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Sketch 6: LONIU

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6.1. INTRODUCTION. Loniu is spoken in two villages, Loniu (Protestant), and Lolak (Catholic) on Los Negros island, immediately east of Manus, from which it is separated by a channel only a few hundred yards wide. Its closest relatives are said to be Naringel and Papitalai. We are fortunate in this case to have one of the three fullest grammars of any language of the Admiralties (Hamel 1994), the others being Bowern (2011), for Titan, spoken in the Mbuke islands off the south coast of central Manus, and Schokkin (2020), for Paluai, spoken on Baluan Island. Given the relatively detailed description in Hamel (1994), which represents the speech of Loniu village, my primary aims in this sketch are to supplement the lexical data in that work, especially with regard to flora, fauna and some aspects of material culture, to add a few remarks on grammar, and to address the repeatedly stated, but never confirmed claim of an immediate subgrouping relationship between Loniu and Bipi.

Hamel (1994:1) reported the number of native speakers at between 450 and 500, although many of these are said to "reside in other Manus villages or in cities on the mainland of Papua New Guinea." Given the widespread tendency of the younger generation in many parts of PNG to prefer the use of Tok Pisin to their native language, it is likely that Loniu is now seriously endangered, a situation that is made even more likely by its relatively exposed position near the Momote airport, the principal connection with the outside world.

At the time of my arrival at the airport in Momote on Los Negros island early in February, 1975, the local community was enmeshed in a heated dispute with a community from the south coast of Manus. A young boy from the latter community had contracted cerebral malaria, and his family were desperate to get him to the only hospital in Manus province, located in the provincial capital of Lorengau, which is on the north coast of the main island. The quickest access from the south coast to Lorengau was through the channel that separates Manus from Los Negros island, and the quickest mode of transport was by motorized watercraft. The Loniu community objected to the south coast people's use of this passage, as they insisted that the boat, with its loud engine noise, had disturbed their standard food fish, the mullet, making them harder to catch. Given this social environment at the time of my arrival, and the prominence of fish in the dispute, I made a special effort to collect Loniu fish names, and my efforts were richly rewarded. In this effort I was greatly assisted by Munro (1967), which I had brought with me to facilitate identification.

Loniu data was obtained between February 14 and February 26 from Sioni Papi and Lihieu Elisha, both aged 17 at the time of data collection. In addition to English and Tok Pisin one or both of them reportedly spoke Naringel. Although I recorded 'Loniu' as the village from which both speakers came, certain discrepancies that will be noted in this brief description, especially in relation to Hamel's excellent grammar, raise the possibility that one was from Loniu and the other from Lolak, and that the two teamed up to represent Loniu, because as students at Manus Government Secondary School in Lorengau, they considered themselves to be speakers of the same language in contradistinction to many of their classmates.
6.2. PHONOLOGY. The discussion of synchronic phonology is divided into: 1. phoneme inventory, 2. phonotactics, and 3. phonological processes.
6.2.1. Phoneme inventory. The Loniu phoneme inventory given by Hamel (1994:8) is as follows, where the places are labial, alveolar, palatal, velar, and glottal, and the manners are stop, rounded stop, affricate, fricative, nasal, rounded nasal, lateral liquid, trilled liquid, and approximant/glide:

Table 6.1: The phonemes of Loniu as given by Hamel (1994)

$/ \mathrm{p} /$, /t/ and $/ \mathrm{k} /$ are voiceless unaspirated stops at labial, alveolar and velar positions. Unlike the case in many other AN languages $/ \mathrm{t} /$ is alveolar and not postdental. / $\mathrm{p}^{\mathrm{w}} /$ is labiovelar, or 'rounded' (Hamel 1994:12-13), and /č/ a voiceless unaspirated palatal affricate. The fricatives $/ \mathrm{s} /$ and $/ \mathrm{h} /$ have their expected phonetic values, and require no special comment. Much the same can be said for the nasals, with $/ \mathrm{m}^{\mathrm{w}} /$ showing lip rounding rather than lip spreading as in some Micronesian languages. It should be noted, however, that both labiovelars were optionally heard as sequences of consonant $+/ \mathrm{u} /$ when preceding a front vowel, as with mwiPin $\sim$ muPin 'late, last; rear part', or pwici ~ puci 'claw, nail, scales', and /mwa/ was optionally heard as $/ \mathrm{mo} /$, with fusion of the low vowel and the rounding of the nasal, as where Hamel (1994:203) has mwasas 'k.o. fish, prob. various sepecies of goatfish', but I recorded mosas 'long-barbelled goatfish', or Hamel (1994:204) has mwenen but I was given mwenen ~ monen 'straight, correct'. The only other consonant that requires comment is /r/. Hamel (1994:11) describes Loniu /r/ in non-initial position as a trill in free variation with a flap, which agrees with my observations. In initial position she views it as a prenasalized alveolar trill [dr], a point to which I return below.

In general I arrived at the same consonant inventory as Hamel (1994), with two differences. First, my vocabulary contains eight words with $d r$, all but one of them in initial position, as in Drokow 'Loniu (place name)'. Hamel lists sixteen words of this type in her vocabulary, but writes them with ${ }^{n} r$, as in ${ }^{n}$ roloko/ ${ }^{n} r o k o$ 'Loniu name for themselves, their village and their language'. Because [dr], which she recorded only word-initially, and [r], which she recorded only elsewhere, are in complementary distribution, she treats them as allophones of a single phoneme /r/. Given her considerably longer exposure to the language (about 30 months compared to my 20 hours), Hamel's analysis should be given greater credence than mine. However, I recorded one function morpheme and one content morpheme with initial [r] ([rع?] 'to' [rúrun] 'swing'), and another morpheme with medial [ndr] ([puendríli] 'giant clam') which provides at least minimal evidence of an /r/ :/dr/ contrast. Moreover, as noted by Ross
(1988:322), Loniu $d r$ - has no known etymological source, both Proto-Eastern Admiralty *r and *dr having become glottal stop (intervocalically) or zero (initially), as in *d(r)amut >am 'lime spatula', *drayi > ay 'day', *draRaq > ay 'blood', *kuriap > wi $i$ i wiri 'dolphin', *kuron > ku 'cooking pot', *muri > muPi-n ~mwiPi-n 'late, last, rear', *dranum > an 'fresh water', *raqan(> *dra-dra) > aPa-n 'branch', *rorom > o 'dark/pitch black', *ruo-pu > ma-Puo-h 'two', or *ruyuy $>u$ 'dugong'. Surprisingly, this implies that the Loniu endonym Drokow is a loan. For all of these reasons, and of uncertainty about whether other forms with initial [r] will be found, I provisionally write $d r$-, even though it may well be subphonemic, as Hamel argues.

