le PROG	su COP?	pehe under	pak stone	‘A snake is under the stone’
35)	ni fish	le PROG	ro COP?	lon inside	dris basket	‘A fish is inside the basket’
36)	mwi dog	le PROG	ro COP?	pala outside	wum house	‘A dog is outside the house’
37)	mwi dog	terekay run	na-nih thither	lo in	dras sea	‘A dog is running toward the sea’
38)	mwi	terekay	na-nih	lo	len	

- dog run thither in bush/forest  
 ‘A dog is running toward the bush/forest’
- 39) mwi terekay na-me taro  
 dog run hither 1DL.IN  
 ‘A dog is running toward the two of us’
- 40) mwi terekay a taro  
 dog run away from 1DL.IN  
 ‘The dog is running away from the two of us’

There are no articles, leaving the English translation free to choose either a definite or indefinite reading, the actual determination being dependent upon context within a larger discourse.

All of these sentences show an order in which the verb precedes the locational or directional term. However, the following sentence differs in showing the reverse order:

- 41) i le yaw Momote name mahu  
 3SG PROG from Momote come day after tomorrow  
 ‘S/he will come from Momote the day after tomorrow’

In sentence 31) *mara* is almost certainly a variant pronunciation of *mata* ‘eye’, which includes ‘front’, ‘point’ and various other meanings in its rich polysemy in many Austronesian languages. An alternative and more complex version of sentence 33) was given as follows:

- 42) pisi sih xay tewa le yen tehitah wum  
 bird one ? there PROG COP? on top house  
 ‘A bird is there on top of the house’

The function of *su*, *yen* and *ro*, all of which seem to have some type of existential reference, remains unclear. Finally, since *la/le* appears to mark progressive aspect in other sentences, it is surprising that it is absent in sentences 37-40.

**2.3.6. Questions.** The following *wh*- question words were recorded:

how? : pakisah	where? : he
how much/how many? : sehe	who? : (le) hilaw
what? : sah	why? : asa
when? : sehe taim	

Examples in context, along with answers to them, appear below:

- 43) le-hilaw wen-i ni ayo ‘Who ate my fish?’  
 ?-who eat-TR fish 1SG
- 44) John wen-i ni awow  
 John eat-TR fish 2SG ‘John ate your fish’

- 45) kaxa-m                      la/le    hilaw  
 name-2SG.POSS.            ?        who  
 ‘What is your name?’ (lit. ‘Who is your name?’)
- 46) kaxo-Ø                      Manuel  
 name-1SG.POSS            Manuel                      ‘My name is Manuel’
- 47) wow                      pari                      he  
 2SG                          from                      where                      ‘Where are you from?’
- 48) cu                          pari                      Bipi  
 1SG                          from                      Bipi                      ‘I am from Bipi’
- 49) tua                          sah  
 this                          what                      ‘What is this?’
- 50) tewa                          sah  
 that                          what                      ‘What is that?’
- 51) wo    wan    sah  
 2SG    eat    what                      ‘What did you eat?’
- 52) asa    John    wen-i    ni    ayo  
 why    John    eat-TR    fish    1SG                      ‘Why did John eat my fish?’
- 53) i    wen-i    asa                      i    mesok  
 3SG    eat-TR    because                      3SG    hungry ‘He ate it because he was hungry’
- 54) sehe                      taim    wow    susui    ni  
 how much                      time    2SG    catch    fish                      ‘When did you catch the fish?’
- 55) wo    susui    ni    sehe  
 2SG    catch    fish    how many                      ‘How many fish did you catch?’
- 56) wo    susui    ni    to    he  
 2SG    catch    fish    at    where                      ‘Where did you catch the fish?’
- 57) wo    susui    ni    pakisah  
 2SG    catch    fish    how                      ‘How did you catch the fish?’

These sentences raise some questions that cannot be fully answered on the basis of available information. The first element, *le-*, in sentence 43) is peculiar in seeming to mark progressive aspect, which would normally apply only to dynamic verbs. The suffix in *wen-i*, which might be suspected of being a marker of transitivity, perhaps marks the object as specific or definite, as it does in Papitalai and Lele, like Bipi members of the East Manus subgroup (Boettger 2015:102–107; Cleary-Kemp 2015:13), since *wan* is followed by a definite object in sentence 52), and *wen-i* in sentence 53) has an understood definite object. The object *sah* in 51) is arguably indefinite.

The variation between *wow* (the historically expected reflex of POC \*koe), and *wo* ([woʔ]) is pervasive in my data. While this often appears to be free variation, there are some sentences in which I was told only one variant or the other is permissible, as in *wo/wow wan kalakalo* ‘Eat the taro!’ (both variants allowed), but *wo sa wan kalakalo* ‘Don’t eat the taro!’, where a variant with *wow* was explicitly rejected. Whether this difference is based on grammatical conditioning, or is simply a product of free variation misinterpreted by the speaker cannot be determined from my limited fieldnotes.

A single yes-no question was recorded, and it appears to differ from the corresponding statement only in having a final rising intonation:

- 58) i       mek           nambɛɛ  
       3SG   die           yesterday  
       ‘Did s/he die yesterday?’

**2.3.7. Causatives.** Atypically for an Austronesian language, Bipi appears to lack a morphological causative construction, using a lexical causative *piti* ‘to make’ instead:

- 59) i       piti   cu       meñah  
       3SG   make 1SG   sit down  
       ‘S/he made me sit down’

- 60) i       piti   cu       telun  
       3SG   make 1SG   stand up  
       ‘S/he made me stand up’

**2.3.8. The attributive suffix.** As in other languages of the Admiralty Islands, Bipi has an apparently fossilized attributive suffix *-Vn*. There is little evidence for this by way of paradigmatic contrast in the data I collected, but it becomes apparent on listing words with an attributive sense, as can be seen in Table 2.6:

**Table 2.6:** Evidence for Bipi *-n* ‘marker of attribution’

aɲuan ‘yellow’	moan ~ muan ‘bad’
drawan ‘heavy’	monen ‘smooth, level; straight’
droken ‘old’	ñakitan ‘black’
hawun ‘new’	ñalitan ‘cold’
heon ‘winding, as river’	ñamulen ‘sour’
hutun ‘thick, as plank’	patien ‘light (weight)’
huyen ‘good’	paxilen ‘white, clean’
jin ‘angry’	pitin ‘deep (of the sea)’
kadrahan ‘hot’	piton ‘hard (like stone)’
kadrien ‘painful’	poitan ‘soft’
kapuan ‘bitter’	poxuan ‘rotten (meat, fish)’
kaxitan ‘itchy’	pukuhun ‘rotten (wood)’



koxolalen ‘thin, of animates’	puon ‘short’
lawen ‘long, tall’	saluan ‘much, many’
lun ‘deaf, mute’	saman ‘shimmering, glaring’
maisen ‘ripe’	sapuen ‘wet’
maluen ‘far, distant’	tinan ‘big’
mamaxan ‘ripe’	xaman ‘red’
mametan ‘raw; uncooked’	yahan : ‘blind’

The evidence for a fossilized or partly fossilized attributive suffix in Bipi is weaker than that in Seimat, since it has no known synchronic pairs such as ‘smoke : smoky’ or ‘saltwater : salty’. Moreover, in addition to the 38 forms in Table 2.6 the following 23 attributive words that do not end in *-n* are found in my fieldnotes: *esok* ‘dry’, *hadruw* ‘true, correct’, *kew* ‘bent’, *kilitah* ‘full (container)’, *lik* ‘dark’, *mahalum* ‘slow; lethargic’, *mak* ‘to die; dead’, *masok* ‘hungry’, *matuw* ‘blunt, dull’, *maxaw* ‘blue/green’, *moxay* ‘calm, still (water)’, *ñakak* ‘dirty’, *ñañoh* ‘swollen’, *ñoy*<sub>-1</sub> ‘mad, insane’, *pakahik* ‘near’, *pex* ‘hoarse’, *pisik* ‘small’, *posax* ‘dry’, *pulemasi* ‘ashamed’, *sakapuk* ‘tangled’, *sehe* ‘few, little’, *soi* ‘quick, fast’, *xañey* ‘bald’. Nonetheless, by my count there are 120 words in the attached vocabulary that end in *-n*, and 32% of these describe attributes that typically translate as English adjectives, whereas they represent less than 6% of the recorded vocabulary. In addition, a number of the nouns that were recorded very likely contain an unidentified 3SG possessive pronoun *-n*. All in all, then, there seems little reason to doubt that the words in Table 2.6 contain a fossilized attributive suffix. As in Seimat, this is most commonly *-an* (17 of 38 examples), but since *a* is the most frequent vowel in Bipi, as in most Oceanic languages, this count may be statistically meaningless.

The most challenging question that this data raises probably is what semantic or other factors determine whether an attributive word has *-n*. The most basic color terms (black, white, red, yellow) all have *-n*, but ‘blue/green’ does not. Most paired opposites (‘heavy/light’, ‘old/new’, ‘thick/thin’, ‘good/bad’, ‘hot/cold’, ‘long/short’, ‘ripe/raw’, ‘hard/soft’) agree in having *-n*, but a few do not, as ‘far/near’, ‘many/few’, ‘wet/dry’, or ‘big/small’. However, beyond this it is hard to see any pattern, and for the present this division between a very large percentage of attributive words that end in *-n*, and a significant number of others that do not is unexplained.<sup>4</sup>

**2.3.9. Reciprocals and reflexives.** Only two reciprocal constructions and one reflexive were recorded:

- 61)   ixu           tay    ixow  
       3DL.NOM   hit   3DL. ACC.  
       ‘The two of them hit each other’
- 62)   ixu           la    walum       ixow  
       3DL.NOM   PROG look       3DL.ACC  
       ‘The two of them are looking at each other’
- 63)   John   tixiti   i  
       John   cut    3SG

<sup>4</sup> For comment on this distribution in Oceanic languages, see Ross 1998 and the literature cited therein.

‘John cut himself (accidentally or deliberately)’

The first two sentences are atypical for an Oceanic language, where reciprocal verbs are often marked by a prefix, creating a structure Subj. RECIP-verb, with no need for an object pronoun such as is found here. Sentence 63) also differs from the structure found in many Austronesian languages in using a 3SG pronoun whose referent is potentially ambiguous, rather than some means of marking the subject and object as coreferential.

**2.3.10. Imperatives.** Very little information was collected on imperative constructions in Bipi. From the little that I have, it appears that a 2SG pronoun is normally required, and that the imperative is then distinguished from the corresponding declarative construction by use of *le* immediately before the verb in the latter, as seen by contrasting sentences 65) and 66):

64)    wow           yaw           kewin  
      2SG           follow        behind  
      ‘Follow me!’

65)    wow           tek  
      2SG           walk  
      ‘Go take a walk!’ (command)

66)    wow   le       tek  
      2SG   PROG   walk  
      ‘You are walking (statement)’

The function of *le* is not entirely clear, but appears to mark progressive aspect, indicating an action that is taking place at the time of the speech event. It is noteworthy that *la* ‘go’ may also immediately precede the main verb, both in statements and in commands, as in sentence 67):

67)    wow   la       matex  
      2SG   go       sleep  
      ‘You go off to sleep’

The explanation given to me for this sentence was that it implies that the person must go somewhere to sleep, but if s/he is already in bed *la* is not used.

A negative imperative or vetative is formed by inserting the prohibitive marker *sa* immediately before the verb, with no other change from the positive imperative:

68)    wow   wan   kalakalo  
      2SG   eat   taro  
      ‘Eat the taro!’

69)    wo     sa     wan   kalakalo  
      2SG   NEG   eat   taro  
      ‘Don’t eat the taro!’

**2.3.11. Tense/aspect.** I did not collect enough sentence material to be certain about how tense or aspect work in Bipi, but nearly all of the sentences I have which describe an action that is in progress or continuing require a preverbal auxiliary *la* or *le*, which seem to be variants meaning ‘walk’ or ‘go’, marking progressive aspect. Many of these have already been given. Some additional examples are:

70)	i	le	matex				
	3SG	PROG	sleep				‘S/he is sleeping’
71)	i	le	tu	mimin			
	3SG	PROG	?	urinate			‘He is urinating’
72)	cu	le	pway	kutu	mimin		
	1SG	PROG	want	?	urinate		‘I want to urinate’
73)	iru		le/la	tah			
	3PL.NOM		PROG	plant			‘They are planting (crops)’
74)	cu	la	wan				
	1SG	PROG	eat				‘I am eating’
75)	cu	la	wan	kalakalo			
	1SG	PROG	eat	taro			‘I am eating taro’
76)	uxu	la	wan	kalakalo			
	1DL	PROG	eat	taro			‘The two of us are eating taro’
77)	cu	le	pway	ki	wen	kalakalo	
	1SG	PROG	want	?	eat	taro	‘I want to eat taro’
78)	i	la	hisik	kolos			
	3SG	PROG	dry	clothes			‘S/he is drying the clothes’

As these sentences appear to indicate, there is no syntactic or semantic difference between *le* and *la*. However, as noted in the previous section, in at least imperative sentences the presence or absence of this marker does signal differences of meaning, its absence indicating that an action should be performed *in situ*, and its presence indicating that the subject must change location in order to carry it out. The only example of this contrast was with *la*, but given the weight of the evidence from other sentences collected it must be assumed that the same would be true with *le*.

By contrast, sentences that describe an action which is clearly past never appear to take *la/le*, although the auxiliary also occurs in future constructions:

79)	cu	mwin	xan	nu	niw	nambeje
	1SG	drink	water	GEN	coconut	yesterday

‘I drank the coconut water yesterday’

- 80) cu la pwa ki mwin xan nu niw xak  
 1SG PROG ? ? drink water GEN coconut tomorrow  
 ‘I’ll be drinking coconut water tomorrow’

In two recorded sentences the verb appears to be dispensable if the progressive marker is present, although this leaves open the question what verb the hearer is expected to supply.

- 81) cu le John to paapi  
 1SG PROG John at beach  
 ‘I saw John at the beach’

- 82) cu le John e Mary to paapi  
 1SG PROG John and Mary at beach  
 ‘I saw John and Mary at the beach’

**2.3.12. Miscellaneous.** I recorded certain grammatical features in Bipi that cannot be placed in the larger categories that emerged from a wider range of data. One of these is the alternation of /a/ with /e/ in certain verbs under conditions that are not always stateable. Perhaps the clearest example is seen in the personal pronoun paradigm that I collected for the verb *tah* ‘to plant’, as shown in Table 2.7:

**Table 2.7:** Evidence of /a/ : /e/ variation in the paradigm for ‘to plant’

cu teh	‘I planted
wo tah	‘You (SG) planted’
i teh	‘S/he planted’
taxo tah	‘We (DLin.) planted’
uxu tah	‘We (DLex.) planted’
taro tah	‘We (PL.IN) planted’
uru tah	‘We (PL.EX) planted’
axu tah	‘You two planted’
aru tah	‘You all planted’
ixu tah	‘The two of them planted’
hitow tah	‘All of them planted’

Two things are puzzling about this paradigm. The first is the transcription of *taxo* and *taro* as subject pronouns rather than object pronouns, and of *hitow* rather than *iru* for the 3PL subject pronoun. No questions were asked about this during the few hours of elicitation time that I had with these three Bipi speakers, and based on the limited grammatical data that I have I must treat these as simple alternatives.

Second, the vowel of the verb appears as *e* in first person and third person singular forms. This pattern is also found with the transitive verb *wan* ‘to eat’ in the following partial paradigm

(where all non-singular forms take *wan*, and the temporal adverb may occur either clause-initially or clause-finally):

- 83) cu    wen    kalakalo    nambeye  
 1SG   eat    taro        yesterday  
 ‘I ate the taro yesterday’
- 84) wow   wan    kalakalo    nambeye  
 2SG   eat    taro        yesterday  
 ‘You ate the taro yesterday’
- 85) i       wen    kalakalo    nambeye  
 3SG   eat    taro        yesterday  
 ‘S/he ate the taro yesterday’

The only other example I have of this is the elicitation of *mak* ‘dead; to die’ in isolation, but of *mek* in the question *i mek nambeye* (rising intonation) ‘Did he die yesterday?’, and of *tey* ‘killed’ in /i tey puw/ ‘He killed the pig’. Since this is consistent with the paradigm for ‘to dig’ I tentatively assume that at least some verb stems with underlying /a/ show /e/ in the first person and third person singular forms. The change from /a/ to /e/ might also be interpreted as marking past tense or perfective aspect, but this is contradicted by sentence (84).

This pattern changes in the future, where the verbal auxiliary *la/le* carries the burden of vocalic alternation, leaving *wan* as an invariant stem (all non-singular forms take *la + wan*):

- 86) cu    le    wan    kalakalo    xak  
 1SG   PROG eat    taro        tomorrow  
 ‘I’ll be eating the taro tomorrow’
- 87) wow   la    wan    kalakalo    xak  
 2SG   PROG eat    taro        tomorrow  
 ‘You’ll be eating the taro tomorrow’
- 88) i       le    wan    kalakalo    xak  
 3SG   PROG eat    taro        tomorrow  
 ‘S/he’ll be eating the taro tomorrow’

However, in a desiderative construction, which resembles the future, but with a second element between auxiliary and main verbs, the pattern of a/e alternation in the main verb is restored:

- 89) cu    le    pway   ki    wen    kalakalo  
 1SG   PROG want ?    eat    taro  
 ‘I want to eat the taro’

In addition, the following sentences show *e/a* variation in the marker of progressive aspect that correlates with first and third person singular vs. second person singular:

- 90) cu le mwin xan nu niw  
 1SG PROG drink water GEN coconut  
 ‘I am drinking coconut water’
- 91) wow la mwin xan nu niw  
 2SG PROG drink water GEN coconut  
 ‘You are drinking coconut water’
- 92) i le mwin xan nu niw  
 3SG PROG drink water GEN coconut  
 ‘S/he is drinking coconut water’

Two sentences that illustrate an instrumental construction were recorded, as follows:

- 93) cu susui ni nan kamek  
 1SG catch fish with trap  
 ‘I caught the fish with a trap’
- 94) John tey mwi nan para ki  
 John hit dog with trunk wood  
 ‘John hit the dog with a stick’

In sentence 94) it is clear that *para* is an alternative pronunciation of *pata*, which in other contexts refers to a tree trunk or stalk of wood.

In some sentences existence is represented by a zero copula, as in *kaxo Manuel* (name.1SG Manuel) ‘My name is Manuel’. However, other sentences, as 31) - 36) appear to have some type of copular element *su*, *yen*, or *ro*. More data is needed to resolve this issue.

Among the odd bits of grammatical data that I was able to obtain for Bipi that are not readily placed in more inclusive categories is the possessive construction with enumerated objects. Where English and various other European languages have a structure of the form Subject have Number Object, as in ‘I have two children’, many Austronesian languages prefer a structure of the form Subject-Possessor (Copula) Number, as in ‘My children are two’, with no main verb ‘have’, a zero copula in most languages, and the number forming the predicate. Bipi follows this pattern, as seen in sentences 95) and 96):

- 95) natu-Ø xuoh  
 child-1SG.POSS two ‘I have two children’
- 96) wum ayo xuoh  
 house 1SG.POSS two ‘I have two houses’

An unidentified morpheme *-s* was found in one construction, where *kilimay* was independently recorded meaning ‘healed’:

- 97)     matakaka-n     k     ilimay-s  
           yaws-3SG.POSS     heal-?     ‘His/her yaws have healed’

Since no other examples of final consonant clusters were recorded across a morpheme boundary this example is problematic.

In the sentence *putue-n kili tum* (belly-3SG continue swollen) ‘She is pregnant’ the morpheme *kili* appears to mark a state that extends over time. Finally, the expression *kaman lo koman* ‘men’s house’ is puzzling, since it repeats the word for ‘male’. In Loniū, which appears to be the closest extant relative of Bipi, the word I recorded for ‘men’s house’ is *lo koman*, which is literally ‘in the men’s house’, and an example of what I have elsewhere called the ‘adhesive locative’ in Austronesian languages, namely the tendency for a locative preposition to become fossilized on certain following nouns (sea, forest, men’s house) and henceforth appear even in dictionary entries (Blust 1989). It is possible that the Bipi form is the same, and that the speaker who offered this word began with *kaman* and then quickly corrected himself to *lo koman*, giving the false impression of a longer expression than is actually used.

Little information was collected on the rich topic of negation in Oceanic languages (Hovdhaugen and Mosel 1999). One example of the negation of an adjective turned up by chance, namely *hutun pwe* ‘thin, of materials’ (= ‘not thick’), and here the negator follows the word it negates. By contrast, as noted elsewhere, in the negative imperative the negative marker precedes the word it modifies, as in *wo sa wan kalakalo* (2SG NEG eat taro) ‘Don’t eat the taro!’.

**2.4. LEXICON.** The vocabulary that I collected for Bipi follows. Where a base morpheme was recorded only in a suffixed form an abstract underlying representation is given without the expected surface form, as with (/ate/) ‘chest’ (no free form *ate* was recorded). Where the vowels of the singular possessive paradigm vary the third person singular form is chosen as basic.

## BIPI-ENGLISH VOCABULARY

/a/

- 001. *a*<sub>-1</sub> : away from
- 002. *a*<sub>-3</sub>: second person non-singular pronominal prefix
- 003. *adray* : sugarcane
- 004. *adri-* : take away? (cf. *taloh*)
- 005. *adro-* : take away? (cf. *sih, saŋon*, etc.)
- 006. (*a*)*hayah* : afternoon, evening
- 007. *ahin* : basket worn over the shoulder and used to carry small things
- 008. *ai* : 3SG possessor (indirect), his, her
- 009. *alik* : putty nut: *Parinari laurinum*
- 010. *aŋey* : kind of edible three-sided nut
- 011. *aŋuan* : yellow

012. *api* : sago palm  
 013. *arow* : 2PL object, you all  
 014. *aru* : 2PL subject, you all  
 015. *asa* : why?; because  
 016. /ase/ : red inner gills of fish, *ase-n*  
 017. /asu/ : gall, gall bladder, *asu, asu-m, asu-n*  
 018. /ate/ : chest (anat.), heart, *ate-w, ate-m, ate-n*  
 019. *awow* : 2SG possessor (indirect), your  
 020. *axihin* : young (unmarried) woman, maiden  
 021. *axow* : 2PL object, the two of you  
 022. *axu* : 2PL subject, the two of you  
 023. *ayo* : 1SG possessor (indirect), my

/bw/

024. *bweha* : last-born child, youngest child

/c/

025. *cu* : 1SG subject/object; I, me

/dr/

026. *dradrah* : wind  
 027. *drah* : conch shell trumpet  
 028. *draken* : base of a tree  
 029. *drako* : house lizard, gecko  
 030. *drakuk* : glutton, someone who cannot eat enough  
 031. *dralay* : kind of small clam that attaches to stones  
 032. *dralies* : fireplow, stick traditionally twirled to start a fire  
 033. *draliki* : heavy rope used on boats  
 034. /draliŋe/ : ear, *draliŋe-w, draliŋe-m, draliŋe-n*  
 035. *dralis* : a shore tree with edible nut: *Terminalia catappa*  
 036. *dramen* : to ask (a question)  
 037. *dran* : down  
 038. *drañem* : termite  
 039. *drapun* : taboo  
 040. *drapunah* : child (general term)  
 041. *dras* : saltwater  
 042. *draw* : star  
     *draw ahayah* : Evening star, Venus  
     *draw pwaha-xak* : Morning star, Venus (lit. ‘star at the mouth/opening of the day’)  
 043. *drawan* : heavy  
 044. *drawey* : coconut grater  
 045. *drawox* : kind of large black diving sea bird  
 046. *draxay* : lionfish



047. /draxi/ : cross-sibling, sibling of opposite sex, *draxi-w*, *draxi-m*, *draxi-n*  
 048. /draxuko/ : waist, *draxuko*, *draxuko-m*, *draxuko-n*  
 049. *dre* : feces, waste, *dre ayo*, *dre awow*, *dre ai*  
     *dre kaxax* : cloud ('feces of the sky')  
     *dre mata-* : sleep in the corner of the eye  
     *dre mwan* : ashes, charcoal  
     *dre xuxuli* : ear wax, cerumen  
 050. *drekey* : small wooden bowl  
 051. *dreliw* : to lose (as possessions)  
 052. *drin* : mud, swamp  
 053. *dris* : coconut leaf basket  
 054. *dro*<sub>-1</sub> : punting pole (for propelling canoe in shallow water)  
 055. *dro*<sub>-2</sub> : wood?  
     *dro mwan* : firewood  
 056. *drohey* : to drive fish into a corral  
 057. *droken* : old (both inanimate and living things)  
 058. *dromwe* : to swallow  
 059. *drom* : large carrying basket made of tree bark  
 060. *dromwe* : to think, ponder  
 061. *dronani* : to drop  
 062. *drosun* : egg  
 063. *drow*<sub>-1</sub> : ironwood tree: *Intsia bijuga*  
 064. *drow*<sub>-2</sub> : wet nasal mucus, snot  
 065. *dru* : housepost  
 066. *druh* : pandanus with inedible fruit (leaves used to weave mats); sleeping mat woven of the leaves of this plant  
 067. *drukusux* : saliva  
 068. *drun* : outrigger canoe  
     *mwe-n-drun* : stern of a canoe  
     *ŋo-n-drun* : prow of a canoe  
 069. *drusi* : eel (general term)

/e/

070. *e*<sub>-1</sub> : and (cf. *xuŋek*)  
 071. *e*<sub>-2</sub> : third person non-singular pronominal prefix with conjoined nominal subjects and resumptive pronoun  
 072. *esok* : dry  
     *niw esok* : dry coconut

/g/

073. *guria* : earthquake (TP)

/h/

074. *hadruw* : true; correct  
 075. *hah* : four  
 076. *hak* : to feed (people or animals)  
 077. *halis* : to laugh  
 078. *hanay* : anchor (of stone)  
 079. *haŋak* : four hundred  
 080. *haŋon* : forty  
 081. *hawe* : toward, in the direction of  
 082. *hawun* : new  
 083. *he* : where (in questions)  
 084. *hek*<sub>1</sub> : to chop wood  
 085. *hek*<sub>2</sub> : sago grub (bores in trunk of sago palm, and is edible)  
 086. *hek*<sub>3</sub> : to seek lice, search for lice in the hair; to delouse  
 087. *heon* : winding, as a river or road  
 088. *hilaw* : who?  
       *le-hilaw* : who?  
 089. *hilolow* : whale  
 090. *himolis* : pupa (caterpillar in a cocoon)  
 091. *hisik*<sub>1</sub> : to dry (as wet clothes)  
 092. *hisik*<sub>2</sub> : to squeeze, as juice from a fruit (possibly identical to the preceding)  
 093. *huk*<sub>1</sub> : to sniff, smell  
 094. *huk*<sub>2</sub> : to wake someone up, rouse someone from sleep  
 095. *hulow* : to run  
 096. *hutun* : thick (as a plank)  
       *hutun pwe* : thin (as a plank)  
 097. *huyen* : good

/i/

098. *i*<sub>1</sub> : 3SG subject/object, he/she, him/her, himself/herself  
 099. *i*<sub>2</sub> : third person non-singular pronominal prefix  
 100. *-i*<sub>3</sub> : transitive suffix? (cf. sentences 43, 44, 52)  
 101. *ik* : (gloss uncertain; cf. *pak*)  
 102. *irow* : 3PL, they, them (object)  
 103. *iru* : 3PL, they, them (subject; also recorded once as *hitow*)  
 104. *ixow* : 3DL, the two of them (object)  
 105. *ixu* : 3DL, the two of them (subject)

/j/

106. *jam* : white-skinned person, Caucasian; foreigner  
 107. *jax* : shock-like pain, usually felt in the feet, and interpreted as an omen  
 108. *jay*<sub>1</sub> : fishing line  
 109. *jay*<sub>2</sub> : to swim  
 110. *jew* : banyan  
 111. *jin*<sub>1</sub> : angry

112. *jin*-2 : to dig (in planting)  
 113. *jix* : to scrape the meat from a coconut  
 114. *jux* : rain

/k/

115. *kadrahan* : hot (of water, food, the weather)  
 116. *kadrien* : ache, pain, painful  
 117. *kadru* : to carry on the shoulder  
 118. *kah* : to search; to find  
 119. *kahax* : ant (generic)  
 120. *kahio* : to carry on the shoulder  
 121. *kaho* : shellfish, mussel  
 122. *kahoh* : flying fish  
 123. *kak* : sago leaf thatch; roof  
 124. /kaka/-<sub>1</sub> : foot, leg, *kako*, *kaka-m*, *kaka-n*  
     *pata-kaka-* : thigh  
     *pule-kaka-* : knee, *pule-kako*, *pule-kaka-m*, *pule-kaka-n* ('forehead of the leg?')  
     *wota-kaka-* : calf of the leg, *wota-kaka-w*, *wota-kaka-m*, *wota-kaka-n*  
 125. *kaka*-<sub>2</sub> : (gloss uncertain, = center?; cf. *putue*)  
 126. *kakaro* : chicken (TP)  
 127. *kakaw* : spear with stone head  
 128. *kakaxey* : coconut flower spathe  
 129. *kakaxi* : to cough  
 130. *kalakalo* : taro with purple leaves  
 131. *kalapux* : housefly  
 132. *kali*-<sub>1</sub> : large sea fish, grouper  
 133. *kali*-<sub>2</sub> : mother's brother, *kali-w*, *kali-m*, *kali-n*  
 134. *kaluih* : dust  
 135. *kam* : kind of cordage made of tree bark and used in making nets  
 136. *kaman* : male; man  
     *kaman lo koman* : men's house  
 137. *kamaw* : left hand, left side  
 138. *kamek* : trap (for catching fish)  
 139. *kami* : head hair, *kami palo*, *kami pala-m*, *kami pala-n*  
 140. *kamie* : to taste, test, try  
 141. *kamis* : gale, storm, typhoon  
 142. *kamodrow* : axe, adze  
 143. *kamwie* : to spy on  
 144. *kan* : food  
 145. *kanas* : mullet  
 146. *kanaw* : seagull  
 147. *kanay* : sweet potato  
 148. *kaney* : mangrove crab  
 149. *kañow*-<sub>1</sub> : comb of a rooster  
 150. *kañow*-<sub>2</sub> : a flowering plant: *Hibiscus tiliaceus*

151. /kapete/ : side? (cf. *xui*)
152. /kapise/ : chin, jaw, *kapise-w*, *kapise-m*, *kapise-n*  
*kapise-n* : outer opening of the gills of a fish
153. *kapite* : outside  
*kapite wum* : wall of a house
154. *kapuan* : bitter
155. /kaputen/ : node in bamboo or sugarcane (probably = *kapute-n*)
156. *kasen* : golfball-sized coconut (growth stage)
157. *kason* : wooden headrest, pillow
158. *kasu* : (gloss uncertain; cf. *ɲas*)
159. *kasus* : coconut crab
160. *katah* : Frigate bird, large black sea bird with white breast and long curved beak (feathers worn in hair)
161. *kaw* : fishhook
162. *kawas* : friend, companion
163. /kaxa/ : name, *kaxo*, *kaxa-m*, *kaxa-n*
164. *kaxax* : (sky, heavens?; cf. *dre*, and *mata*)
165. *kaxek* : red parrot
166. *kaxitan* : itchy
167. *kaxopow* : heron
168. *kaxow* : gray hair
169. *kay* : to hit with an instrument (as a stick)
170. *kayan* : kind of pandanus with large red fruit that is boiled to eat
171. *kayaw* : ladle for dishing out food
172. *kepay* : shelf above hearth for storing firewood  
*pala-kepay* : shelf above hearth for storing firewood
173. *kew* : bent, as the end of a spear that has struck a stone
174. /kewi/ : tail of any animal, *kewi-n*  
*kewi-n* : behind (as in following someone)
175. *ki*<sub>1</sub> : (gloss uncertain; cf. sentences 77, 80, 89)
176. *ki*<sub>2</sub> : tree; wood
177. *kies* : outrigger boom, connecting sticks for outrigger float
178. *kili* : continue, remain (cf. *mañah* ~ *meñah*, *talun*)
179. /kilihi/ : skin, *kilihi-w*, *kilihi-m*, *kilihi-n*  
*kilihi-n mwi* : dog skin  
*kilihi-n puw* : pig skin
180. *kililuh* : hunchback, hunched over
181. *kilimay* : to heal, of a wound  
*kilimay-s* : (gloss incertain)
182. *kilitah* : full, of a container; satiated after eating
183. *kiliwuhi* : to recover from an illness; to mend, to repair (= *kiliwuh-i*?)
184. *kim* : eyebrow
185. *kin* : slitgong, signal drum
186. *ko*<sub>1</sub> : home, place one lives  
*me ko* : to come home  
*la ko* : to go home