The second way in which my consonant inventory differs from Hamel's is with regard to the glottal stop. As in most, if not all languages of Manus, words that end phonemically with a vowel are followed by an automatic glottal stop, and these contrast with similar words that end with a homorganic glide, as with $/ \mathrm{ko} /=[\mathrm{ko}$ ] ' village' vs. $/ \mathrm{kow} /=[\mathrm{kow}]$ 'fence', 'fishhook'. The glottal stop is therefore not phonemic in final position, as she clearly states. However, I have some concerns with her statement that "The glottal stop in Loniu is not contrastive, but is inserted by rule to separate two vowels" (Hamel 1994:15). This is certainly true between identical vowels, but it is not true between all vowels that differ in height. Where the first vowel in a -VV- sequence is high and the second non-high Hamel separates them by a homorganic glide, as in tiye 'interior, inside of', or puwe 'testicle; fruit, seed'. However, this is little more than an orthographic convention for representing what is arguably a phonemic vowel sequence, since in normal speech it is impossible to produce a high vowel + unlike vowel without a transitional glide, and for this reason I abandon it in my orthography. One might nonetheless argue that even if we write /tiz/ and /pue/ without the transitional glides it is still possible to state a rule that glottal stop is predictable between identical vowels or dissimilar vowels of ascending height. This works in many cases, but not all, as seen in, e.g. [eit] 'putty nut' vs. [pelع?ip] 'bamboo tongs used to pick up hot items in cooking'. Moreover, despite the rejection of glottal stop in her phonemic analysis, Hamel includes it in her vocabulary in such items as lePe 'to see, look at', maPa 'skin', pok 2 ' 'little finger', or $t \varepsilon$ Pi 'parallel sibling'. Given these uncertainties about the distributional possibilities for the glottal stop, and the discrepancy between analyis and practice in Hamel's description I have opted to retain it in intervocalic position, even while recognizing that it is fully predictable between identical vowels.

In addition, Hamel reports that a glottal stop is automatically inserted as an onset before initial stressed vowels, hence /an/ = [Pan] 'fresh water', /um/ = [Pum] 'house', etc. I also recorded this in my transcriptions, where it was particularly clear across a morpheme boundary in collocations that place two vowels in contact, as /mata an/ = [mataPán] 'spring of fresh water' (lit. 'eye of water'), or /lo um/ = [loPúm] 'village' (lit' 'in the house'). However, in these cases it must be asked whether the intervocalic glottal stop is morpheme-final or morpheme-initial (or both). One other detail that I noticed in my transcription of sentence material was a tendency in natural speech to resyllabify a sequence of $\mathrm{CVC}+\mathrm{VCV}$ as CV + CVCV to avoid syllables without onsets, as in /itien tuh ayu/ 'That is my sugarcane', resyllabified as [dijén tu háju?].

This brings me to the major difference between the phoneme inventory of Hamel (1994) and the one that emerges from my fieldnotes, namely the putative contrast between tense and lax mid vowels $/ \mathrm{e} /$, $/ \varepsilon /$ and $/ \mathrm{o} / \mathrm{/} / \mathrm{o} /$. With regard to the front vowel Hamel (1994:17) gives three sets of words that are said to constitute minimal pairs. These are:

| /ehe/ | $[\mathrm{ehe}]$ | lie down, recline, sit |
| :--- | :--- | :--- |
| /عhe/ | $[\varepsilon \mathrm{h} \varepsilon]$ | yes; where |
| /hes/ | $[\mathrm{his}]$ | jump |
| /ckes/ | $[\varepsilon \mathrm{k} \varepsilon \mathrm{s}]$ | powdered sago pith |
|  |  |  |
| /pet/ | $[\mathrm{pIt}]$ | float |
| /tct/ | $[\mathrm{tct}]$ | ladder |

This is less convincing than one might hope for, since in two of the three forms posited with /e/ (/hes/ and /pet/) this segment surfaces as [r], which we are told (Hamel 1994:17) is also "a third variant of $[\varepsilon]$ ", making the two vowels phonetically identical in at least some environments. Morever, Hamel's vocabulary contains just three words that begin with /e/, but 72 that begin with $/ \varepsilon /$, meaning that $96 \%$ of the mid-front vowels in initial position are $/ \varepsilon /$, and just $4 \%$ are $/ e /$, an extremely disproportionate number for sounds that are said to contrast. A search of the first several pages of her vocabulary showed a similar preponderance of $[\varepsilon]$ : of the first 225 mid -front vowel graphemes encountered in Hamel's Loniu lexicon 206, or over $91 \%$ are [ $\varepsilon$ ]. In my own fieldnotes virtually all mid-front vowels were transcribed as $[\varepsilon]$, the rare exceptions generally preceding /i/, as in /eili/ 'to call out, to hail s.o.', /ein/ 'its scent, its odor', or /eit/ 'putty nut'. Hamel (1994:184) writes the last of these variably as /et/, /e:t/ and /eyt/. However, Loniu has no word-final consonant clusters or contrastive vowel length, making the latter two transcriptions appear like attempts to escape from a problem in the phonemic analysis of the vowels.

Moreover, in her vocabulary Hamel lists forms such as $l e$ ?e 'to see, look, at', where I repeatedly
 continuative, simulfactive' (which would make these two morphemes another minimal pair)
 transcribed [p\&y] in my fieldnotes, her te 'feces' is [t₹?], and her yen 'a fight or battle; war' (cp. $y \varepsilon n$ 'lie down') is [jen], to name only some of the disagreements between her transcription of front vowels and mine. Given Hamel's considerably longer exposure to the language than I had, I would normally defer to her analysis as being more trustworthy. However, there are certain reasons why I have not done this. First, prior to working in the Admiralties I collected field data for 41 language communities in Borneo (Blust 1974), some of which, as Sa'ban of northern Sarawak, have four contrastive front vowels $/ \mathrm{i} /$ / $/ \mathrm{I} /$, /e/, / $\varepsilon /$, and four contrastive back vowels $/ \mathrm{u} /$, $/ \mathrm{\sigma} / \mathrm{lo} / \mathrm{l} / \mathrm{\rho} /$ (Blust 2001:262). I was therefore prepared in advance to hear the difference between tense and lax variants of the mid vowels in a language other than English. Second, it is my practice in transcribing field data to write nothing until I have imitated the speech produced and my imitation has been accepted, and this led to transcriptions of [ $\varepsilon$ ] rather than [e] in the forms just cited. Third, in my experience, speakers will object if a researcher fails to distinguish phonemes in pronouncing the target language, and this never came up during the ten meetings that I had with these two speakers over a period of thirteen days. Finally, if my data contains errors regarding the $[e]:[\varepsilon]$ difference, the direction of mistranscription would almost certainly have been to write $[\varepsilon]$ as [e], rather than the reverse, so these discrepancies must be regarded as significant.