187. *ko*-2 : sea cucumber, sea squirt  
 188. *kohe* : to take something somewhere  
 189. *koheh* : bamboo basket trap for fish  
 190. *koki* : cockatoo (TP)  
 191. *koko* : butterfly  
 192. *kokoros* : cockroach (TP)  
 193. *kolam* : croton  
 194. *kolaw* : clothing  
 195. *kole* : type of kidney-shaped nut  
 196. /koliŋa/ : back (anat.), *koliŋo*, *koliŋa-m*, *koliŋa-n*  
 197. *kolos* : clothes (TP)  
 198. /koñe/ : neck, *koñe-w*, *koñe-m*, *koñe-n*  
 199. *koñelalaw* : to dive, submerge  
 200. *kosax* : garden  
 201. *kosiw* : grasshopper, locust (generic)  
 202. *kox*-1 : earth, soil  
 203. *kow*-2 : fence (around a garden)  
 204. *kox*-3 : village  
 205. *koxa*-1 : cuscus, opossum  
 206. /koxa/-2 : root, *koxa-n*  
 207. *koxak* : long green grass growing up from the sea floor  
 208. *koxolalen* : thin, of people or animals, skinny  
 209. *ku*- (gloss uncertain; cf. *paley*)  
 210. *kuik* : octopus  
 211. *kuiw* : mole on the skin  
 212. *kuk* : louse (both head and clothes louse)  
 213. *kulaw* : coconut with soft meat (TP)  
 214. *kuli* : rudder, steering paddle of canoe  
 215. *kulu* : tidal wave, tsunami  
 216. *kum* : east monsoon  
 217. *kumu* : an edible plant: *Hibiscus manihot*  
 218. *kun* : breadfruit  
 219. *kupwen* : fish net (general term)  
 220. *kuru* : brain (TP)  
 221. *kutu* : (gloss uncertain; cf. sentence 72)  
 222. *kux* : clay cooking pot  
 223. *kuxux* : thunder  
 224. *kuy* : small coconut leaf basket or bag
- /l/
225. *la ~ le*: to go; marker of progressive aspect  
 226. /lale/ : vein, tendon, *lale-w*, *lale-m*, *lale-n*  
 227. *lalow* : kind of large, tough betel nut (rarely chewed)  
 228. *laman* : light, radiance, as of the sun  
 229. *lami* : body hair, feather, *lami lime-w*, *lami lime-m*, *lami lime-n*

- lami kapise-* : beard, *lami kapise-w*, *lami kapise-m*, *lami kapise-n*  
*lami mwe-n* : tail feathers (of a bird or a rooster)  
*lami naŋo* : pubic hair, *lami naŋo ayo*, *lami naŋo awow*, *lami naŋo ai*  
*lami-n* : feather
230. *lan*<sub>-1</sub> : east, east wind  
 231. *lan*<sub>-2</sub> : Trochus shell  
 232. *lapanam*<sub>-1</sub> : ancestral spirit, nature spirit  
 233. *lapanam*<sub>-2</sub> ~ *lapanap*: spider  
 NOTE: These terms were not collected at the same time, and as a result I failed to inquire in the field as to whether there is a culturally-conceived connection between them.
234. *las*<sub>-1</sub> : coral limestone  
 235. *las*<sub>-2</sub> : stone fish corral  
 NOTE: Possibly made of coral limestone.  
 236. *lasow* : bandicoot, marsupial rat  
 237. *lau* : leaf, *lau-n*  
*lau ki* : leaf of a tree  
*lau niw* : coconut frond
238. /*lawa*/ : kinsman, relative, *lawo*, *lawa-m*, *lawa-n*  
 239. *lawen* : long, of things, tall, of people, trees, etc.  
 240. *le* : (gloss uncertain; cf. *hilaw*)  
 241. *lehe* : tooth, *lehe-w*, *lehe-m*, *lehe-n*  
*lehe sus* : milk teeth (teeth of a baby that are later lost)
242. *lehilaw* : who?  
 243. *leitow* : to reside, live in a place  
 244. *leta* : ladder (TP)  
 245. *li* : ginger  
 246. *lih* : to choose, select  
 247. *lik* : dark  
 248. *lim* : fist  
 NOTE: Probably the same as the following, but unpossessed.
249. /*lime*/ : hand, *lime-w*, *lime-m*, *lime-n*  
 250. *limeh* : five  
 251. *limeŋak* : five hundred  
 252. *limeŋon* : fifty  
 253. *liŋis* : (gloss uncertain; cf. /*mata*/)  
 254. *lis* : nit, louse egg  
 255. *lo* : in, inside  
 /*lo nime*/ : palm of the hand, *lo nime-w*, *lo nime-m*, *lo nime-n*  
 /*lo kaka*/ : sole of the foot, *lo kaka-w*, *lo kaka-m*, *lo kaka-n*
256. *loak* : March fly (stinging)  
 257. *lok* : boil, abscess, *lok ayo*, *lok awow*, *lok ai*  
 258. *lokay* : freshwater shrimp  
 259. *lokoyah* : large black flying fox that eats bananas, fruit of the *Barringtonia*, etc.  
 260. *lolen* : jungle, bush, forest (probably *lo len* ‘in the forest’, with the ‘adhesive locative’)  
 261. *luh* : to bend down (of a person)  
 262. *lun* : deaf, mute

263. *lupuni* : to throw (= *lupun-i?*)  
     *lupuni yew* : to throw away, dispose of  
 264. *lupwi* : to throw, as a stone  
 265. *luw* : shallow light green water between reef and shore

/m/

266. *-m* : 2SG possessor, your  
 267. *madra* : first-born child, oldest child  
 268. *madrey* : mountain  
 269. *mah* : taro with large green leaves  
 270. *mahalum* : slow; lethargic  
 271. *mahiñe* : day before yesterday  
 272. *mahu* : day after tomorrow  
 273. *maisen* : ripe  
 274. *mak*<sub>1</sub> ~ *mek* : to die; dead  
 275. *mak*<sub>2</sub> : giant squid  
 276. *mak*<sub>3</sub> : reef  
 277. /malio/ : shadow; reflection  
     *malio-n* : spirit of a dead person  
 278. /malisawa/ : brother-in-law/sister-in-law, *malisawo*, *malisawa-m*, *malisawa-n*  
 279. *maluen* : far, distant  
 280. *mamak* : to awake, wake up (intr.)  
 281. *mamaxan* : ripe  
 282. *mametan* : raw; uncooked  
 283. *manuey* : sea eagle  
 284. *mañah* ~ *meñah* : to sit, be sitting  
     *kili-mañah* : to be sitting, remain sitting  
 285. *mañix* : red tree ant  
 286. *mapik* : morning while still dark, just before sunrise  
 287. *maraju* : rippling of water (as by the wind)  
 288. *mas* : sea anemone  
 289. *masih* : all, every  
 290. *masok* ~ *mesok* : hungry  
 291. /mata/ : eye; front, *mato-n*, *mata-m*, *mata-n*  
     *mara-kaxax* : sky  
     *mata-kaka-* : yaws, any sore on the foot, *mata kako*, *mata kaka-m*, *mata kaka-n*  
     *mara lijis* : jealous, envious  
     *mata-mwan* : hearth, cooking place  
     *mata-nime-* : wound (on the hand), *mata-nime-w*, *mata-nime-m*, *mata-nime-n*  
     *mata-n* : lid, cover; sharp  
     *mata-pukusu* : lip, *mata-pukusu*, *mata-pukusu-m*, *mata-pukusu-n*  
 292. *matex* : to sleep  
 293. *matun* : old coconut without seed (just before falling)  
 294. *matuw* : blunt, dull  
 295. *mauk* : small fishnet shaped like a quarter of a circle and used by hand

296. *maxaw* : blue, green  
 297. *maxion* : shelter  
 298. *me* : to come  
 299. *medran* : to descend, move downward  
     *ñak medran* : to descend, as a ladder  
 300. *meñah* : to sit down  
 301. *mimieh* : to dream  
 302. *mimin* : urine; to urinate, *mimin ayo*, *mimin awow*, *mimin ai*  
 303. *moan* ~ *muan* : bad  
 304. *mon* : small dugout canoe without outrigger  
 305. *monen* : smooth, level; straight  
 306. *mosas* : catfish  
 307. *motidras* : kind of black sea snake  
 308. *moto* : (gloss uncertain; cf. *mwak*<sub>2</sub>)  
 309. *mow* : to pour liquids  
 310. *moxay* : calm, still, of the surface of water  
 311. *moxusix* : sandfly  
 312. *moy* : kind of pandanus with green fruit that becomes yellow or red when ripe (two types)  
 313. *muli* : citrus fruit (TP)  
 314. *mumu* : earth oven (TP)  
 315. *munun* : hole in a canoe, wall, etc.; leaking, as a roof  
 316. *musim* : a shore tree: *Casuarina equisetifolia*  
 317. *musun* : green coconut with soft meat

/mw/

318. *mwak*<sub>1</sub> : point (< mata- ‘eye’)  
     *sa-mwak* : single-pronged, of a fishing spear (= ‘one eye/point’)  
     *xu-mwak* : double-pronged, of a fishing spear (= ‘two eyes/points’)  
 319. *mwak*<sub>2</sub> : snake  
     *moro-mwak* ~ *moto-mwak* : sea snake or eel  
 320. *mwan* : fire  
 321. *mwasoh* : garbage, rubbish  
 322. *mwax* : twins  
 323. *mway* : itching taro, *Alocasia* spp.  
 324. /mwe/ : back side, buttocks, *mwe-w*, *mwe-m*, *mwe-n*  
     *mwe-nime-* : elbow (‘back of arm’), *mwe-nime-w*, *mwe-nime-m*, *mwe-nime-n*  
     *mwe-kaka-* : heel (‘back of foot’), *mwe-kako*, *mwe-kaka-m*, *mwe-kaka-n*  
     *mwe-n* : the bottom or rear part of anything  
 325. *mwey* : sand crab  
 326. *mwi* : dog  
 327. *mwin* : to drink  
 328. *mwipow* : caterpillar

/n/



329. *-n* : 3SG possessor, his, her  
 330. *-na* : (gloss uncertain)  
     *na-me* : towards speaker  
     *na-nih* : away from speaker  
 331. *nambeŋe* : yesterday  
 332. *nan* : with (instrumental)  
 333. *nana* : pus, *nana-n*  
     /*nana kaka*/ : pus in the foot  
 334. *naŋo* : penis, *naŋo ayo*, *naŋo awow*, *naŋo ai*  
     *moan naŋo* : to copulate (lit. ‘bad penis’)  
 335. *nas* : sharp-pointed stick used to husk coconuts  
 336. /*narue*/ : sibling, *narue-w*, *narue-m*, *narue-n*  
     *narue-tinan* : older sibling  
 337. /*natu*/ : child (offspring), *natu*, *natu-m*, *natu-n*  
     *natu paapu* : grandchild  
 338. *natun* : core of a tree, heartwood  
 339. *nehineh* : honeybee  
 340. *new* : firefly  
 341. *ni* : fish  
 342. *nih* : away? (cf. *na*)  
 343. /*nime*/ : hand, *nime-w*, *nime-m*, *nime-n*  
 344. *niw* : coconut  
 345. /*no*/ : nose, snout *no*, *no-m*, *no-n*  
     *no-n puw* : snout of a pig  
 346. *noh* : fear, afraid  
 347. *nonon* : to cast hungry looks at someone who is eating  
 348. *nu* : (genitive marker; cf. sentences 79, 80, 90-92)  
 349. *nunuh* : needle for sewing clothes, stick for sewing sago leaves to make roof thatch

/ñ/

350. *ñah* : fish spear  
     *ñah sa-mwak* : single-pronged fish spear  
     *ñah xu-mwak* : double-pronged fish spear  
 351. *ñahom* : to do in return, take revenge  
 352. *ñak*<sub>1</sub> : to climb, as a ladder  
 353. *ñak*<sub>2</sub> : kind of hardwood, latex-yielding tree with apple-like fruit, probably *Palaquium* spp.  
 354. *ñakak* : dirty  
 355. *ñakitan* : black; dirty  
 356. *ñala* : shivering, as from cold  
 357. *ñalak* : stinging nettle, *Laportea* sp.  
 358. *ñalitan* : cold (of water, food, the weather)  
 359. *ñama* : fat, grease, *ñama-n*  
     *ñama puw* : pork fat  
     *ñama-n* : sweet; tasty  
 360. *ñamon* : mosquito

361. *ñamulen* : sour  
 362. *ñamus* : sweat, perspiration, *ñamus ayo*, *ñamus awow*, *ñamus ai*  
 363. *ñamwek* : tattoo  
 364. /*ñana*/ : parent-in-law, *ñano*, *ñana-m*, *ñana-n*  
 365. *ñaña* : seaweed  
 366. (*ña*)*ñaw* : widow(er)  
 367. *ñañoh* : swollen  
 368. *ñapus* : to pinch  
 369. *ñas*<sub>1</sub> : to shave  
 370. *ñas*<sub>2</sub> : to whet, sharpen (possibly identical to the preceding)  
 371. *ñaxiw* : to pull, as on a rope  
 372. *ñon* : to stray, get lost, lose one's way  
 373. *ñoño* : to push  
 374. *ñow* : tall tree with yellow wood, used in building canoes  
 375. *ño*<sub>1</sub> : insane, crazy  
 376. *ño*<sub>2</sub> : short, roundish tree with large leaves and small inedible fruit that turns yellowish when ripe: *Morinda citrifolia*  
 377. *ñu*<sub>1</sub> : squid  
 378. *ñu*<sub>2</sub> : to wash the body, bathe  
 379. *ñukulum* : to fold, as cloth

/ŋ/

380. *ŋah* : lime for betel chew, calcium carbonate  
 381. *ŋak/ŋek* : unit of one hundred  
       *sa-ŋak* : one hundred  
 382. *ŋan*<sub>1</sub> : barracuda  
 383. *ŋan*<sub>2</sub> : sun  
       *ŋan paliŋan* : noon ('sun at zenith')  
 384. *ŋas* : smoke  
       *kasu-ŋas* : smoke  
 385. *ŋaxey* : story  
 386. *ŋay* : hole (in the ground)  
 387. *ŋo* : (variant of *no* 'nose'?; cf. *drun*)  
 388. /*ŋohota*/ : breath, *ŋohoto*, *ŋohota-m*, *ŋohota-n*  
 389. *ŋon* : unit of ten  
       *sa-ŋon* : ten  
       *xu-ŋon* : twenty

/p/

390. *paapi* : shore, beach  
 391. *paapu* : grandfather  
 392. *pahaw*<sub>1</sub> : kind of edible mango-shaped brown nut  
 393. *pahaw*<sub>2</sub> : oar  
 394. *pahay* : small grayish centipede

395. *pak* (/patu/) : stone  
*patu-ik* : trivet, three stones to hold the cooking pot on the fire
396. *pakahik* : near
397. /paken/ : seed
398. *pakisah* : how?
399. /pala/-<sub>1</sub> : head, *palo*, *pala-m*, *pala-n*  
*mwe pala-* : back of the head, *mwe-palo*, *mwe-pala-m*, *mwe-pala-n*  
*pala-n nime-* : finger, *palan nime-w*, *palan nime-m*, *palan nime-n*  
/pala-putue/ : intestines, *pala-putue-w*, *pala-putue-m*, *pala-putue-n*
400. *pala*-<sub>2</sub> : outside
401. *pala*-<sub>3</sub> : wood, stick  
*pala jay* : fishing pole
402. /palaxalime/ : tongue, *palaxalime-w*, *palaxalime-m*, *palaxalime-n*
403. *paley* : sail  
*ku-paley* : mast for the sail on a canoe
404. *paliew* : skipjack tuna, bonito
405. *paliŋan* : up; above; zenith
406. *paliŋek* : flying fox (general term for two types which have separate names)
407. *palue* : the opposite side of something
408. *palui* : to turn (head or body)
409. *pam* : to hide (intr.)
410. *pan* : dove, pigeon
411. /pani/ wing, *pani-n*
412. *paŋay* : hawk
413. *papux* : to boil food
414. *parakalay* : jellyfish
415. *param* : fathom, armspan
416. *parapux* : kind of white and black-spotted sea snake or eel
417. *pari* : from (a place of residence)
418. *pas* : stone fish corral
419. *pata* : tree trunk (and 'tree' in certain combinations), *pata-n*  
*pata tiken* : areca palm
420. *patien* : light (weight)
421. *patiliw* : to hold in the hand
422. *patilow* : obsidian-pointed spear ('stone of Lou island')
423. *patuoh* : small clam, about fifteen centimeters in diameter, that lives in the sand
424. /pawe/ : cheek, *pawe-w*, *pawe-m*, *pawe-n*
425. *pawos* : a quarrel; to quarrel
426. *pax* : pandanus with edible fruit
427. *paxak* : kind of small black sea bird with white marking on head --- smaller than a seagull
428. *paxen* : cave
429. *paxilen* : white; clean
430. *paxouko* : canoe platform (opposite the outrigger side)
431. *pay* : stingray
432. *payaw* : sea swell, wave in the open sea
433. *pehe* : under, beneath

434. *pew* : shark (generic)  
 435. *pex* : hoarse, sore throat  
 436. *pihin* : female; woman  
 437. *pik* : night  
 438. *pises* : liver, *pises ayo*, *pises awow*, *pises ai*  
 439. *pisi*<sub>-1</sub> : bird  
 440. *pisi*<sub>-2</sub> : nail (of finger, toe), scales of fish  
     *pisi-n* : fish scale  
 441. *pisi*<sub>-3</sub> : shell, gourd  
     *pisi ηah* : lime gourd (for betel chew)  
     *pisi puy* : turtle shell  
     *pisi-n* : coconut shell  
 442. *pisik* : small; younger (of siblings)  
 443. *piti*<sub>-1</sub> : to make happen, cause, force  
 444. *piti*<sub>-2</sub> : to mend, repair  
 445. *pitike* : large wooden bowl  
 446. *pitin* : deep (of the sea)  
 447. *piton* : tough, chewy, of food; hard; difficult  
 448. *plaua* : flower (TP)  
 449. *po* : to make, to build  
 450. *poik* : kind of thick bamboo used to make combs  
 451. *poitan* : soft  
 452. *pokek* : illegitimate child, bastard  
 453. /pokokahi/ : armpit, *pokokahi-w*, *pokokahi-m*, *pokokahi-n*  
 454. *pokopahena* : thief; to steal  
 455. *pom* : kind of grass that grows on the sea floor  
 456. *ponok* : spear gun with a rubber string  
 457. *poηow* : kind of black sea bird about the size of a seagull  
 458. *popoηan* : dorsal fin of a fish  
 459. *pos* : canoe paddle  
 460. *posax* : low tide, ebb tide; to dry up, dry off, as wet clothes  
 461. /pose/ : shoulder, *pose-w*, *pose-m*, *pose-n*  
 462. *poson* : rat, mouse  
 463. *poton* : thorn  
 464. *poxodroy* : cinnamon tree: *Cinnamomum xanthoneuron*  
 465. *poxon* : handle of axe or adze  
 466. *poxuan* : rotten (meat, fish, vegetables)  
 467. *pue*<sub>-1</sub> : fruit, *pue-n*  
     *pue ki* : fruit of a tree  
 468. /pue/<sub>-2</sub> : testicles, *pue-w*, *pue-m*, *pue-n*  
 469. *puey* : crocodile  
 470. *puh* : muscle spasm, cramp  
 471. *puk*<sub>-1</sub> : bunch, cluster  
     *niw sa-puk* : one bunch of coconuts  
     *tiken xu-puk* : two bunches of betel nuts  
 472. *puk*<sub>-2</sub> : fishnet float (possibly = *puk*<sub>-3</sub> if made from *Barringtonia* wood)

473. *puk*-3 : a shore tree: *Barringtonia asiatica*  
 474. *puki* : giant clam, *Tridacna* spp.  
 475. *puko* : mushroom  
 476. *pukuhun* : rotten, crumbling, of wood  
 477. *pukusu* : (gloss uncertain; cf. *mata*)  
 478. *pule*-1 : elephant-ear taro  
 479. /*pule*/-2: eye, *pule-w*, *pule-m*, *pule-n*  
 480. /*pule*/-3 : forehead, *pule-w*, *pule-m*, *pule-n*  
 481. *pulemasi* : ashamed, embarrassed  
 NOTE: Probably *pule-masi* if *pule* ‘eye’ or ‘forehead’ also = ‘face’.  
 482. *pulis* : fallow land, land out of cultivation for awhile  
 483. /*pulu*/ : spouse, *pulu*, *pulu-m*, *pulu-n*  
 484. *pulupun* : tree which yields a sap sometimes used to catch birds; sap from this tree  
 485. *pulutah* : , cave bat, insectivorous bat  
 486. *puluten* : glue, any sticky substance; to stick, adhere to something  
 487. *pun*-1 : betel leaf, leaf used in betel quid  
     *pue pun* : betel pepper  
 488. *pun*-2 : moon, month  
 489. *puŋon* : fiber?  
     *puŋon (niw)* : coconut husk  
 490. *puon* : short (in length or height)  
 491. *pupux* : to blow on a fire, inflate a balloon, etc.  
 492. *pus* : to squeeze, as juice from a fruit  
 493. *pusen* : foam, bubbles in frothy water  
 494. *puso* : island  
 495. *puto* : grass, including sword grass: *Imperata cylindrica*  
 496. *puton* : bud of a flowering fruit  
     *puton niw* : seed inside coconut  
 497. *putow* : a shore tree: *Calophyllum inophyllum*  
 498. /*putue*/ : abdomen, belly, *putue-w*, *putue-m*, *putue-n*  
     /*kaka-putue*/ : navel  
     *putue-n kili tum* ‘She is pregnant’  
 499. *puw* : pig  
 500. *pux* : banana  
 501. /*puxuno*/ : a snore, *puxuno*, *puxuno-m*, *puxuno-n*  
 NOTE: It is unclear whether this base functions both as a noun and a verb, as it was recorded only once, and was given with the singular possessive pronouns.  
 502. *puy* : large sea turtle, the green turtle: *Chelonia mydas*

/pw/

503. *pwa* : (gloss uncertain; cf. sentence 80)  
 504. *pwaha*/ : mouth, *pwaho*, *pwaha-m*, *pwaha-n*  
     *pwaha-xak* : dawn, sunrise (‘mouth of the day’)  
 505. *pwahapuŋi* : rafter of a house  
 506. *pwak* ~ *pwek* : to capsize, turn over, of a boat

507. *pwakahak* : to say, tell, speak  
 508. *pwaw* : unit of one thousand  
       *sa-pwaw* : one thousand  
 509. *pway*<sub>-1</sub> : to say, tell, speak  
 510. *pway*<sub>-2</sub> : to wish, want  
 511. *pwe* : general negator, no, not  
 512. *pwejam* : beads  
 513. *pwekom* : hermit crab  
 514. *pwotay* : kind of edible green or purple egg-shaped nut

/r/

515. *renbo* : rainbow (TP)  
 516. *ro* : copula; be/stay? (cf. sentences 35-36)  
 517. *ru/ro(w)* : plural marker on pronouns

/s/

518. -s : (gloss uncertain; cf. sentence 97)  
 519. *sa*<sub>-1</sub> : don't (in commands)  
 520. *sa*<sub>-2</sub> : one (in combination forms; cf. *ŋak*, etc.)  
 521. *sah* : what (in questions)  
 522. *sakapuk* : tangled, as thread or hair  
 523. *sakay* : traditional carved wooden bowl  
 524. *saken* : to want, desire something  
 525. *sako* : multi-pronged fish spear (general term)  
 526. *salan* : passage through the reef  
 527. /sali/<sub>-1</sub> : body, *sali-w*, *sali-m*, *sali-n*  
 528. *sali*<sub>-2</sub> : fruit  
       *sali pax* : pandanus fruit  
 529. *sali*<sub>-3</sub> : to slap  
 530. *salin* : right hand, right side  
 531. *saluan* : much, many  
 532. *sam*<sub>-1</sub> : outrigger float  
 533. *sam*<sub>-2</sub> : to sing  
 534. *saman* : shimmering or glaring, as sunlight on water  
 535. *san*<sub>-1</sub> : doorway of a house  
 536. *san*<sub>-2</sub> : path, road  
 537. *sanoh* : stonefish  
 538. /saŋa/ : fork of a branch, *saŋa-n*  
 539 : *saŋak* : one hundred  
       *adro-saŋak* : nine hundred  
 540. *saje* : to wash things (as clothes, dishes)  
 541. *saŋon* : ten  
       *adro-saŋon* : ninety  
 542. *sapak* : kind of small brown frog

543. *sapoxox* : puffer fish  
 544. *sapuen* : wet  
 545. *sapwe* : small brown flying fox that eats bananas, etc.  
 546. *sapwen* : kind of white sea bird  
 547. *sasaxi* : surfing, riding the waves  
 548. *saw* : to bail out a canoe  
 549. *sawik* : to sew clothes  
 550. *saxox* : to jump  
 551. *say*<sub>-1</sub> : Malay apple: *Syzygium gomata*  
 552. *say*<sub>-2</sub> : mangrove  
 553. *sehe*<sub>-1</sub> : few, little (in amount)  
 554. *sehe*<sub>-2</sub> : how much/how many?  
 555. *sey* : to carry on a pole between two men  
 556. *sih* : one  
     *adro-sih* : nine  
 557. *sim* : to buy  
 558. *sin* : horizontal and transverse sticks on a sail  
 559. *sinen* : plant shoot, taro sucker  
 560. *sisiw* : oyster  
 561. *so* : to shoot (as with bow)  
 562. *soi* : quick, fast  
 563. *sokoya* : to hiccough  
 564. *solay*<sub>-1</sub> : kingfisher  
 565. *solay*<sub>-2</sub> : sailfish  
 566. *somwon* : to hail, call someone  
 567. *sope* : to catch something thrown  
 568. *sopun* : to bark, of a dog  
 569. *sow* : bed, sleeping place  
 570. *soxie* : to fry sago  
 571. *su*<sub>-1</sub> : comb  
 572. *su*<sub>-2</sub> : copula; be? (cf. sentences 31-34)  
 573. *suey* : to paddle a canoe  
 574. *suh*<sub>-1</sub> : to peel any fruit  
 575. *suh*<sub>-2</sub> : to pluck, pull out  
 576. *suh*<sub>-3</sub> : to weed a garden, pull up weeds  
 577. *sui*<sub>-1</sub> : to pierce the skin (as a nail when stepped on)  
 578. *sui*<sub>-2</sub> : to strike, hit  
     *sui-lim* : to punch  
 579. *suluk* : rattan  
 580. *sun*<sub>-1</sub> : dried coconut frond; coconut leaf torch  
 581. *sun*<sub>-2</sub> : to roast, burn  
 582. *sus*<sub>-1</sub> : female breast, *sus ayo*, *sus awow*, *sus ai mata sus* : nipple of the breast  
 583. *sus*<sub>-2</sub> : to sew sago leaves to make roof thatch  
 584. *susuey* : sea urchin  
 585. *susuh* : to suck

586. *susui* : to catch (as animals in a trap; = *susu-i*?)  
 587. *sux-1* : coughing sickness (whooping cough?)  
 588. *sux-2* : to stand up, rise from sitting  
 589. *suy* : soup

/t/

590. *ta-* : first person non-singular inclusive pronominal prefix  
 591. *tabak* : tobacco (TP)  
 592. *tah-1* : to bury, to plant  
 593. *tah-2* : to make, to build  
 594. *tahitah* ~ *tehitah* : above, on top of; to flap the wings; to fly  
 595. *tahus* : to smoke fish or meat for preservation  
 596. *taim* : time (TP)  
 597. *tak* : to weep, cry  
 598. *takum* : to pile up, as coconuts  
 599. *taloh* : three  
       *adri-taloh* : seven  
 600. *talun* ~ *telun* : to stand up, rise from sitting  
       *kili-talun* : to be standing, in a standing position  
 601. /tama/ : father, *tama*, *tama-m*, *tama-n*  
 602. *tamana* : to dance  
 603. *tayahak* : to beg for something  
 604. *tarakay* ~ *terekay* : to run  
 605. *taro* : 1PL.IN object, us  
 606. *taru* : 1PL.IN subject, we  
 607. *tawey* : to give  
 608. *tawoh* : ridgepole of house  
 609. *taxay* : to dry things in the sun  
 610. *taxo* : 1DLin. object, the two of us  
 611. *taxow* : to draw, write  
 612. *taxu* : 1DLin. subject, the two of us  
 613. *tay-1* : to beat, pound, as sago in preparing food  
 614. *tay-2* : to catch fish with a net  
 615. *tay-3* : to caulk a canoe  
 616. *tay-4* ~ *tey* : to hit, kill  
       NOTE: Possibly the same as *tay-1*.  
 617. *teheh* : to float, bob on the water; to drift away, as on a current  
 618. *tehi* : to stab  
 619. *tek* : to walk  
 620. *teku* : to fall from a height, as fruit from a tree; to stumble and fall  
 621. *telun* : to stand up  
 622. *-tewa* : there (near hearer or distant)  
 623. *ti* : to plait, weave (baskets, mats)  
 624. *tien* : to be born  
 625. *tiken* : betel nut



626. *tim* : to open  
 627. *tinan* : big; older (of siblings)  
 628. /*tine*/ : mother, *tine*, *tine-m*, *tine-n*  
 629. *tixiti* : to cut (= *tixit-i*?)  
 630. *tixix* : to cut, as wood, meat, or rope  
 631. *to* : at, on  
 632. *tolaw* : north wind  
 633. *tolopwak* : to split  
 634. *tonian* : to know (as how to do things)  
 635. *tu*<sub>1</sub> : to bring  
 636. *tu*<sub>2</sub> : (gloss uncertain; cf. sentence 71)  
 637. *-tua* : here  
 638. *tuh* : grass that has overgrown a mowed area  
 639. *tuih* : to chew betel nut  
 640. *tuluŋek* : three hundred  
       *adro-tuluŋek* : seven hundred  
 641. *tuluŋon* : thirty  
       *adro-tuluŋon* : seventy  
 642. *tum* : to swell; swollen  
 643. *tun* : to carry on the back  
 644. *tutuh* : to sink, to drown  
 645. *tutui* : to rub in liniment, etc. (= *tutu-i*?)  
 646. *tux* : to close

/u/

647. *u-* : first person non-singular exclusive pronominal prefix  
 648. /*umwe*/ : nest, *umwe-n*  
 649. *uro* : 1PLEX object, us  
 650. *uru* : 1PLEX subject, we  
 651. *uxo* : 1DLEX. object, the two of us  
 652. *uxu* : 1DLEX. subject, we two, the two of us

/w/

653. *-w* : 1SG possessor, my  
 654. *waatu* : to recognize, as a person  
 655. *wahak* : to yawn  
 656. *wahaje* : to hide (trans.)  
 657. *wahisik* : to sneeze  
 658. *wahiti* : to bend, as an iron rod (= *wahit-i*?)  
 659. *walum* : to see, to look  
 660. *wan* ~ *wen*: to eat (of eating food and chewing sugarcane, but not of chewing betel nut)  
 661. *wasay* : to lie; a lie  
 662. *wati* : monitor lizard  
 663. *watilihi* : to bite (= *watilih-i*?)