To add yet another reason for questioning this distinction, Hamel gives puwe 'testicle; fruit, seed' and puwe 'betel palm and its fruit' with different final vowels (hence another minmal pair for the asserted contrast). However, as the polysemy of puwe itself attests, these are the same form, as confirmed by the observation that words with both glosses (i.e. 'testicle', vs. 'fruit; betel nut') are reflexes of Proto-Malayo-Polynesian *buaq 'fruit; seed; blossom; testicle; betel nut; numeral classifier for roundish objects, etc.' (Blust and Trussel 2020). It is true that some languages of Manus now distinguish these two words, as in Nali brua- 'testicle' but brue 'betel nut', possibly because betel chewing is so central to the cultures of Manus that this particular homophony might prove to be conversationally indelicate if allowed to stand. However, other languages have one form for both meanings, as Likum, with pwiye, or Levei, with pui, and those languages that do distinguish these forms phonemically do so by preserving the original vowel in one and fronting it in the other, rather than by fronting it in both with a tense/lax distinction.

The evidence for an /o/ : / / contrast is equally unconvincing, as I never recorded [ 0 ], even though I recorded the lax mid-front vowel hundreds of times. Moreover, comparative evidence shows that Hamel's /o/ and /o/ both reflect POC *o (*onom > wono-h 'six', *ponu > poñ 'sea turtle', *nopu > noh 'stonefish', *topu > toh 'sugarcane', etc.) Based on these observations I conclude that Loniu has only two mid-vowel phonemes /e/ and /o/. The front member of this pair is usually realized as [ $\varepsilon$ ], but occasionally as [e], especially when preceding a front vowel or glide. The back vowel, so far as my transcriptions indicate for the speakers with whom I worked, is invariably [o].

This still leaves one complication with regard to the vowels. My phonetic transcriptions for Loniu include four values for front vowels: [i], [r], [e] (rare), and [ $\varepsilon$ ]. The one phonetic vowel that remains to be discussed is the lax high-front vowel [r]. Hamel (1994:16-17) states that, while / i / is usually [i], "In closed syllables or when followed by a nasal consonant, /i/ is optionally realised as lower, more central high front [I]." Similarly, she notes that "/e/ has two major variants, [e] and [ I$] \ldots$ This [ I ] is phonetically the same as the [ I ] allophone of $/ \mathrm{i} /$. The assignment of $[\mathrm{I}]$ to one or the other of $/ \mathrm{i} /$ and $/ \mathrm{e} /$ is dependent on careful pronunciation and speaker responses to 'same or different' tests." And, lastly, she observes that " $/ \varepsilon /$ is realised as the lower mid-front vowel $[\varepsilon]$, and occurs in all positions. In unstressed syllables, especially in rapid speech, $/ \varepsilon /$ may be reduced and centralised to [ə] ... A third variant of $/ \varepsilon /$, [ I , occurs optionally before a suffixed nasal possessive marker, as in /عtem/ [ $\mathrm{tt} \mathrm{\varepsilon m}]$ ~ [ $\varepsilon$ tım] 'your liver'., /lehen/ [lغhen] ~ [lغhın] 'its tooth'."

Working with the two young speakers who taught me a bit of Loniu some nineteen years before Hamel's grammar was published, I experienced the same difficulties she did in determining the underlying form of vowels that were often neutralized as [ I ] in pronunciation. In general my observations confirm hers. Thus, the singular possessive paradigm for 'rib', /kesi/, was recorded as [késip] (free form), [késiw], [késım], [késin], with lowering and laxing of /i/ before nasals, but not before other segments, while the similar paradigm for 'liver', /ete/ was recorded with invariant [r]: [P'́tı?] (free form), [?'́tıw], [?ćtım], [? $\varepsilon$ tın]. In most cases the underlying last vowel in these cases is distinguished in the free forms, with $[\mathrm{i}]=/ \mathrm{i} /$, and $[\mathrm{I}]=/ \mathrm{e} /$. Hamel's use of "optionally" is important, since i also recorded cases of singular possessive paradims with
 Finally, a word was sometimes recorded in a single shape with [r], as [ $\varepsilon$ liki] 'coconut oil', [pokit]
'deep sea far from shore', or [tfakin] 'old, of things' and here the underlying vowel was indeterminate without further information. Where Hamel has such forms in her vocabulary I have generally followed her interpretation, but because the two vocabularies only partially overlap this alternative was not always available. Moreover, she was also unable to resolve some of these ambiguities, as seen in her inclusion of čakın 'old, dirty, used', or pokıt 'saltwater coloured', despite the absence of /I/ in her phoneme chart (I will return to differences of glossing below). in other cases she recorded multiple forms, as with $\varepsilon$ leke $\sim$ elike 'coconut oil', with variants that leave the matter of a single invariant underlying form in limbo (perhaps justifiably). Where this alternative failed I turned to cognates in other languages of the Admiralties, as with Ere [sáken], Leipon [fóken], Bipi [dróken] 'old, of things', Levei [f'ók $\varepsilon$ ]] 'old, of people', thus favoring Loniu /caken/ 'old, of things', or [kit] 'octopus' next to Nali [kuwit], Titan, Nauna [kwit], Lou [kit], hence Loniu /kit/ 'octopus'. This still left the following forms with an ambiguous underlying front vowel:
(1) $e p w_{I}$ (in sih $e p w_{I}$ 'kinsman, relative')
(2) yelepu etm 'stinging March fly'
(3) Imwec 'spoiled, rotten (vegetable matter)'
(4) likın 'node in bamboo or sugarcane'
(5) marapıñek 'fallow land' (= mata pıñek?)
(6) pokit 'deep sea far from shore'
(7) puciriba 'centipede’
(8) puedrili 'giant clam'
(9) tahituw 'last one (in sequence)'

Hamel (1994:23ff) deals with stress placement and the occasional deletion of unstressed vowels, and I need not repeat here what she already covers well. Whether stress should be considered phonemic in Loniu remains an open question, as it does not invariably fall on the same syllable, yet never seems to be critical to distinguishing the meanings of morphemes. One pattern that appears repeatedly in my field materials is for stress to be penultimate in the free forms of nominal bases, but final in at least the singular possessed forms, as in [nímع?] 'hand' (free form), [nimó?], [nimém], [nimén]. This suggests that stress was penultimate in pre-Loniu before the loss of final vowels, and that the language had a rule of rightward stress shift that maintained stress on the penult in forms suffixed with $*$-gu, *-mu and *-ña.

Hamel also states (1994:24) "There are some dozen words which are consistently pronounced with a perceptibly lengthened vowel, in all cases the penultimate vowel." The examples she cites (all with initial/penultimate stress) are: 1. [ma:sih] 'all', 2. [mu:wan] 'bad', 3. pi:Pen] 'white', 4. [i:nen] 'small', 5. [pa:san] 'know; knowledge of', 6. [ke:yaw] 'ceremonial platform', 7. [ka:lon] 'ant', 8. [po:li] 'as far as', 9. [na:ton] 'his/her grandmother', and 10. [ka:m ${ }^{\mathrm{w}}$ an] 'ashes; fireplace'. To these I can add the following, which were similarly recorded with a longer vowel in stressed position than is generally true in other words: 11. [Pa:tfay] 'fork of a branch', 12. [he:no?] 'first, before', 13. [ka:tfan] 'floor of a house', 14. [maha:puy] 'four (in counting bunches)', 15. [nu:nun] 'earthquake', 16. [t $\varepsilon: \mathrm{ku}]$ 'charcoal'. Hamel (1994) lists four of these without noting penultimate vowel length: ačaŋ 'gloss unclear, poss. a stick used as a kind of tool', hans, hams, heno 'before, first', kačay 'floor', mahapuy 'four (in counting clusters of fruit growing on a single branch, such as betel nut, coconut, or Malay apples)'.