664. *waton* : to bite  
 665. *watux* : mist, fog  
 666. *waw* : kind of slender bamboo used for spears  
 667. *waxie* : to lie; a lie  
 668. *weteh* : tide, current in sea  
 669. *wey* : surf, breakers (on reef or shore)  
 670. *wik* : to fetch water  
 671. *wilaw* : spiderweb; net  
 672. /*wilie*/ : grandmother, *wilio*, *wilie-m*, *wilie-n*  
 673. *wilihiw* : bachelor, young unmarried man  
 674. *wisiki* : vine; rope  
 675. *wisix* : broom; to sweep  
 676. *wiwey* : mango  
 677. *wok* : work (TP)  
 678. *wolak* : medium-size yellowish fish that may have black spots  
 679. *won* : sand  
 680. *wonoh* : six  
 681. *wonoŋak* : six hundred  
 682. *wonoŋon* : sixty  
 683. *wosin* : lightning  
 684. *wota* : flesh, muscle, *woto*, *wota-m*, *wota-n*  
       *wota puw* : pork  
 685. *wo(w)* : 2SG subject/object; you  
 686. *woxi* : song  
       *i le sam woxi* ‘S/he is singing a song’  
 687. *woy* : water, liquid  
       *woy mata-* : tears  
       *woy sus* : breast milk  
 688. *wuh* : lobster  
 689. *wulu* : high tide; flood  
 690. *wum* : house  
 691. *wun* : maggot  
 692. *wus* : rain (rare word)  
 693. *wusum* : to husk coconuts  
 694. *wuxi* : dolphin
- /x/
695. *xahun* : afterbirth, placenta  
 696. *xain* : smell, odor  
       *xain muan* : stench  
 697. *xaisi* : to fart  
 698. *xak* : day, daylight; tomorrow  
 699. *xakew* : sea  
 700. *xalas* : coral limestone  
 701. *xaliki* : coconut oil

702. *xaloh* : bailer for a canoe  
 703. *xam* : lime spatula (for betel chew)  
 704. *xaman* : red  
 705. *xamat* : person, human being  
 706. *xamok* : to vomit  
       *xamut-ay* : vomit (n.), vomitus  
 707. *xan* : fresh water; river  
 708. *xanun* : coconut cream  
 709. *xañey* : bald  
 710. *xas* : to scratch (general term for scratching an itch, scratching someone, as a cat, etc.)  
 711. *xasaxisax* : starfish  
 712. *xawak* : to play  
 713. /xaxa/ : branch  
       *xaxa-n ki*: branch of a tree  
 714. *xay*<sub>-1</sub> : blood, *xay ayo*, *xay awow*, *xay ai*  
       *xay kun* : breadfruit sap ('blood of the breadfruit')  
 715. *xay*<sub>-2</sub> : (gloss uncertain; cf. sentences 27-30)  
 716. *xek*<sub>-1</sub> : to grow  
 717. *xek*<sub>-2</sub> : to hear  
 718. *xetim* : tongs used to pick up hot coals  
 719. *xix* : a major food fish, Spanish mackerel  
 720. *xok* : to bind, tie by wrapping around; to hug, embrace  
 721. *xox*<sub>-1</sub> : to count  
 722. *xox*<sub>-2</sub> : to pour solids; to spill or leak out, as sugar from a bag  
 723. *xoy* : traditional bead armlets and anklets  
 724. *xu/xo(w)* : dual marker on pronouns  
 725. /xui/ : bone, *xui-w*, *xui-m*, *xui-n*  
       *xui kapete-* : rib, *xui kapete-w*, *xui kapete-m*, *xui kapete-n*  
       *xui ni* : fish bone  
 726. *xuñek* : two hundred  
       *adro-xuñek* : eight hundred  
       *xuñek e tuluñon* : two hundred and thirty  
 727. *xuñon* : twenty  
       *adro-xuñon* : eighty  
 728. *xuoh* : two  
       *adro-xuoh* : eight  
 729. *xuxuli* : (gloss uncertain; cf. dre)
- /y/
730. *yahan* : blind  
 731. *yahay* ~ *cahay* ~ *jahay* : west; west monsoon  
 732. *yaw* : to follow someone; from (in describing movement)  
 733. *yawyaw* : dew  
 734. *yehey* : fork (cross-sticks) on the outrigger for the connecting poles  
 735. *yen* : copula; be?

736. *yew* : away

737. *yuyu* : to hail, call someone

### 2.4.1 English-Bipi Index

abdomen	:	/putue/
above	:	paliŋan, tahitah/tehitah
abscess	:	lok
to adhere	:	puluten
adze	:	kamodrow
afraid	:	noh
afterbirth	:	xahun
afternoon	:	(a)hayah
all	:	masih
anchor (stone)	:	hanay
and	:	e (?)
angry	:	jin
ant (generic)	:	kahax
ant (red tree)	:	mañix
armlet/anklet	:	xoy
armpit	:	/pokokahi/
ashamed	:	pulemasi
ashes	:	dre mwan
ask (a question)	:	dramen
away	:	nih?, yew
axe	:	kamodrow
bachelor	:	wilihiw
back (anat.)	:	/koliŋa/
bad	:	moan ~ muan
to bail out (canoe)	:	saw
bailer (for canoe)	:	xaloh
bald	:	xañey
bamboo	:	poik, waw
banana	:	pux
bandicoot	:	lasow
banyan	:	jew
to bark (dog)	:	sopun
base of tree	:	draken
basket	:	ahin, dris, drom, kuy
bastard	:	pokek
bat (cave)	:	pulutah
to bathe	:	ñu-
beach	:	paapi
beads	:	pwejam
beard	:	lami kapise-
to beat	:	tay

bed	:	sow
to beg	:	tañahak
behind, in back of	:	kewi-n
belly	:	/putue/
to bend (down)	:	luh
to bend (something)	:	wahiti
bent	:	kew
betel leaf	:	pun
betel nut	:	tiken
betel nut (tough)	:	lalow
betel pepper	:	pue pun
big	:	tinan
to bind	:	xok
bird	:	pisi
bird sp.	:	drawox, kanaw, katah, kaxek, kaxopow, pan, pañay, paxak, poñow, sapwen, solay
to bite	:	watilihi, waton
bitter	:	kapuan
black	:	ñakitan
blind	:	yahan
blood	:	xay
to blow	:	pupux
blue	:	maxaw
blunt	:	matuw
body	:	/sali/
boil (on skin)	:	lok
to boil (food)	:	papux
bone	:	xui-
boom (of sail)	:	sin
to be born	:	tien
bottom	:	mwe-n
bowl	:	drekey, pitike, sakay
brain	:	kuru (TP)
branch	:	xaxa
breadfruit	:	kun
breadfruit sap	:	xay kun
breakers	:	wey
breast	:	sus
breath	:	/ñohota/
to bring	:	tu
broom	:	wisix
bubbles	:	pusen
bud	:	puton
to build	:	po, tah
bunch	:	puk

to burn	:	sun
to bury	:	tah
butterfly	:	koko
buttocks	:	mwe-
to buy	:	sim
calf of leg	:	wota kaka-
calm (water)	:	moxay
canoe (outrigger)	:	drun
canoe (dugout)	:	mon
to capsize	:	pwak/pwek
to carry (on back)	:	tun
to carry (on shoulder)	:	kadru, kahio
to carry (with pole)	:	sey
to carve	:	tixix
to catch (fish)	:	tay
to catch (in air)	:	sope
caterpillar	:	mwipow
to caulk	:	tay
to cause	:	piti
cave	:	paxen
centipede	:	pahay
cerumen	:	dre xuxuli
charcoal	:	dre mwan
cheek	:	/pawe/
chest (anat.)	:	/ate/
to chew (betel)	:	tuih
to chew (sugarcane)	:	wan
chewy (of food)	:	piton
chicken	:	kakaro (TP)
child (first-born)	:	madra
child (offspring)	:	/natu/
chin	:	/kapise/
to choose	:	lih
to chop wood	:	hek
citrus fruit	:	muli (TP)
clam sp.	:	dralay, patuoh, puki
clean	:	paxilen
to climb (as ladder)	:	ñak
to close	:	tux
clothes	:	kolaw, kolos (TP)
cloud	:	dre kaxax
cluster	:	puk
cockatoo	:	koki (TP)
cockroach	:	kokoros (TP)
coconut	:	niw
coconut (dry)	:	niw esok

coconut (green)	:	musun
coconut (old)	:	matun
coconut (small)	:	kasen
coconut (soft meat)	:	kulaw (TP)
coconut cream	:	xanun
coconut flower spathe	:	kakaxey
coconut frond	:	lau niw
coconut frond (dry)	:	sun
coconut grater	:	drawey
coconut oil	:	xaliki
coconut shell	:	pisi-n
cold	:	ñalitan
comb	:	su
comb (of rooster)	:	kañow
to come	:	me
companion	:	kawas
conch shell	:	drah
continue	:	kili
to copulate	:	moan naŋo
coral limestone	:	las, xalas
cordage (of bark)	:	kam
correct	:	hadruw
to cough	:	kakaxi
coughing sickness	:	sux
to count	:	xox
cover (n.)	:	mata-n
crab sp.	:	kaney, kasus, mwey, pwekom
cramp	:	puh
crazy	:	ñoy
crocodile	:	puey
croton	:	kolam
crumbling	:	pukuhun
to cry	:	tak
current	:	weteh
cuscus	:	koxa
to cut	:	tixix
to dance	:	tamana
dark	:	lik
dawn	:	pwaha-xak
day(light)	:	xak
dead	:	mak
deaf	:	lun
deep	:	pitin
to delouse	:	hek
to descend	:	medran
to desire	:	saken

dew	:	yawyaw
to die	:	mak/mek
difficult	:	piton
to dig (in planting)	:	jin
dirty	:	ñakak, ñakitan
distant	:	maluen
to dive	:	koñelalaw
dog	:	mwi
dolphin	:	wuxi
don't	:	sa
doorway	:	san
dove	:	pan
down (direction)	:	dran
to draw	:	taxow
to dream	:	mimieh
to drift away	:	teheh
to drink	:	mwin
to drop	:	dronjani
to drown	:	tutuh
dry	:	esok
to dry	:	hisik, taxay
dull	:	matuw
dust	:	kaluih
ear	:	/draliŋe/
earth	:	kox
earth oven	:	mumu (TP)
earthquake	:	guria (TP)
east wind	:	lan
east (monsoon)	:	kum
to eat	:	wan/wen
eel	:	drusi
egg	:	drosun
eight	:	adro-xuoh
eighty	:	adro-xuŋon
elbow	:	mwe-nime-
embarrassed	:	pulemasi
envious	:	mata liŋis
evening	:	(a)hayah
Evening star	:	draw ahayah
every	:	masih
eye	:	/mata/
eyebrow	:	kim
to fall	:	teku
fallow land	:	pulis
far	:	maluen
to fart	:	xaisi



fast	:	soi
fat (n.)	:	ñama
father	:	/tama/
fathom	:	param
fear	:	noh
feather	:	lami
feces	:	dre
to feed	:	hak
female	:	pihin
fence (garden)	:	kow
to fetch (water)	:	wik
few	:	sehe
fifty	:	lime-ŋon
fin (dorsal)	:	popoŋan
to find	:	kah
finger	:	pala-n nime-
fire	:	mwan
firefly	:	new
fireplow	:	dralies
fish	:	ni
fish corral	:	las, pas
fish drive	:	drohey
fishhook	:	kaw
fishing line	:	jay
fishing pole	:	pala jay
fishnet	:	kupwen, mauk
fishnet float	:	puk
fish sp.	:	draxay, kahoh, kali, kanas, mosas, ŋan, paliew, pay, pew, sanoh, sapoxox, solay, wolak, xix
fish trap	:	koheh
fist	:	lim
five	:	limeh
flesh	:	wota
to float	:	teheh
flood	:	wulu
flower	:	plaua (TP)
fly (housefly)	:	kalapux
to fly	:	tahitah ~ tehitah
flying fox	:	lokoyah, paliŋek, sapwe
foam	:	pusen
fog	:	watux
to fold	:	ñukulum
to follow	:	yaw
food	:	kan
foot	:	kaka

to force	:	piti
forehead	:	/pule/
foreigner	:	jam
forest	:	lolen
fork (of branch)	:	/saŋa/
fork (on outrigger)	:	yehey
forty	:	ha-ŋon
four	:	hah
frog	:	sapak
fruit	:	pue, sali
to fry	:	soxie
full (cup, stomach)	:	kilitah
friend	:	kawas
gall (bladder)	:	/asu/
garbage	:	mwasoh
garden	:	kosax
gecko	:	drako
gills (inner)	:	/ase/
gills (outer)	:	kapise-n
ginger	:	li
to give	:	tawey
glaring (light)	:	saman
glue	:	puluten
glutton	:	drakuk
to go	:	la/le
good	:	huyen
gourd	:	pisi
grandchild	:	natu paapu
grandfather	:	paapu
grandmother	:	wilie
grass	:	puto, tuh
grasshopper	:	kosiw
gray hair	:	kaxow
grease	:	ñama
green	:	maxaw
to grow	:	xek
to hail (a person)	:	somwon, yuyu
hair (body)	:	lami
hair (head)	:	kami-
hair (male pubic)	:	lami naŋo-
hand	:	/lime/, /nime/
handle	:	poxon
he/she	:	i
head	:	/pala/
headrest (wooden)	:	kason
to heal	:	kilimay

to heap up	:	takum
to hear	:	xek
heart	:	/ate/
hearth	:	mata-mwan
heartwood of tree	:	natun
heavy	:	drawan
heel	:	mwe-kaka-
to hiccough	:	sokoya
to hide (intr.)	:	pam
to hide (trans.)	:	wahape
to hit	:	kay, sui, tay/tey
hoarse	:	pex
to hold	:	patiliw
hole (in object)	:	munun
hole (in ground)	:	ɲay
home	:	ko
honeybee	:	nehineh
hot	:	kadrahan
house	:	wum
housepost	:	dru
to hug	:	xok
human being	:	xamat
hunched over	:	kililuh
one hundred	:	sa-ɲak
hungry	:	masok/mesok
hungry looks	:	nonon
husk (of coconut)	:	puŋon (niw)
to husk (coconut)	:	wusum
husking stick	:	nas
I	:	cu
in(side)	:	lo
insane	:	ñoy
intestines	:	/pala-putue/
island	:	puso
itchy	:	kaxitan
jaw	:	/kapse/
jealous	:	mata liŋis
jellyfish	:	parakalay
to jump	:	saxox
to kill	:	tay/tey
kinsman	:	/lawa/
knee	:	pule-kaka-
to know (how to do)	:	tonian
ladder	:	leta (TP)
ladle	:	kayaw
to laugh	:	halis

leaf	:	lau
to leak (as roof)	:	munun
to leak out (of bag)	:	xox
left (hand, side)	:	kamaw
leg	:	kaka
lethargic	:	mahalum
level	:	monen
lid	:	mata-n
lie (falsehood)	:	wasay, waxie
light (from sun)	:	laman
light (in weight)	:	patien
lightning	:	wosin
lime (for betel)	:	ŋah
lime spatula	:	xam
lip	:	mata-pukusu
liquid	:	woy
little (amount)	:	sehe
to live (in a place)	:	leitow
liver	:	pises
lobster	:	wuh
to look	:	walum
to lose	:	dreliw
to lose one's way	:	ñon
locust	:	kosiw
long (things)	:	lawen
louse	:	kuk
maggot	:	wun
maiden	:	axihin
to make	:	piti, po, tah
Malay apple	:	say
male	:	kaman
man	:	kaman
mango	:	wiwey
mangrove	:	say
mangrove crab	:	kaney
many	:	saluan
March fly	:	loak
mast	:	ku-paley
me	:	cu
to mend	:	kiliwuhi, piti
men's house	:	kaman lo koman
milk (breast)	:	woy sus
milk teeth	:	lehe sus
mist	:	watux
mole (on skin)	:	kuiw
monitor lizard	:	wati

moon, month	:	pun
morning (early)	:	mapik
Morning star	:	draw pwaha-xak
mosquito	:	ñamon
mother	:	/tine/
mother's brother	:	/kali/
mountain	:	madrey
mouse	:	poson
mouth	:	/pwaha/
much	:	saluan
mud	:	drin
muscle	:	wota
mushroom	:	puko
mussel	:	kaho
mute	:	lun
nail (finger, toe)	:	pisi-
name	:	/kaxa/
navel	:	/kaka-putue/
near	:	pakahik
neck	:	/koñe/
needle	:	nunuh
nest	:	/umwe/
net	:	wilaw
nettle ( <i>Laportea</i> sp.)	:	ñalak
new	:	hawun
night	:	pik
nine	:	adro-sih
ninety	:	adro-sañon
nipple (of breast)	:	mata sus
nit (louse egg)	:	lis
no, not	:	pwe
node (bamboo, etc.)	:	/kaputen/
noon	:	ñan paliñan
nose	:	/no/
nut (edible)	:	añey, kole, pahaw, pwotay
oar	:	pahaw
occiput	:	mwe pala-
octopus	:	kuik
odor	:	xain
old	:	droken
older (siblings)	:	tinan
one	:	sa-, sim
to open	:	tim
opossum	:	koxa
opposite side	:	palue
outrigger boom	:	kies

outrigger float	:	sam
outside	:	kapite, pala
oyster	:	sisiw
paddle (for canoe)	:	pos
to paddle (canoe)	:	suey
painful	:	kadrien
palm (of hand)	:	/lo nime/
pandanus	:	moy, pax
parent-in-law	:	/ñana/
passage (in reef)	:	salan
path	:	san
to peel	:	suh
penis	:	naŋo
to persist	:	kili
person	:	xamat
to pierce (as skin)	:	sui
pig	:	puw
pigeon	:	pan
pillow	:	kason
to pinch	:	ñapus
placenta	:	xahun
to plait	:	ti
plant sp.	:	kañow, kumu
platform (canoe)	:	paxouko
to play	:	xawak
to pluck	:	suh
point/prong	:	mwak
pork	:	wota puw
pot (clay cooking)	:	kux
to pound	:	tay/tey
to pour (liquids)	:	mow
to pour (solids)	:	xox
pregnant	:	putue- kili tum
progressive aspect	:	la/le
prow of canoe	:	ŋo-n-drun
to pull	:	ñaxiw
to punch	:	sui-lim
punting pole	:	dro
pupa	:	himolis
pus	:	nana
to push	:	ñoño
putty nut	:	alík
quarrel	:	pawos
quick	:	soi
rafter	:	pwahapuŋi
rain	:	jux, wus

rainbow	:	renbo (TP)
rat	:	poson
rattan	:	suluk
raw	:	mametan
to recognize	:	waatu
recover, get well	:	kiliwuhi
red	:	xaman
reef	:	mak
reflection	:	/malio/
remain	:	kili
to repair	:	kiliwuhi, piti
to reside	:	leitow
to take revenge	:	ñahom
rib	:	xui kapete-
ridgepole	:	tawoh
right (side)	:	salin
ripe	:	maisen, mamaxan
rippling (water)	:	maraju
river	:	xan
road	:	san
to roast	:	sun
roof	:	kak
root	:	/koxa/
rope	:	wisiki
rope (heavy)	:	draliki
rotten (flesh, plants)	:	poxuan
rotten (wood)	:	pukuhun
to rub in	:	tutui
rubbish	:	mwasoh
rudder	:	kuli
to run	:	hulow, tarakay/terekay
sago grub	:	hek
sail	:	paley
saliva	:	drukusux
saltwater	:	dras
sand	:	won
sandfly	:	moxusix
to say	:	pwakahak, pway
scale (of fish)	:	pisi-n
to scrape coconut	:	jix
to scratch	:	xas
sea	:	xakew
sea anemone	:	mas
sea cucumber	:	ko
sea eagle	:	manuey
sea grass	:	koxak, pom

to search for s.t.	:	kah
sea urchin	:	susuey
seaweed	:	ñaña
to see	:	walum
seed	:	/paken/
seed (in coconut)	:	puton niw
to select	:	lih
seven	:	adri-taloh
seventy	:	adro-tuluḡon
to sew	:	sawik, sus
shadow	:	/malio/
sharp	:	mata-n
to sharpen	:	ñas
to shave	:	ñas
shelf (over hearth)	:	(pala)-kepay
shell	:	piŋi
shelter	:	maxion
shimmering	:	saman
shivering	:	ñala
shock in feet	:	jax
shoot (of plant)	:	sinen
to shoot	:	so
shore	:	paapi
short	:	puon
shoulder	:	/pose/
shrimp	:	lokay
sibling	:	/narue/
sibling (cross)	:	/draxi/
sibling-in-law	:	/malisawa/
side (of body)	:	kapete-?
to sing	:	sam
to sink	:	tutih
to sit, be sitting	:	mañah/meñah
six	:	wonoh
sixty	:	wono-ḡon
skin	:	/kilihi/
skinny	:	koxolalen
sky	:	mara-kaxax
to slap	:	sali
sleep (in eye)	:	dre mata
to sleep	:	matex
slitgong	:	kin
slow	:	mahalum
small	:	pisik
smell (n.)	:	xain
to smell	:	huk



smoke	:	(kasu)-ŋas
to smoke (fish, meat)	:	tahus
smooth	:	monen
snake	:	mwak
snake (sea)	:	motidras, moro-mwak, parapux
to sneeze	:	wahisik
to sniff	:	huk
snore	:	/puxuno/
snot	:	drow
snout	:	no-n puw
soft	:	poitan
soil	:	kox
sole (of foot)	:	/lo kaka/
song	:	woxi
soup	:	suy
sour	:	ñamulen
spasm	:	puh
to speak	:	pwakahak, pway
spear (fishing)	:	ñah, sako
spear (stone head)	:	kakaw, patilow
speargun	:	ponok
spider	:	lapanjam ~ lapanjap
spiderweb	:	wilaw
to spill	:	xox
spirit (ancestral)	:	lapanjam
spirit (recent dead)	:	malio-n
to split	:	tolopwak
spouse	:	/pulu/
to spy on	:	kamwie
to squeeze	:	hisik, pus
squid	:	mak, ñu
to stab	:	tehi
to stand	:	sux, talun/telun
star	:	draw
starfish	:	xasaxisax
to steal	:	pokopahena
steering paddle	:	kuli
stench	:	xain muan
stern of canoe	:	mwe-n-drun
stick	:	pala
to stick to	:	puluten
stone	:	pak
storm	:	kamis
story	:	ŋaxey
straight	:	monen
to stray	:	ñon

to submerge	:	koñelalaw
to suck	:	susuh
sucker (of plant)	:	sinen
sugarcane	:	adray
sun	:	ŋan
sunrise	:	pwaha-xak
surf	:	wey
to surf, ride waves	:	sasaxi
to swallow	:	dromkomwe
swamp	:	drin
sweat	:	ñamus
to sweep	:	wisix
sweet	:	ñama-n
sweet potato	:	kanay
to swim	:	jay
swollen	:	ñaño, tum
taboo	:	drapun
tail	:	/kewi/
to take	:	kohe
tall	:	lawen
take away?	:	adri/adro-
tangled	:	sakapuk
taro (elephant ear)	:	pule
taro (green leaves)	:	mah
taro (itching)	:	mway
taro (purple leaves)	:	kalakalo
to taste s.t.	:	kamie
tasty	:	ñama-n
tattoo	:	ñamwek
tears	:	woy mata-
to tell	:	pwakahak, pway
ten	:	sa-ŋon
tendon	:	/lale/
termite	:	drañem
testicles	:	/pue/
thatch	:	kak
they/them	:	iru/ixu
thick (as a plank)	:	hutun
thief	:	pokopahena
thigh	:	pata-kaka-
thin (animates)	:	koxolalen
to think	:	dromwe
thirty	:	tulu-ŋon
thorn	:	poton
one thousand	:	sa-pwaw
three	:	taloh

to throw (as stone)	:	lupuni, lupwi
to throw away	:	lupuni yew
thunder	:	kuxux
tidal wave	:	kulu
tide	:	weteh
tide (high)	:	wulu
tide (low, ebb)	:	posax
to tie	:	xok
tobacco	:	tabak (TP)
tomorrow	:	xak
tongs	:	xetim
tongue	:	/palaxalime/
tooth	:	/lehe/
torch	:	sun
tough	:	piton
toward	:	hawe, na-nih
trap (for fish)	:	kamek
tree	:	ki
tree sp.	:	api, dralis, drow, druh, kayan, musim, ñow, ñoy, ñak, pata tiken, pax, poxodroy, puk, putow, pulupun,
trivet	:	patu-ik
Trochus shell	:	lan
true	:	hadruw
trunk (of tree)	:	pata
to try	:	kamie
tsunami	:	kulu
to turn	:	palui
turtle	:	puy
twenty	:	xu-ŋon
twins	:	mwax
two	:	xuoh
two days past	:	mahiñe
typhoon	:	kamis
uncooked	:	mametan
up	:	paliŋan
urine/urinate	:	mimin
vein	:	/lale/
village	:	kox
vine	:	wisiki
to vomit	:	xamok
vomitus	:	xamut-ay
waist	:	/draxuko/
to wake up (trans.)	:	huk
to wake up (intr.)	:	mamak
to walk	:	tek

wall (of house)	:	kapite wum
to want	:	saken
to wash	:	saje
water	:	woy
water (fresh)	:	xan
water (shallow sea)	:	luw
wave (at sea)	:	payaw
we (DL and PL.EX)	:	u-
we (DL and PL.IN)	:	ta-
we (DL ex.)	:	uxu/uxo
we (DL in.)	:	taxu/taxo
we (PL.EX)	:	uru/uro
we (PL.IN)	:	taru/taro
to weave	:	ti
to weed	:	suh
to weep	:	tak
west (monsoon)	:	cahay ~ jahay ~ yahay
wet	:	sapuen
whale	:	hilolow
what?	:	sah
where (in questions)	:	he
to whet	:	ñas
white	:	paxilen
white person	:	jam
why (in questions)	:	asa
widow(er)	:	(ña)ñaw
wind	:	dradrah
wind (north)	:	tolaw
winding (as river)	:	heon
wing	:	/pani/
with (instrumental)	:	nan
woman	:	pihin
wood	:	dro?, ki, pala
work	:	wok (TP)
wound	:	mata-
to write	:	taxow
to yawn	:	wahak
yaws	:	mata-kaka-
yellow	:	añuan
yesterday	:	nambene
you (SG)	:	wow
younger (sibling)	:	pisik
youngest child	:	bweha

**2.5. HISTORICAL PHONOLOGY.** Like all languages of the Admiralty Islands apart from Wuvulu-Aua and one now extinct language of the Kaniet group (Blust 1996a:41-45), Bipi has

regularly reduced POC CVCVC word shapes to CVC by loss of the last -VC unless the word coda was protected by a suffix. This process has resulted in a high incidence of monosyllabism, especially for nouns and intransitive verbs, as shown in Table 2.8:

**Table 2.8:** Canonical reduction of Proto-Oceanic word forms in Bipi

POC	Bipi	
*kawil	kaw	fishhook
*kuluR	kun	breadfruit
*kuron	kux	clay cooking pot
*lako	la	to go
*lisaq	lis	nit, louse egg
*maRi	me	to come
*pulan	pun	moon, month
*taŋis	tak	to weep, cry
*paRi	pay	stingray
*qone	won	sand

In a few cases that remain unexplained a word-final vowel in a Proto-Admiralty form was not lost in Bipi, as with PADM \*wati ‘monitor lizard’ (cf. Wuvulu, Aua *waʔi*, Seimat *wat*, expected Bipi form \*\*wak, but attested *wati*). Since this is true of a number of the languages of Manus it is possible that the PADM word was \*watiV. However, if this is true the loss of an earlier final vowel in Wuvulu-Aua is irregular.

In addition to a general ‘erosion from the right’ Bipi has altered the phonetic properties that are generally assumed for most POC consonants, and reflects many of these differently in nouns and non-nouns. A summary of major developments appears in Table 2.9:

**Table 2.9:** Bipi reflexes of POC consonants

POC	Bipi
*pw	pw
*bw	ʔ
*mw	mw
*w	w
*p	p- (in nouns), h (elsewhere)
*b	p
*m	m
*t	dr- (in nouns), -k (/__#), t ~ r (/V_V), t (elsewhere)
*d	x
*s	s
*n	n
*r	x
*dr	x

*l	l-, -n
*c	x
*j	s
*ñ	ñ
*y	y ~ j
*k	k- (in nouns), Ø (elsewhere)
*g	Ø
*ŋ	ŋ-, -k
*q	Ø
*R	Ø, y

POC \*pw and \*bw are rare, and only a single reflex of the former was recorded, namely \*pw > *pw* in \*kupwena > *kupwen* ‘fish net’.

No reflexes of \*bw are known in Bipi. The single Bipi word with *bw*, *bweha* ‘last-born child’ has no known etymology, and is in an apparent loanword, so the regular development of POC \*bw remains unclear.

POC \*mw remained unchanged in \*mwata > *mwak* ‘snake’, but became a simple bilabial nasal in \*mwapo > *mah* ‘taro’. However, although certain languages of the Admiralties have words for ‘taro’ that clearly derive from \*mwapo, the words in other languages are ambiguous for either of two POC forms, \*mapu and \*mwapo, both referring to varieties of taro, and it is possible that Bipi *mah* reflects the former form.

POC \*w remained unchanged both initially and intervocalically: \*wai ‘mango sp.’ > *wi-wey* ‘mango’, \*waiR > *woy* ‘liquid, water’, \*bakewak > *pew* ‘shark’, \*kawil > *kaw* ‘fishhook’, and \*sawit-i > *sawik* ‘to sew’. Somewhat more problematic is POC \*mawiRi > *ka-maw* ‘left side’. This development is further strengthened by PADM \*watiV > Bipi *wati* ‘monitor lizard’.

As word onset POC \*p became Bipi *p-* in nouns:

\*p- > *p-*: \*padran > *pax* ‘pandanus variety’, \*pa-layaR > *paley* ‘to sail; a sail’, \*papine > *pihin* ‘woman’, \*paRi > *pay* ‘stingray’, \*patu > *pak* ‘stone’, \*pitaquR > *putow* ‘a tree: *Calophyllum inophyllum*’, \*ponu > *puy* ‘the green turtle’, \*pose > *pos* ‘canoe paddle’, \*pudi > *pux* ‘banana’, \*pulan > *pun* ‘moon’, \*pujun > *-puk* ‘bunch, cluster’, \*puqaya > *puey* ‘crocodile’, \*puta > *puk* ‘fishnet float’, \*putun > *puk* ‘a tree: *Barringtonia asiatica*’.

In all other environments \*p became *h-*, both as word onset in words other than nouns, and in non-initial position in any word class:

\*p > *h* as word onset: \*paka-Rapiqi (> \*payapi) > *hayah* ‘afternoon’, \*panjan > *hak* ‘to feed’.

\*p > *h* in non-initial position: \*apaRat > *yahay* ‘west, west wind’, \*katapa > *katah* ‘frigate bird’, \*mwapo > *mah* ‘taro variety’, \*papine > *pihin* ‘woman’, \*supi > *suh* ‘to peel’, \*tapuRi > *drah* ‘conch shell trumpet’. To this we can add the final *-h* in the numerals *xuoh* ‘two’, *taloh* ‘three’, *hah* ‘four’, *limeh* ‘five’, and *wonoh* ‘six’, all of which reflect \*pu, ultimately from \*puaq ‘fruit’.

general numeral classifier'. The apparent retention of a POC word-final \*p as *-h* in \*susup > *susuh* 'to suck', on the other hand, is unexplained, unless it reflects a transitive verb \*susup-i.

As observed by Ross (1988:335) the reason reflexes of some word-initial consonants differ in nouns and non-nouns is that the former were preceded by the common noun article \*na, which lost its unstressed vowel, prenasalizing a following stop and causing it to voice, since voicing and prenasalization are inseparable features of stops in many Oceanic languages. The Proto-Eastern Admiralty continuations of POC \*padran 'pandanus', etc. thus began with \*b- ([mb]), but underwent trilling to \*br ([mbr]) before \*u, giving rise to Bipi *p-* in both cases.

As might be inferred from the preceding discussion, POC \*b became *p-*: \*baluc > *pan* 'dove, pigeon', \*banic > *pani-* 'wing', \*na boŋi > *pik* 'night', \*na boRok > *puw* 'pig'. Since all known examples are in nouns, this change would have been conditioned by fusion with the preceding common noun article \*na in any case. However, because POC \*b also became Bipi *p* in medial position, Bipi *p* would appear to be the regular unconditioned reflex of POC \*b: \*Rabia > *api* 'sago palm', \*tabuna 'dehortative: don't!' > *drapun* 'taboo, forbidden'.

POC \*m generally did not change initially or intervocalically: \*madrar > *ma-maxa-n* 'ripe', \*mamata 'be awake' > *mamak* 'to wake up', \*maqati 'low tide' > *mak* 'dry reef', \*maRi > *me* 'to come', \*mata > *mata-* 'eye', \*mate > *mak* 'to die; dead', \*matiruR > *matex* 'to sleep', \*mimi > *mimi-* 'urine', \*mona > *mon* 'canoe type'; \*d(r)amut > *xam* 'lime spatula', \*kamaliR 'men's house' > *kaman* 'male', \*lima-pu > *limeh* 'five', \*boma > *pom* 'kind of seaweed used to paint canoes', \*Rumaq > *wum* 'house', \*saman > *sam* 'outrigger float', \*tama > *tama-* 'father'.