Taking all of these considerations into account, my interpretation of the Loniu phoneme inventory appears in Table 6.2:

Table 6.2: The phonemes of Loniu proposed here


Quite apart from differences in the phoneme inventory, which are a matter of interpretation, there are also a number of transcriptional differences between Hamel's vocabulary and mine. These are noted within parentheses in the vocabulary that follows this sketch, along with occasional differences in glosses. Within my own material I also found variation in words that end with a non-low vowel plus homorganic glide (-ey, -iy, -ow, -uw), as several of these were recorded just as often without the glide, and had the predictable glottal stop that follows word-final vowels. Examples that are particularly noteworthy are /iy/ ~/i/ ' 3 SG ', /wow/ ~/wo/ ' 2 SG', and $/ \mathrm{key} / \sim$ $/ \mathrm{ke} / \sim \mathrm{ki} /$ 'tree, wood'. The personal pronouns were recorded with roughly equal frequency as [ij] or [iP], and [wow] or [wo?] in the same environments. That this was not due to mishearing was confirmed in the field by careful checking, and insistence from the speakers that both forms are correct. By contrast, the word for 'tree, wood', which appears both in isolation, and in a number of expressions relating to plants, was most commonly heard without the final glide.
6.2.2. Phonotactics. Hamel indicates few phonotactic constraints for Loniu, and this makes it somewhat different from some other languages of Manus, such as Bipi, which permit only a limited number of consonants word-finally. She notes (Hamel 1994:6) that "Generally, consonant clusters do not occur except across morpheme boundaries." The one exception that she notes, and which I recorded as well is pamboñ 'eagle ray'.

Where two consonants do come into contact across a morpheme boundary the cluster is usually simplified, as she notes with min 'to sit' + tan 'down' = [mítan] 'to sit down'. However, where the first consonant is a glide, as in the collocation ey pow 'the smell of a pig' it is allowed to stand both before word boundary and before morpheme boundary, as in $\varepsilon y+n$ [ejn] 'it's smell', where the glide is indistinguishable from the corresponding high vowel, as in [ejt] 'putty nut', where a glide has never existed (cf. POC *qarita).

Three consonants do not occur in final position, namely the labiovelars, which occurred only as syllable onsets in POC and PADM, and $/ 1 /$, which had no earlier distributional limitations. The
labiovelars are also rare before rounded vowels, and alternate with their plain counterparts in
 suggests that rounded consonants are favored before non-round vowels. However, there is also conflicting evidence that labial consonants before labial (rounded) vowels tend to be slightly rounded in anticipation of the vowel, leading to discrepancies between Hamel's transcriptions and mine in the few cases where they appear in both vocabularies, as in mon 'bead anklets' (my notes) vs $m^{w} \partial n / m \supset n$ 'beaded or woven arm or leg band' (Hamel), or moñ long red or yellow sweet pandanus fruit' (my notes) vs. $m^{w} \supset n ~ ' k . o . ~ f r u i t, ~ p r o b . ~ p a n d a n u s ' ~(H a m e l) . ~ W h e r e ~ c o g n a t e s ~$ are available in other languages of the Admiralties that distinguish $* \mathrm{~m}$ from ${ }^{*} \mathrm{mw}$ they show a plain bilabial nasal (e.g. PADM *moña 'k.o. pandanus fruit'), and it therefore seems likely that the labiovelars before rounded vowels in Hamel's transcriptions are underlying plain labials with optional allophonic rounding before a rounded vowel. Finally, I recorded [kaman] 'men's house', but [lo komwan] 'in the men's house' (also offered in the meaning 'men's house'), suggesting that a labial consonant may show allophonic rounding following a rounded vowel.

Historically, the lateral liquid merged with $* \mathrm{n}$ in final position, and although I recorded no synchronic alternations Hamel (1994:21-22) reports several, such as kaman 'men's house' : kemelin 'his men's house', or tun 'canoe' : telew 'my canoe. Loanwords also show adaptations to this morpheme structure constraint, as with nin 'needle' (TP nil).

Although many morphemes are monosyllabic, Hamel (1994:25-26) reports some tendencies to vowel harmony within longer morphemes in Loniu, with high frequencies of agreement in vowel height or rounding. However, there are so many exceptions to these observations that they should not be overstressed.
6.2.3. Phonological processes. In speech, underlying and surface forms can be substantially different in Loniu. One of the most common processes that produces variant pronunciations of the same morphemes is the lenition of /t/ to [r] in intervocalic position, which appears to be a sound change in progress. In my data this is particularly noteworthy with the morphemes /mata/ 'eye; front; blade, point; focal point', and /pata/ 'stem, stalk, trunk'. The first of these was recorded with [ t ] in the possessive paradigm for 'eye', and in compounds like mata an 'spring of fresh water', or mata susu 'nipple of the breast', but with [r] or [r] in [mara tip] 'window' (Hamel gives just cip 'window', but note that the English word itself is historically 'wind eye'). The second was recorded with /t/ in [patakí?] 'tree trunk', but with [r] in [parakáka?] 'lower leg (knee to ankle)', [paraním\&?] 'arm above the wrist', and [paraníw] 'trunk of coconut palm'. Since there is an independent [r] (or at least an [r] that was not observed in free variation with [t]), the decision how best to write such forms is not straightforward. Hamel (1994:12) suggests that because $/ \mathrm{r}$ / is only realized as a liquid, while /t/ may be realized either as a liquid (in rapid or casual speech), or as a stop (in careful speech), the two should be written differently. I agree with regard to the basic lexical entry, but some compounds such as [parakáka?] and [paraním\&?], which were heard only with the rhotic variant, may have already been restructured as /para kaka/ and /para nime/, while [patakí?] may still be /pata ke/. Other morphemes heard sometimes with [t] and sometimes with [r] are /peti/ 'from', which was recorded variously as [péri२], [píri२] and [priP], as in [ju? priP Loniu] 'I'm from Loniu', and the continuative aspect or present marker /ta/, as in /wo ta tuah pue/ 'You are chewing betel', heard in fast speech as [wóra túwah púwi?].