In two words \*m is reflected as a labiovelar nasal, a sporadic change that is widely attested in Oceanic languages (Blust 1981): \*mata 'eye, center, focal part' > *-mwak* 'point (as of a fish spear)', \*Rumaq 'house' > *umwe-* 'nest'. Both of these POC forms also have regular reflexes (*mata-* 'eye', *wum* 'house'). A similar split of \*Rumaq into two divergent reflexes is seen in other Admiralty languages, as with Lou *um* 'house', but *umwa-n monmon* 'bird's nest', or Loni *um* 'house', but *umwe-n* 'nest, spiderweb', and reflexes of \*mata 'eye, face, point, cutting edge; sharp, etc.' show a split between reflexes of a labiovelar nasal, as with Fijian *ŋata* (< \*mwata, but ultimately \*mata) 'sharp, of a point or a blade', and reflexes of a bilabial nasal, as with Samoan *mata* (< \*mata) 'eye; point, cutting edge, blade'.

Word-initially POC \*t became Bipi *dr-* in most nouns (following the common noun article \*na): \*tabu-na > *drapun* 'taboo', \*taliŋa > *draliŋe-* 'ear', \*talise > *dralis* 'a shore tree: *Terminalia catappa*', \*tanoq 'earth' > *dran* 'down', \*tapuRi > *drah* 'conch shell trumpet', \*taqe > *dre-* 'feces', \*tasik > *dras* 'sea; saltwater', \*tokon > *dro* 'punting pole', \*toRas > *drow* 'ironwood tree', \*tuRu > *dru* 'housepost'. The divergent development in \*tokon > *dro*, and \*toRas > *drow* merits a brief comment. In the first of these \*na tokon > \*ntoko > \*ndoko > \*ndok > \*drok > *dro*, and in the second \*na toRas > \*ntoRa > \*ntoa > \*ndoa ([ndowa]) > ndow > *drow*. These examples show that the development of the alveolar trill was not conditioned by the following vowel, and the different development of \*tokon and \*toRas shows that once \*R disappeared an automatic transitional glide developed between \*o and \*a, which was retained after loss of the final vowel, whereas the loss of \*k in \*tokon had no such effect, the two identical vowels simply coalescing into one. Although the facts are quite clear in this case, since *dro* was recorded as

[droʔ], and *drow* was recorded as [drow], the development of *Rabia* > *api* ([apiʔ]), rather than *apiy* ‘sago’, exhibits a contrary development, without the expected retention of the transitional glide after the loss of the final vowel. Although the available data are insufficient for firm conclusions, this difference may be part of a regular process distinguishing the treatment of labiovelar and palatal glides in both retention and addition, since --- as will be noted below --- glide *accretion* occurred before initial \*u, but not initial \*i.

One other form that requires mention is *dran*, which earlier meant ‘earth, ground, soil’, but which has acquired the secondary sense of ‘down’ in Bipi and various other languages of the Admiralties. Nonetheless, this word followed the common noun marker \*na in POC, and so underwent the sound changes typical for a noun despite its change of word class. Three other nouns that began with \*t in POC show no change: \*tama > *tama-* ‘father’, \*tina > *tine-* ‘mother’, and \*tokalaur > *tolaw* ‘north wind’. Although the first two of these nouns take the common noun article in some other Oceanic languages, as Fijian, kin terms appear to have done without the article in Proto-Admiralty, and the third word probably was used more as a directional term than a noun.

For reasons that remain unclear, one example of POC \*t- in a noun became *x-* rather than *dr-*, and the derived final stop did not shift to *-k*: \*taumata > *xamat* ‘person, human being’. This strongly suggests borrowing, although a plausible source language is yet to be identified.

Both initially in non-nouns and medially in words of any class \*t remained unchanged or varies freely with *-r-*: \*taŋis > *tak* ‘to weep, cry’, \*tinana > *tinan* ‘big’, \*tolu (> PADM \*tolu-pu) > *taloh* ‘three’, \*katapa > *katah* ‘frigate bird’, \*mata > *mata-* ~ *mara-* ‘eye; focal point’, \*matiruR > *matex* ‘to sleep’, \*natu > *natu-* ~ *naru-* ‘child, offspring’, \*pitaquR > *putow* ‘a shore tree: *Calophyllum inophyllum*’, \*qate ‘liver’ > *ate-* ‘heart’.

In coda position POC \*t became Bipi *-k*, removing /t/ from the class of coda consonants: \*kuRita > *kuik* ‘octopus’, \*kutu > *kuk* ‘louse’, \*maqati ‘low tide’ > *mak* ‘dry reef’, \*mwata > *mwak* ‘snake’, \*ñatuq > *ñak* ‘a fruit tree: *Palaquium* spp.’, \*patu > *pak* ‘stone’, \*puta > *puk* ‘fishnet float’, \*putun > *puk* ‘a shore tree: *Barringtonia asiatica*’, \*qarita > *alík* ‘putty nut’, \*qatop > *kak* ‘roof thatch’, \*sa-ŋaRatus > *sanjak* ‘one hundred’. It is noteworthy that this highly distinctive conditioned change is shared with a block of languages in western Manus that includes Lindrou, Likum, Drehet, Levei, Mondropolon and Pelipowai, and is known in no other Austronesian language, although \*t > *k* as an unconditioned change is more widespread (Blust 2004). Given this distribution there can be little doubt that Bipi, which clearly subgroups with Loniu and other languages of the eastern Admiralties, acquired this innovation through contact with one or more of these languages (Lindrou being the prime suspect).

A notable aspect of Bipi historical phonology is the appearance of more than one reflex of the same POC morpheme appearing in different shapes as a result of conditioning that is no longer synchronically apparent. An example is POC \*patu > *pak* ‘stone’, but also *patilow* ‘obsidian’ (= ‘stone of Lou’, referring to Lou island, one of the two major obsidian sources in the western Pacific, and the primary source for the peoples of the Admiralties). Others are POC \*salan > *san*



‘path, road’, but \*salan-an ‘passage’ > *salan* ‘passage through the reef’, and somewhat more problematically \*mata > /mata/ ‘eye’, but *mwak* ‘point, as of a fish spear’.

POC \*d is not common, but is clearly reflected as *x* in \*pudi > *pux* ‘banana’.

POC \*s did not change: \*sa- > *sa-* ‘one (clitic form)’, \*saku-layaR > *solay* ‘sailfish’, \*saman > *sam* ‘outrigger float’, \*saja > *saja-* ‘fork, bifurcation’, \*sapa > *sah* ‘what?’, \*suluq > *sun* ‘coconut leaf torch’, \*sulu > *sun* ‘to roast, burn’, \*supi > *suh* ‘to peel’, \*suRuq ‘sap, juice, gravy’ > *suy* ‘soup’, \*susu > *sus* ‘female breast’, \*lisaq > *lis* ‘nit, louse egg’, \*pose > *pos* ‘canoe paddle’, \*qasu > *asu-* ‘gall’, \*qusan > *wus* ‘rain’, \*qusila > *wosin* ‘lightning’, \*talise > *dralis* ‘a shore tree: *Terminalia catappa*’, \*tasik ‘sea, saltwater’ > *dras* ‘saltwater’, PADM \*mosimo > *musim* ‘a shore tree: *Casuarina equisetifolia*’. More problematic is POC \*asaŋ > *ase-* ‘gills’.

In one known case \*s is irregularly reflected as *ñ*: \*salatoŋ > *ñalak* ‘stinging nettle’.

POC \*n remained unchanged: \*nanaq > *nana-* ‘pus’, \*natu > *natu-* ‘child, offspring’, \*niuR > *niw* ‘coconut’, \*kanase > *kanas* ‘mullet’, \*kanawe > *kanaw* ‘seagull’, \*kani ‘to eat’ > *kan* ‘food’, \*onom (> PADM \*ono-pu) > *wono-h* ‘six’, \*papine > *pihin* ‘female; woman’, \*qone > *won* ‘sand’, \*dranum > *xan* ‘fresh water’, \*tanoq ‘earth, soil, land’ > *dran* ‘down’, \*tina- > *tine-* ‘mother’. More problematic is \*nupu > *sa-noh* ‘stonefish’.

POC \*r is normally reflected as *x* in all positions: \*dranum > *xan* ‘fresh water’, \*raqan > *xa-xa-* ‘branch’, \*rua > *xuo-h* ‘two’, \*ruRi ‘thorn’ > *xui-* ‘bone’, \*koro ‘fortified place, village’ > *kox* ‘village’, \*kuron > *kux* ‘clay cooking pot’, \*kururu > *kuxux* ‘thunder’, \*matiruR > *matex* ‘to sleep’, \*kuriap > *wuxi* ‘dolphin’.

In four known cases \*r shows an irregular development, becoming /l/ as onset in three words, and /h/ as coda in another: \*qarita > *alix* ‘putty nut: *Parinari laurinum*’, \*ramaR > *lama-n* ‘light, luminosity’, \*raun > *lau* ‘leaf’, \*quraŋ > *wuh* ‘lobster’.

POC \*dr (a prenasalized alveolar trill) merged with \*r as *x*: \*d(r)amut > *xam* ‘lime spatula’, \*draŋi > *xak* ‘day’, \*draRaq > *xay* ‘blood’, \*kadroRa > *koxa* (< met.) ‘cuscus’, \*padran ‘pandanus’ > *pax* ‘pandanus sp.’

POC \*l remained unchanged in onset position, but merged with \*n as a derived coda: \*kalika > *kali* ‘grouper’, \*laje > *las* ‘coral limestone’, \*lako > *la* ‘to go’, \*lalak > *lan* ‘Trochus shell’, \*laqia > *li* ‘ginger’, \*lima (> PADM \*lima-pu) > *lime-h* ‘five’, \*lisaq > *lis* ‘nit, louse egg’, \*lom > *lo* ‘in, inside’, \*loto > *lok* ‘boil, abscess’, \*pa-layaR ‘to sail’ > *paley* ‘sail’, \*tokalaur > *tolaw* ‘north wind’, \*tolu (> PADM \*tolu-pu) > *talo-h* ‘three’, \*salan-an ‘passageway’ > *salan* ‘passage through the reef’, \*taliŋa > *draliŋe-* ‘ear’, \*talise > *dralis* ‘a shore tree: *Terminalia catappa*’, \*baluc > *pan* ‘dove, pigeon’, \*kamaliR ‘men’s house’ > *kaman* ‘male’, \*kuluR > *kun* ‘breadfruit’, \*pulan > *pun* ‘moon’, \*quloc > *wun* ‘maggot’, \*qusila > *wosin* ‘lightning’, \*salan > *san* ‘path, road’, \*suluq > *sun* ‘coconut leaf torch’. An additional internal Admiralty comparison is PADM \*pula > *pule-* ‘forehead’.

In one known form POC \*l shows two variants word-initially: \*qalima > *lime-* ~ *nime-* ‘hand’. The first of these is attested in *lami lime-* ‘body hair (specifically ‘hair of the arms’)', and the second in *nime-* ‘hand’. A more questionable etymology, because neither vowel reflex is regular, is \*lipon > *lehe-* ‘tooth’.

The only reflexes of POC \*c that were not lost because of canonical reduction are seen in \*ŋacan > *kaxa-* ‘name’, and \*taci > *draxi-* ‘cross-sibling’, which agree in showing a merger of this phoneme with POC \*d, \*r, and \*dr.

POC \*j (the nasal grade of \*s) became *s* in the three known relevant forms: \*jalan > *san* ‘path, road’, \*kiajo > *kies* ‘outrigger boom’, \*laje > *las* ‘coral limestone’.

POC \*ñ generally remained a palatal nasal as onset, and merged with \*y as a derived coda, making Bipi (and many other daughters of PEADM) among the few languages that preserve the distinction between POC \*n and \*ñ: \*ñatuq > *ñak* ‘a hardwood tree with edible fruit’; \*poñu > *puy* ‘the green turtle: *Chelonia mydas*’. Somewhat more problematic are \*ñamuk > *ñam-on* ‘mosquito’, and \*nuse (or \*ñuse?) > *ñu* ‘squid’. Further support for the reflex of \*ñ in derived coda position is seen in PADM \*kuñV > *kuy* ‘small coconut leaf basket or bag’.

There is one known irregular reflex: \*-ña > *-n* ‘3SG possessor’.

POC \*y is reflected only as a derived coda, where it is unchanged in the two known cases: *payaR* ‘to sail’ > *paley* ‘sail’, and \*saku-layaR > *solay* ‘sailfish’. In \*kayu > *ki* ‘wood’ \*y has irregularly disappeared or merged with the preceding low vowel. Bipi *kasus* ‘coconut crab’ is assumed to reflect POC \*kasusu, a variant of the better-known \*qayuyu.

Word-initially POC \*k generally did not change, although virtually all examples are nouns, making it difficult to determine whether \*k- behaved differently in nouns and non-nouns: \*kalika > *kali* ‘rock cod, grouper’, \*kamaliR ‘men’s house’ > *kaman* ‘male’, \*kanase > *kanas* ‘mullet’, \*kawil > *kaw* ‘fishhook’, \*kayu > *ki* ‘wood, tree’, \*kiaco > *kies* ‘outrigger boom’, \*kuluR > *kun* ‘breadfruit’, \*kururu > *kuxux* ‘thunder’, etc.

Medially and in derived final position \*k disappeared: \*bakewak > *pew* ‘shark (generic)’, \*lako > *la* ‘to go’, \*penako > *poko-pa-hena* ‘to steal’, \*saku-layaR > *solay* ‘sailfish’, \*tokalaur > *tolaw* ‘north wind’, \*tokon > *dro* ‘punting pole’.

In \*koe > *wo(w)* ‘2SG, you’, and \*kuriap > *wuxi* ‘dolphin’ initial \*k disappeared, and a homorganic glide was added before the resulting initial rounded vowel. In addition, a minor irregularity is seen in \*kalika > *kali* ‘rock cod, grouper’, where we would expect \*\*kaliy as a result of glide formation after loss of the medial \*k and before loss of the final vowel. It is possible that this apparent irregularity is a result of ordering in which the loss of the final vowel preceded loss of the original final syllable onset.

POC \*g is known from a single form, where it disappeared: \*-gu > *-w* ‘1SG possessor’.

POC \*ŋ did not change in onset position, but became *-k* as a derived coda, where it merged with \*t: \*aŋo-aŋo-ana > *aŋuan* ‘yellow’, \*saŋa > *saŋa-* ‘bifurcation, fork of a branch’, \*sa-ŋaRatus > *sa-ŋak* ‘one hundred’, \*taliŋa > *draliŋe-* ‘ear’; \*boŋi > *pik* ‘night’, \*draŋi > *xak* ‘day’, \*puŋu > *-puk* ‘bunch, cluster’, \*paŋan > *hak* ‘to feed’, \*taŋis > *tak* ‘to weep, cry’.

POC \*q generally disappeared unconditionally in Bipi: \*qasu > *asu-* ‘gall’, \*qate ‘liver’ > *ate-* ‘heart; chest’, \*qone > *won* ‘sand’, \*quloc > *wun* ‘maggot’, \*qusan > *wus* ‘rain’, \*laqia > *li* ‘ginger’, \*maqati ‘low tide’ > *mak* ‘dry reef’, \*pitaquR > *putow* ‘a shore tree: *Calophyllum inophyllum*’, \*raqan > *xa-xa* ‘branch’, \*taqe > *dre* ‘feces’.

In one or two forms \*q is reflected instead as *k-*. The clearest example of this is \*qatop > *kak* ‘thatch, roof of a house’. Other examples are \*qulin > *kuli* ‘rudder’, and \*qaqe > *ka-ka* ‘foot, leg’. The first two of these are shared with Lindrou *kak* ‘thatch, roof of a house’, and *kulik* ‘rudder’, where they are also irregular, and the third may be a product of chance.

As in a number of other Austronesian languages, \*R has multiple reflexes. In general POC \*R disappeared in Bipi, but is reflected as /y/ in a small number of forms:

\*R > Ø: \*Rabia > *api* ‘sago palm’, \*boRok > *puw* ‘pig’, \*kadroRa > *koxa* (< met.) ‘cuscus’, \*kuRita > *kui* ‘octopus’, \*maRi > *me* ‘to come’, \*ruRi ‘thorn, fish bone’ > *xui* - ‘bone’, \*tapuRi > *drah* ‘conch shell trumpet’, \*toRas > *drow* ‘ironwood tree: *Intsia bijuga*’.

R > y: \*apaRat > *yahay* ~ *jahay* ‘west, west wind’, \*draRaq > *xay* ‘blood’, \*paRi > *pay* ‘stingray’, \*suRuq ‘juice, broth, soup’ > *suy* ‘soup’.