It is possible that flapping of intervocalic /t/ in rapid speech is an extension of intervocalic voicing, which is the first step in assimilating voiceless stops to the [+voice] and [+continuant] features of surrounding vowels, as both $/ \mathrm{p} /$ and $/ \mathrm{t} /$ were occasionally heard as their voiced counterparts when the utterance was 'quick', as with [topohón] ~ [tobohóy] 'dragonfly', or [pow tatáy] ~ [pow datáy] for /pow ta tay/ 'The pig is grunting'. The conditions determining why the first $/ t /$ in this utterance is voiced in rapid speech, while the second is not, remain unclear. Stress does not appear to be implicated, as seen with [súdaPidísu?] meaning 'They are having sex'. Loniu has no phoneme [d], and the morpheme boundaries in this construction were initially unclear, but with a little work I found this to be /suPu ta iti suPu/ (3DL PRES sexual intercourse 3DL). The phonological processes that gave rise to this difference are 1 . loss of intervocalic glottal stop, 2. contraction of the resulting sequence of like vowels, and 3. voicing of $/ t /$. The automatic final glottal stops after $/ \mathrm{ta} /$ and the second instance of $/ \mathrm{suPu} /$ were retained, while those after the first instance of /suPu/ and /iti/ were lost under conditions that I am unable to specify. In still other cases rapid speech variants show assimilatory changes to adjacent vowels and consonants, as in the phrase /kito tata cow/ 'on top of the mat', which was recorded as [kóro? tára? tow] in rapid speech, and then then slowed down at my request to [kíto? táta? tyow]. In addition to these processes I noticed occasional deletions of glottal stop between vowels, as with /soPiy/ > [soj] 'to shoot', /su Pu/ > [su] '3DL, the two of them', and the loss of both final vowels and final consonants between words in contact, as in /ceni kaka/ 'muscles of the leg', heard as [tf£ŋkáka], and /masih/ 'all' heard as [masi] in /masih pucey/ 'altogether'.

Apart from unique assimilations of the kind recorded in /kito/ > [kóro?], the Loniu vowels are subject to a number of recurrent phonological processes under conditions that are sometimes hard to define. First, my fieldnotes indicate clear nasalization of vowels after a nasal consonant, with certain consonants, including at least $/ \mathrm{h} /$, transparent to nasal spreading, as in /mahah/ > [mãhãh] 'four (in serial counting)'.

Second, as noted earlier, Hamel (1994:16-17) states that "In closed syllables or when followed by a nasal consonant, /i/ is optionally realised as lower, more central high front [ I ]." My own fieldnotes partially support this statement and partially do not. In examples such as [kési२] 'rib' (free form), [kesíw], [kesím], [kesín], /i/ lowers, as stated, when followed by a nasal, but not in all closed syllables, and in examples such as [nímo?] 'my hand' it does not lower before a nasal. To cover all cases, then, it appears that the condition for lowering and laxing of $/ \mathrm{i} /$ is preceding a nasal consonant in a closed syllable (hence changing Hamel's disjunction to a conjunction of conditions). However, in other singular possessive paradigms I recorded lowering before both
 still other cases /i/ does not lower before any of the singular possessive suffixes, as with [ut] 'penis' (free form), [utíw], [utím], [utín]. The only difference here is that the free form lacks a final vowel + glottal stop, for reasons that remain unclear (cf. POC *qutin 'penis'), since nearly all other body part terms retain the last syllable vowel in both the free form and the possessed forms. Note, also, that although lowering of $/ \mathrm{i}$ / in possessive paradigms is commonplace, nothing similar happens to $/ \mathrm{u} /$.

Third, both /a/ and /e/ undergo rounding processes in the first person singular of possessive paradigms, but these are not fully predictable. For example, compare the following:

[nímع?] (free form) 'hand’, [nimó?], [nimém], [nimén]
Why the 1SG possessive form of 'tooth' is marked by /-w/, but the similar construction for 'hand' is marked by rounding /e/ to /o/ is unclear, but it is a pattern shared with Leipon, spoken on the nearby Pityilu, Ndrilo and Hauwei islands, and less clearly with Lele of central Manus. Even more puzling is the difference between the 1 SG possessive forms of bases that end in $/ \mathrm{a} /$, as with the following:
[kákaP] (free form) 'foot/leg', [kokóP], [kakám], [kakán] [máta?] (free form) 'eye', [metú?], [matám], [matán]

Here, 'my foot/leg' shows rounding of the final stem vowel /a/, to /o/, just as 'my hand' does for /e/ to /o/, but 'my eye' shows phonetically unmotivated fronting of the penultimate stem vowel, and rounding of the final stem vowel $/ \mathrm{a} /$ to $/ \mathrm{u} /$ rather than $/ \mathrm{o} /$. Hamel (1994:26-29) provides a brief, incomplete treatment of these patterns, which are theoretically challenging. and in need of further study.
6.3. GRAMMAR. Given Hamel's published grammar, which is based on much longer exposure to the language than I had in a three-month linguistic survey of the whole of the Admiralties, the reader is advised to refer to her description for a fuller account of Loniu grammar than I can provide here. However, it is always preferable to have more than one pair of eyes viewing the object under description, as each person will inevitably notice some details that others have missed, so the following remarks may not be entirely without value. The categories covered in this brief treatment are the same as those treated in previous sketches, namely 6.3.1. the counting system, 6.3.2. personal pronouns, 6.3.3. possessive pronouns, 6.3.4. demonstratives, 6. 3.5. locatives and directionals, 6.3.6. quesstions, 6.3.7. causatives, 6.3.8. the attributive suffix, 6. 3.9. reciprocals and reflexives, 6.3.10, imperatives, 6.3.11. tense/aspect, and 6.3.12. miscellaneous (a catch-all for other bits and pieces that do not fit into the other categories).
6.3.1. The counting system. The Loniu system of serial counting is basically the same as most others found in the eastern Admiralties: it is decimal, with separate words for 'hundred' and 'thousand' but subtractive numerals for 7-9. Where complexity arises is in counting specific referents, as these require the use of noun class markers, or classifiers, which are essentially built into the numerals, giving rise to considerable variation in numeral form, depending upon what is being counted. Table 6.3 shows the basic Loniu numerals used in serial counting:

Table 6.3: Loniu numerals used in serial counting

| sih | one |
| :--- | :--- |
| maPuoh | two |
| macoloh | three |
| mahah | four |
| malimeh | five |
| mawonoh | six |
| maParucoloh | seven |


| maParuPuoh | eight |
| :---: | :---: |
| maParusih | nine |
| masonon | ten |
| masoyon e sih | eleven |
| masoyon e uoh | twelve |
| masonon e coloh | thirteen |
| masonon e hah | fourteen |
| masoyon e limeh | fifteen |
| masonon e wonoh | sixteen |
| masojon e erucoloh | seventeen |
| masoyon e erupuoh | eighteen |
| masoyon e erusih | nineteen |
| mapuyon | twenty |
| maPuyon e sih | twenty one, etc |
| maculuyon | thirty |
| mahayon | forty |
| malimenon | fifty |
| mawonoyon | sixty |
| maParuculuyon | seventy |
| maParuPuyon | eighty |
| maParu-sonon | ninety |
| masayat | one hundred |
| maPunet | two hundred |
| maculunat | three hundred |
| mahayat | four hundred |
| malimenat | five hundred |
| mawonoyat | six hundred |
| maParuculuyat | seven hundred |
| maParuPuyet | eight hundred |
| maParusayat | nine hundred |
| mapun sih | one thousand |
| mapun uoh | two thousand |

Only one complex number between these multiples of ten was recorded: mapuyet e culuyon '230', a result that follows predictably from what has already been given, except that the numeral prefix $m a$ - is dropped in the postposed word for 'thirty'.

Apart from its use of subtractive numerals for 7-9, 70-90, 700-900 and so on, which is common to nearly all languages of the eastern Admiralties, perhaps the most striking features of the Loniu numerals used in serial counting are that all numerals except 'one' start with ma-, and all except 'ten' end with - $h$. The latter feature is shared with most languages of the Admiralties, a reflex of the historically postposed general numeral classifier *-pu. The prefix ma- which, as Hamel (1994:54-55) notes, is also found in the interrogative of quantity macehe, has no clear history or function, but is shared with the neighboring Nali, Papitalai, and Leipon, from one of which it may have been borrowed, as it appears to be an areal feature. Finally, an oddity shared with a number of the languages of Manus is the vowel variation in the base for 'hundred', which is yet
in 'two hundred' and its derivative 'eight hundred', but yat in all other instances of this base. A similar $a \sim e$ alternation that has no apparent phonetic motivation is seen with the subtractive morpheme aru preceding the numeral base in 7-9 and their multiplicative derivatives 70-90, and $700-900$, but eru preceding the numeral base in the additive derivatives 17-19.

The numbers used in serial counting are only the tip of the numerative iceberg in Loniu, as one normally counts specific referents. Hamel (1994) has covered this feature of the grammar in detail, and her discussion should be consulted for further information, but I will begin with a description of the more limited material in my fieldnotes.

Many languages in East and Southeast Asia use numeral classifiers, and in these languages, which are the models for how numeral classifiers work, the classifier is typically an independent noun that occurs in conjunction with the numeral and the quantified referent, as with Malay dua orang guru (two-person-teacher) 'two teachers', tiga ékor sapi (three-tail-cow) 'three cows', or lima buah rumah (five-fruit-house) 'five houses', where orang is an independent noun meaning 'person' but also functions as a numeral classifier in counting people, ékor is an independent noun meaning 'tail' but also functions as a numeral classifier in counting animals, and buah is an independent noun meaning 'fruit' but also functions as a numeral classifier in counting any large roundish object. The system of numeral classifiers in Loniu differs from this prototypical pattern in fusing the classifer and numeral, often in barely recognizable form, where the classifier is sometimes transparently derived from an independent noun, and sometimes is not.

In the following data I recorded pattern (1) for counting houses, although Hamel (1994:65) states more precisely that it applies to "houses when they are completely built, as well as households." Pattern (2) was recorded for counting trees, but Hamel (1994:65) adds that it is also used to count canoes and bunches of bananas. Pattern (3) was recorded for counting children and ropes, but Hamel (1994:61) notes that it is used "to count humans, loose dogs' teeth (not on a string or ornament), individual feathers, and fish" (the last of these with some exceptions). ${ }^{1}$ Pattern (4) was recorded for counting leaves, which Hamel (1994:59) designates more precisely as leaves "of all types of plants except palm leaves." Pattern (5) was recorded for counting bunches of betel nuts or coconuts, which Hamel (1994:63) refines as "clusters of fruit growing on a single branch, such as betel nut, coconut, or Malay apples", and pattern (6) is used for counting fish:
(1) The -em pattern (with um 'house')

| 1 | um sem | 6 | um mawonoem |
| :--- | :--- | :--- | :--- |
| 2 | um maPuem | 7 | um maParuculuem |
| 3 | um maculuem | 8 | um maParuPuem |
| 4 | um mahayem | 9 | um maParusem |
| 5 | um malimiyem | 10 | um masonon |

(2) The -ey pattern (with $k e \sim k e y$ 'tree; wood')

| 1 | ke sey | 6 | ke mawonoey |
| :--- | :--- | :--- | :--- |
| 2 | ke maPuey | 7 | ke maParuculuey |

[^0]| 3 | ke maculuey | 8 | ke maParuPuey |
| :--- | :--- | :--- | :--- |
| 4 | ke mahayey | 9 | ke maParusey |
| 5 | ke malimeyey | 10 | ke masonon |

(3) The -mow pattern (with was 'rope; vine; bowstring')

| 1 | was homow | 6 | was wonomow |
| :--- | :--- | :--- | :--- |
| 2 | was maPamow | 7 | was eruculumow |
| 3 | was maculumow | 8 | was eruPumow |
| 4 | was mahamow | 9 | was erusomow |
| 5 | was limemow | 10 | was masojon |

(4) The -kap pattern (with loPo na ke 'leaf of a tree')

| 1 | loPo na ke hakap | 6 | loPo na ke mawonokap |
| :--- | :--- | :--- | :--- |
| 2 | loPo na ke maPukep | 7 | loPo na ke maParuculukap |
| 3 | loPo na ke maculukap | 8 | loPo na ke maParukep |
| 4 | loPo na ke mahakap | 9 | loPo na ke maParusakap |
| 5 | loPo na ke malimekap | 10 | loPo na ke masonon |

(5) The -puy pattern (with pue 'betel nut')

| 1 | pue hepuy | 6 | pue mawonopuy |
| :--- | :--- | :--- | :--- |
| 2 | pue maPapuy | 7 | pue maParuculupuy |
| 3 | pue maculupuy | 8 | pue maParuPupuy |
| 4 | pue mahapuy | 9 | pue maParusepuy |
| 5 | pue malimepuy | 10 | pue masonon |

(6) The 'fish' pattern (with kanas 'mullet'

| 1 | kanas seleha | 6 | kanas macoloh |
| :--- | :--- | :--- | :--- |
| 2 | kanas sih | 7 | kanas macoloh e seleha |
| 3 | kanas sih e seleha | 8 | kanas mahah |
| 4 | kanas maPuoh | 9 | kanas mahah e seleha |
| 5 | kanas mapuoh e seleha | 10 | kanas malimeh |

While I recorded only these six patterns of numeral classifiers, Hamel (1994:57-66) lists 31, and the reader is referred to her more extensive description for what is perhaps the complete system. Noteworthy aspects of this system are that -em, eey and -puy are derived from independent nouns that are semantically related to the property of the classifier (um 'house', key ~ ke 'tree; wood', -puy 'a bunch, as of bananas'), but other classifiers show no known connection, as with -mow or -kap. The last pattern that I recorded requires a comment. Hamel (1994:66) gives salaha, while I recorded [sعlغha?] five separate times, so it appears that there is some variation in the phonetics of this classifier. She also states that salaha "is used as a counter for certain kinds of fish, including scad and sea bream", but in my data it is illustrated with kanas 'mullet', and I was told that it is used in counting any kind of fish.