Apart from reflexes of POC phonemes, Bipi also shows regular consonant epenthesis in adding /w/ before word-initial rounded vowels (nothing similar happened before front vowels). In many cases this happened only after loss of an initial consonant: \*koe > *wow* ‘2SG subject’, \*kuriap > *wuxi* ‘dolphin’, \*onom > *wono-h* ‘six’, \*qone > *won* ‘sand’, \*quloc > *wun* ‘maggot’, \*quraŋ > *wuh* ‘lobster’, \*qusan > *wus* ‘rain’, \*qusila > *wosin* ‘lightning’, \*Rumaq > *wum* ‘house’. Two words that begin with a low vowel appear to show w-epenthesis as well, but the etymology in both of these cases is questionable: \*kani > *wan* ‘to eat’, \*qauR > *waw* ‘bamboo sp.’.

As noted earlier, a few words in my fieldnotes show variation between the presence of a homorganic final glide and its absence, as with *wow* ([wow]) ~ *wo* ([wo?]) ‘2SG’, and informant reaction left it unclear whether this is free variation or involves some type of conditioning.

In addition, POC \*apaRat ‘west monsoon’ > Bipi *yahay* ~ *jahay* ‘west, west wind’ shows y-accretion before a word-initial low vowel, a change that is widespread in the Austronesian languages of eastern Indonesia and the Pacific (Blust 1990). POC \*qayawan (> PADM \*qaiwa) > *jew* ‘banyan’ suggests the same innovation, although \*aŋo-aŋo-an > *aŋo-an* ‘yellow’ and possibly *ase-* ‘gills’ fail to show this development. More surprisingly, four words that began with \*qa- in POC show a historically secondary velar nasal in initial position: \*qapuR > *ŋah* ‘lime for betel chew, calcium carbonate’, \*qalu > *ŋan* ‘barracuda’, \*qalo > *ŋan* ‘sun’, \*qasu > *ŋas* ‘smoke’.

In general rounded vowels do not occur word-initially (a consequence of glide epenthesis), and final consonants and the vowels that preceded them were lost. However, in vowel sequences where the final vowel could be resyllabified as a glide it was preserved, as with \*ñāRo (>\*ñāRo) > ñā-ñāw ‘widow(er)’, \*niuR > niw ‘coconut’, \*pitaquR > putow (with regular loss of \*q and sporadic rounding assimilation), \*waiwai > wiwey ‘mango’, \*waiR > woy ‘liquid, water’, and possibly \*paRi > pay ‘stingray’ (ambiguous for \*paRi > pai > pay, with resyllabification of \*-i, or \*paRi > payi > pay, with loss of \*-i)..

The five vowel system of POC vowels usually shows regular developments. However, there are exceptions. Some of these may be due to conditioning, as with the progressive assimilation of the low vowel in \*kiajo > kies ‘outrigger boom’, \*lima > lime-h ‘five’, \*qalima > nime- ‘hand’, \*taliŋa > draliŋe- ‘ear’, \*tina > tine- ‘mother’, and the regressive assimilation in \*pa-layaR ‘to sail’ > paley ‘sail’, \*puqaya > puey ‘crocodile’, and \*wai > wi-wey ‘mango’. However, \*tinana > tinan ‘big’, \*paRi > pay ‘stingray’, and \*saku-layaR > solay ‘sailfish’ show none of this.

Other irregular vowel reflexes show no conditioning factor and so are unexplained, as with \*aŋo-aŋo-ana > \*aŋo-ana > aŋuan (expected \*\*aŋoan) ‘yellow’, \*asaŋ > ase- (expected \*\*asa-) ‘gills’, \*boŋi > pik (expected \*\*pok) ‘night’, \*boRok > puw (expected \*\*pow) ‘pig’, \*bulaka > pule (expected \*\*pula) ‘elephant ear taro’, \*kayu > ki (expected \*\*key) ‘tree; wood’, \*lamu > lami- (expected \*\*lamu-) ‘body hair, feather’, \*laqia (> \*laya) > li (expected \*\*ley) ‘ginger’, \*lipon > lehe- (expected \*\*liho) ‘tooth’, \*matiruR > matex (expected \*\*matix) ‘to sleep’, PADM \*mosimo > musim (expected \*\*mosim) ‘a shore tree: *Casuarina equisetifolia*’, \*papine > pihin (expected \*\*pehin) ‘female; woman’, \*pitaquR > putow (expected \*\*pitaw) ‘a shore tree: *Calophyllum inophyllum*’, \*puaq > pue (expected \*\*pua) ‘fruit’, \*qapatoR > hek (expected \*\*ahak) ‘sago grub’, \*qusila > wosin (expected \*\*wusin) ‘lightning’, \*roŋoR > xek (expected \*\*xok) ‘to hear’, \*rua > xuo-h (expected \*\*xua-h) ‘two’, \*Rumaq ‘house’ > umwe- (expected \*\*uma) ‘nest’, \*sa-ŋapuluq > saŋon (expected \*\*saŋahun, with irregular loss of /h/ and contraction of the vowels), \*taliŋa > draliŋe- (expected \*\*draliŋa-) ‘ear’, \*tolu-pu > taloh (expected \*\*toluh) ‘three’, \*waiR > woy (expected \*\*way) ‘liquid, water’, and \*waiwai > \*wewey > wiwey ‘mango’.

Finally, some vocalic irregularities appear to result from contraction, as \*taqe > dre- (expected \*\*drae-) ‘feces’, \*maRi > me (expected \*may) ‘to come’, \*bakewak > pew (expected \*\*paew) ‘shark’, and \*saku-layaR > solay (expected \*\*saulay) ‘sailfish’.

To summarize structural changes, \*d, \*r, \*dr and \*c merged as /x/, and \*s and \*j merged as /s/. All other structural changes are split-mergers. In the first of these POC \*p split into /p/ initially in nouns and /h/ elsewhere. Since \*b became /p/ in all positions it merged with \*p initially in nouns. In the second split-merger \*t split three ways, becoming /dr/ initially in nouns, /k/ as a derived coda, and /t/ elsewhere (varying freely with /r/ intervocally in at least some words). In the third split-merger the palatal nasal \*ñ split into /y/ as a derived coda, where it merged with \*y and \*R, and into /ñ/ elsewhere, and in the fourth split-merger the velar nasal \*ŋ split into /k/ as a derived coda, where it merged with \*t, and into /ŋ/ elsewhere. In the fifth split-merger \*l became /n/ word-finally, where it merged with \*n, but remained a lateral in onset position. Finally, \*k split into /k/ initially in nouns, where it partially merged with \*t and \*ŋ, and into zero elsewhere, merging with \*g, \*q, most examples of \*R, and of course with zero.

## 2.6. BIPI REFLEXES OF PROTO-OCEANIC AND PROTO-ADMIRALTY

	POC	PADM	BIPI	
001.	*aŋo-aŋo-ana	*aŋo-ana	aŋuan	yellow
002.	*apaRat	*yapaya	yahay	west; west wind
003.	*asaŋ	*asa-	ase-	gills
004.	*bakewak	*bakewa	pew	shark
005.	*banic	*bani-	pani-	wing
006.		*bapawV	pahaw	oars
007.	*boma	*boma	pom	seaweed variety
008.	*boŋi	*boŋi	pik	night
009.	*boRok	*boo	puw	pig
010.		*bosa-	pose-	shoulder
011.		*bulaka	pule	elephant ear taro <sup>5</sup>
012.	*d(r)amut	*dramu	xam	lime spatula
013.	*dranum	*dranu	xan	fresh water, river
014.	*draŋi	*draŋ	xak	day
015.	*draRaq	*draya	xay	blood
016.	*-gu	*-ku	-w	1SG possessor, my
017.	*ia	*ia	i	3SG, s/he
018.	*kadroRa	*kodraya (< met.)	koxa	opossum
019.	*kalika	*kalik	kali	rock cod, grouper
020.	*kamaliR	*kamal	kaman	men's house; male
021.	*kanase	*kanase	kanas	mullet
022.	*kanawe	*kanawe	kanaw	seagull
023.	*kani	*kani	kan	to eat; food
024.	*kasusu	*kasusu	kasus	coconut crab
025.	*katapa	*katapa	katah	frigate bird
026.	*kawil	*kawi	kaw	fishhook
027.	*kayu	*kayu	ki	wood; tree
028.	*kiajo	*kiaco	kies	outrigger boom
029.	*koe	*koe	wo(w)	2SG, you
030.		*koqoV	ko	sea cucumber
031.	*koro	*koro	kox	fortification; village
032.	*kuluR	*kulu	kun	breadfruit
033.		*kuñV	kuy	coconut leaf basket

<sup>5</sup> Apparent cognates are found in a number of other Oceanic languages, and in Palauan *brak* 'giant swamp taro'. However, as noted by Ross (2008:269-271) it is impossible to reconstruct a single form that encompasses all forms that appear to be related, suggesting that the distribution of this plant involves a complex history of borrowing. For the purposes needed here I assume a consistent shape only in Proto-Admiralty.

034.	*kupwena	*kupwena	kupwen	long fish net
035.	*kuriap	*kuria	wuxi	dolphin
036.	*kuron	*kuro	kux	cooking pot
037.	*kururu	*kururu	kuxux	thunder
038.	*kuRita	*kuita	kuik	octopus
039.	*kutu	*kutu	kuk	louse
040.	*laje	*lase	las	coral limestone
041.	*lako	*lako	la	to go
042.	*lalak	*lalak	lan	Trochus shell
043.	*lamu	*lamu-	lami-	body hair, feather
044.	*lima	*lima-pu	limeh	five
045.	*lipon	*lipo-	lehe-	tooth (?)
046.	*lisaq	*lisa	lis	nit, louse egg
047.	*lom	*lo	lo	in, inside
048.	*loto	*loto	lok	boil, abscess
049.	*madra	*madra-nV	ma-maxa-n	ripe
050.	*mamata	*mamata	mamak	to wake up
051.	*mapu	*mapu	mah	taro variety
052.	*maqati	*mati	mak	low tide; dry reef
053.	*maRi	*mai	me	to come
054.	*mata	*mata-	mata-	eye
			mata-n	lid, cover
			-mwak	point (of spear)
	*mata nu susu	*mata susu-	mata sus	nipple of breast
055.	*mate	*mate	mak	to die; dead
056.	*matiruR	*matiru	matex	to sleep
057.	*mawiRi	*mawi	ka-maw	left side (?)
058.	*mimiq	*mimi	mimi-n	urine; urinate
059.	*mona	*mona	mon	dugout canoe
060.		*moña	moy	pandanus variety
061.		*mosimo	musim	<i>Casuarina</i> spp.
062.	*-mu	*-mu	-m	2SG possessor, your
063.	*mutaq	*muta	xa-mok	to vomit
			xa-mut-ay	vomit
064.	*mwata	*mwata	mwak	snake
065.	*nanaq	*nana-	nana-	pus
066.	*natu	*natu-	natu-	child, offspring
067.		*nika	ni	fish
068.	*niuR	*niw	niw	coconut
069.	*n opu	*n opu	sa-noh	stonefish (?)
070.	*-ña	*-na	-n	3SG possessor, his/her
071.	*ñaman-na	*ñama-na	ñaman	tasty, sweet
072.	*ñamuk	*ñamu	*ñam-on	mosquito
073.	*ñaRo	*ñaao	ña-ñaw	widow(er)
074.	*ñatuq	*ñatu	ñak	<i>Palaquium</i> spp.
075.	*ñoñu	*ñoñu	ñooy	<i>Morinda citrifolia</i>

076.		*ñu	ñu	to bathe; dive
077.	*ŋacan	*ŋara-	kaxa-	name (?)
078.	*onom	*ono-pu	wonoh	six
079.	*padran	*badra	pax	pandanus variety
080.	*paka-Rapiqi	*payapi	hayah	afternoon
081.	*pa-layaR	*baleya	paley	to sail; a sail
082.	*paluc	*balu	pan	dove, pigeon
083.	*paŋan	*paŋa	hak	to feed
084.	*papine	*bepine	pihin	female; woman
085.		*paunV	hawun	new
086.		*paronV	poxon	handle of axe
087.	*paRa	*baya	ke-pay	firewood rack
088.	*paRi	*bayi	pay	stingray
089.	*pataŋ	*bata	pata-	tree trunk, stick
090.	*patu	*batu	pak	stone
		*batu i low	pat-i-low	obsidian
091.	*penako	*bapenako	poko-pa-hena	to steal
092.	*pitaquR	*bitau	putow	<i>Calophyllum</i> spp.
093.	*poñu	*boñu	puy	green turtle
094.	*pose	*bose	pos	canoe paddle
095.	*puaq	*buaq	pue-	fruit
096.	*pudi	*budri	pux	banana
097.	*pulan	*bula	pun	moon, month
098.	*puŋun	*buŋu	-puk	bunch, cluster
099.	*puqaya	*buaya	puey	crocodile
100.	*puqulu	*buqulu	pun	betel leaf
101.	*puta	*buta	puk	fishnet float
102.	*putun	*butu	puk	<i>Barringtonia asiatica</i>
103.	*qalima	*lima-	nime-	hand
104.	*qapatoR	*qapeto	hek	sago grub
105.	*qarita	*qarita	alík	putty nut
106.	*qasu	*qasu-	asu-	gall (bladder)
107.	*qate	*qate-	ate-	liver; heart
108.	*qatop	*qato	kak	roof; thatch
109.	*qayawan	*qaiwa	jew	banyan
110.	*qone	*qone	won	sand
111.	*qulin	*quli	kuli	rudder of boat
112.	*quloc	*qulo	wun	maggot, caterpillar
113.		*qulua	wulu	high tide, flood
114.	*quraŋ	*qura	wuh	lobster
115.	*qusan	*qusa	wus	rain
116.	*qusila	*qucila	wosin	lightning
117.	*ramaR	*rama	lama-n	light, luminosity
118.	*raqan	*draqa	xa-xa-n	branch of a tree
119.	*raun	*drau	lau-	leaf
120.	*roŋoR	*roŋo	xek	to hear

121.	*rua	*ruo-pu	xuoh	two
122.	*ruRi	*dru-i-	xui-	bone
122.	*ruyuŋ	*ruyu	xu	dugong
124.	*Rabia	*yabia	api	sago palm
125.	*Rumaq	*uma	wum	house
			umwe-n	nest
126.	*saku-layaR	*colaya	solay	sailfish
127.	*salan	*cala	san	path, road
	*salan-an	*calana	salan	passage through reef
128.	*salatoŋ	*ñalato	ñalak	stinging nettle
129.	*saman	*cama	sam	outrigger float
130.	*saŋa	*caŋa	saŋa-	fork of a branch
131.	*sa-ŋapuluq	*saŋapul	saŋon	ten
132.	*saŋaRatus	*saŋatu	saŋak	one hundred
133.	*sapa	*sapa	sah	what?
134.	*sawit	*sawit-i	*sawik	to sew (clothes)
135.	*sulu	*sulu	sun	to burn
136.	*suluq	*culu	sun	coconut leaf torch
137.	*supi	*supi	suh	to peel (as fruits)
138.	*suRuq	*cuyu	suy	juice; soup
139.	*susu	*susu-	sus	female breast
140.	*susup	*susup-i	susuh	to suck
141.	*tabu-na	*drabuna	drapun	taboo
142.	*taliŋa	*draliŋa	draliŋe-	ear
143.	*talise	*dralise	dralis	<i>Terminalia catappa</i>
144.	*tama	*tama-	tama-	father
145.	*tanoq	*drano	dran	earth, down; down
146.	*taŋis	*taŋi	tak	to weep, cry
147.	*tapuRi	*dapuy	drah	conch shell trumpet
148.	*taqe	*draqe	dre-	feces
149.	*tasik	*drasi	dras	sea; saltwater
150.	*taumata	*damata	xamat	person, human being
151.	*tina	*tina-	tine-	mother
152.	*tinana	*tinan	tinan	big
153.	*tokalaur	*tolaw	tolaw	north wind
154.	*tokon	*doko	dro	punting pole
155.	*tolu	*tolu-pu	taloh	three
156.	*toRas	*droa	drow	ironwood tree
157.	*tuRu	*dru	dru	housepost
158.	*waiR	*way	woy	liquid; water
159.	*waiwai	*wewey	wiwey	mango
160.		*watiV	wati	monitor lizard