Without question, the most striking feature of the 'fish' pattern is the use of the numerals 1-5 from serial counting with twice their values in counting fish, so that sih 'one' (in serial counting) means 'two' in counting fish, maPuoh 'two' means 'four' in counting fish, and so on, and the odd numbers from 3-9 simply add 'and one' to each of these, so that 'three' $=2+1$, 'five' $=4+$ 1, etc. Hamel (1994:66) proposes that this surprising feature may have arisen from referring to pairs or halves of fish. If so sih means 'one pair', maPuoh means 'two pair', and so forth, and the odd numbers above 'one' would refer to ' X pairs' + one more single fish.

As can be seen, the system of numeral classifiers in Loniu is complex, and requires considerable memorization. For this reason it is a reasonable guess that counting specific classes of objects correctly is a late feature in children's acquisition of the language, and it is likely to be among the first to disappear as the language becomes increasingly endangered.
6.3.2. Personal pronouns. Like many other Oceanic languages, Loniu personal pronouns distinguish singular, dual and plural numbers, as seen in Table 6.4:

Table 6.4: Loniu personal pronouns

|  | 1IN | 1EX | 2 | 3 |
| :--- | :--- | :--- | :--- | :--- |
| SG |  | yu | wow | iy |
| DL | toPu <br> citu | u | ow | supu |
| PL | utu | atow | hitow |  |

The system of personal pronouns that I was given differs from that in Hamel (1994:52) in two respects. First, for /yu/, /citu/, /utu/ and /hitow/ Hamel has/yo/, /cito/, /uto/ and /hetow/. Given the systematic character of these differences (high vowels in my transcriptions for mid-vowels in hers), Hamel's extensive contact with the community, and the occurrence of these morphemes in multiple examples that we both recorded, it is very unlikely that either of us is wrong. This can only mean that there are differences in the pronunciation of such basic and high-frequency words within what speakers regard as the same language. This may seem surprising, but these are hardly the only examples in which mid-vowel/high-vowel discrepancies are found between Hamel's data and mine, as I have already noted above with regard to the lexicon in general.

The second respect in which the personal pronouns given to me in elicitation differ from those in Hamel (1994) is with respect to number, as Hamel (1994:52) gives my plural set as paucal forms, and provides a different set of plural pronouns: tahah '1PL.IN', uweh '1PL.EX', hah '2pl.', seh '3pl.'. I have little doubt that Hamel's description of Loniu personal pronouns is correct, and that mine is defective. Each time they were described to me, the members of what I recorded as the plural set were said to represent 'three or more' persons. The forms tahah, uweh and hah were not elicited, and for Hamel's sch '3pl.' I recorded only se 'all, everyone', which does not occur as a subject or object pronoun in my data. Why these forms, which were carefully recorded by two trained linguists, would differ as much as they do is puzzling, but it is possible that the two speakers with whom I worked, and who presented themselves to me as being from the same language community, spoke sub-dialects of Loniu, with one coming from Loniu, and the other from Lolak village. Beyond that speculation I can only report what was given to me as
accurately as possible, and highlight these differences in the interest of shedding further light on this language, rather than try to cover them up, which would benefit no one. The following examples illustrate full personal pronoun sets that were given to me in sentence context with the verbs 'to paddle' and 'to eat', the latter in both intransitive and transitive forms:

| 1) | yu | tow |  | sue | 'I am paddling' |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | wow | ta |  | sue |  | are paddling' |
|  | iy | ta |  | sue | 'S/h | is paddling' |
|  | to Pu | ke |  | sue | 'The | wo of us are paddling' |
|  | citu | ke |  | sue | 'The | hree or more of us are paddling' |
|  | u | makala |  | sue | 'The | vo of us (excl.) are paddling' |
|  | utu | makala |  | sue |  | hree or more of us (excl.) are paddling' |
|  | ow | makala |  | sue | 'The | wo of you are paddling' |
|  | etow | makala |  | sue | 'The | hree or more of you are paddling' |
|  | suPu | makala |  | sue | 'The | wo of them are paddling' |
|  | hitow | makala |  | sue |  | hree or more of them are paddling, |
| 2) | yu | lePe | tow | yeniyan |  | 'I am eating' |
|  | wow |  | ta | yeniyan |  | 'You are eating' |
|  | iy |  | ta | yeniyan |  | 'S/he is eating' |
|  | to Pu | lePe | tow | yeniyan |  | 'The two of us are eating' |
|  | citu | lePe | tow | yeniyan |  | 'The three or more of us are eating' |
|  | u | lePe | tow | yeniyan |  | 'The two of us (excl.) are eating' |
|  | utu | le?e | tow | yeniyan |  | 'The three or more of us (excl.) are eating' |
|  | ow |  | ta | yeniyan |  | 'The two of you are eating' |
|  | etow | la | ta | yeniyan |  | 'The three or more of you are eating' |
|  | suPu | la | ta | yeniyan |  | 'The two of them are eating' |
|  | hitow | la | ta | yeniyan |  | 'The three or more of them are eating' |
| 3) | yu | lePe | tow | yan | mah | 'I am eating taro' |
|  | wow | le | ta | yan | mah | 'You are eating taro' |
|  | iy | le | ta | yan | mah | 'S/he is eating taro' |
|  | to u |  | ta | yan | mah | 'The two of us are eating taro' |
|  | cito |  | ta | yan | mah | 'The three or more of us are eating taro' |
|  | u |  | ta | yan | mah | 'The two of us (excl.) are eating taro' |
|  | utu |  | ta | yan | mah | 'The three or more of us (excl.) are eating taro' |
|  | ow |  | ta | yan | mah | 'The two of you are eating taro' |
|  | etow |  | ta | yan | mah | 'The three or more of you are eating taro' |
|  | suPu |  | ta | yan | mah | 'The two of them are eating taro' |
|  | hitow |  | ta | yan | mah | 'The three or more of them are eating taro' |

Probably the most striking thing about these three examples of personal pronouns in syntactic context is the material found between the subject and the verb, which differs in some particulars in each case. This will require a discussion that is best saved for section 6.3.11.

While paradigms 1)-3) were recorded without any variation in the form of the verb, the verb $/ \mathrm{la} /$ (free form) 'to go' varies between /la/ and /le/. The full paradigm for /la/ 'to go' appears in 4)

4) | yu | le | 'I am going' |
| :--- | :--- | :--- |
| a | la | 'You are going' |
| i | le | 'S/he is going' |
| topu | la | 'The two of us are going' |
| citu | la | 'The three or more of us are going' |
| u | la | 'The two of us (excl.) are going' |
| utu | la | 'The three or more of us (excl.) are going' |
| ow | la | 'The two of you are going' |
| etow | la | 'The three or more of you are going', |
| suPu la | 'The two of them are going ' |  |
| hitow | la | 'The three or more of them are going' |

Two things are noteworthy about paradigm 4). First, unlike 'to paddle', 'to eat', 'to look', and most other verbs for which I have data, no tense/aspect marker is used with 'to go'. Second, for the 2SG I recorded [a? la?] rather than [wow lap]. Hamel (1994:72ff) divides Loniu verbs into two classes, using $m \varepsilon$ 'to come' to illustrate Class I, and la 'to go' to illustrate Class II, as shown in Table 6.5 for the present/past (as opposed to 'potential' mood):

Table 6.5: Inflection of Class I and Class II verbs in indicative mood (after Hamel 1994:73)

|  | Class I: $\mathrm{m} \varepsilon$ 'to come' | Class II: la 'to go' |
| :--- | :---: | :--- |
|  |  |  |
| 1SG | $\mathrm{i}+\mathrm{m} \varepsilon \sim \mathrm{u}+\mathrm{m} \varepsilon$ | $\mathrm{i}+\mathrm{l} \varepsilon \sim \mathrm{u}+\mathrm{l} \varepsilon$ |
| 2SG | $\varepsilon+\mathrm{m} \varepsilon$ | $\mathrm{a}+\mathrm{la}$ |
| 3SG | $\mathrm{i}+\mathrm{m} \varepsilon$ | $\mathrm{i}+\mathrm{l} \varepsilon$ |
| NON-SG | $\mathrm{m} \varepsilon$ | la |

I have very little data for the potential, and the reader is referred to Hamel (1994) for further information. Suffice it to say that the potential for Class I verbs adds $k$ - to the 1 SG and 3 SG indicative forms, and $k \varepsilon$ - to the non-singular, while for Class II verbs it adds $k$ - to the 1 SG and 3SG indicative forms, and $k a$ - to the non-singular (the 2 SG remains the same in both classes). What was offered to me for 'You are going' appears, then, to be an inflected form of the verb without a subject pronoun, but why this departure from the general pattern would occur only with the second person singular is unclear (note also that the 1 SG and 3 SG forms of the verb were given in uninflected form). In addition, if $a$ - were truly a prefix we would expect it to be phonologically bound to the verb stem, yet it was clearly recorded with a terminal glottal stop, suggesting that it is separated from the verb by word boundary rather than morpheme boundary. This could conceivably have been because the agreement marker/a/ appeared between pronouns /yu/ and /i/, both of which have a final glottal stop in this paradigm (although in general /i/ varies freely with /iy/).

In addition to subject position, the same set of pronouns was recorded in object position, as seen in sentences 5) -8):

| 5) | i | ta | lele | mere | yu |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 3SG | PRES | look | at | 1SG |

'S/he is looking at me'
6) yu lePe tow lele mere wow

1 SG CONT PRES look at 2SG
'I am looking at you'
7) wow ta lele lePe re iy

2SG PRES look look at? 3SG
'You are looking at him/her'
8) suPu cahapuyani hitow le ki

3DL hit 3pl. with stick
The two of them hit them with sticks'

The gloss of mere is unclear. In sentences 5) and 6) it appears to signal 'at, in the direction of', but the informants insisted that it consists of $m e$ 'come' and re 'to', so perhaps the best gloss for the combination is 'toward'. Similarly, the difference between lele and le?e, both given to me as 'to look at', is unclear. Hamel (1994:196-197) lists lele 'look', and lePe 'see, look at', but does not clarify the difference. More particularly, it is unclear why a sequence of two verbs 'to look' would be needed to express this meaning in sentence 7). Alternatively, if the $/ \mathrm{e} /: / \varepsilon /$ contrast that Hamel proposes is valid, despite the problems already alluded to, what I write as lePe 'look' could be her $l \varepsilon P i / l \varepsilon P \varepsilon$ 'present continuative, simulfactive'. However, if that is the case it would still be necessary to ask why it follows the verb when all other tense/aspect markers precede the verb, and why this aspect marker is missing in sentence 5).

The only thing to add to the discussion of personal pronouns is that the first person plural/paucal inclusive pronoun was recorded as /citu/ ([fítu?]) in paradigms 1) and 2), but as /cito/ ([tfíto?]) in paradigm 3), suggesting that the speakers with whom I worked knew both pronunciations, but preferred the one with $/ \mathrm{u} /$.
6.3.3. Possessive pronouns. Like several other sketches in this collection, my data on possessive pronouns is restricted mostly to the singular set. As in Bipi, nouns that take singular possessors fall into two classes, in one of which possession is marked by suffixation, and in the other by what appears to be a postposed independent pronoun. In addition to possessed forms free forms were also given for most bases. Where a free form was not elicited the abstract base is given followed by a hyphen, but where a free form was offered the hyphen is omitted. Nearly all alternations in singular possessive paradigms occur with the first person, where a vowel signals replacement of the base-final segment, B means the 1SG form is identical to the base, and a vowel before the possessive suffix means that this is not present in the base form, but appears under suffixation. Where other changes occur that cannot easily be expressed in single segments
the entire form is given, as with the paradigms for 'blood' or 'thigh'. The two types of singular possessive constructions in Loniu are shown in Table 6.6:

Table 6.6: The two types of possessive construction in Loniu
CLASS 1: Possession by suffixation

| Base | 1SG | 2 SG | 3SG | gloss |
| :---: | :---: | :---: | :---: | :---: |
| ay | eyu | eye-m | eye-n | blood |
| melewa | 0 | -m | -n | spirit of the dead, ghost |
| ceni | -w | -m | -n | flesh, muscle |
| coea | coiu | coia-m | coia-n | thigh |
| ete | -w | -m | -n | liver |
| kaka | O | -m | -n | foot, leg |
| kehea | u | -m | -n | shoulder |
| kelena | o | -m | -n | back |
| keñewe | u | -m | -n | throat |
| kepase | -w | -m | -n | cheek, chin |
| kesi | -w | -m | -n | bone |
| koputu | B | -m | -n | navel |
| maPa | moPo | -m | -n | body |
| lehe | B | -m | -n | tooth |
| mata | metu | -m | -n | eye |
| melisawa | melisewu | -m | -n | parent-in-law |
| moloa | u | -m | -n | nape of the neck |
| mwe- | -w | -m | -n | buttocks |
| nime | o | -m | -n | hand |
| ñapulu | B | -m | -n | spouse |
| ñatama | ñatomo | -m | -n | father |
| ñane | ñanu | ñani-m | ñani-n | mother |
| ñetu | B | -m | -n | child |
| ñuñuPo | B | -um | -un | sweat |
| yаPa- | yo?o | -m | -n | name |
| yusu | B | -m | -n | lip |
| pala | pelu | -m | -n | head |
| palakePeme | -w | -m | -n | tongue |
| pePetie | u | -m | -n | belly, abdomen |
| pituPo | u | -m | -n | bone |
| poPoyo | B | -m | -n | nose, beak, snout |
| pue | -w | -m | -n | testicles |
| pueni | -w | -m | -n | maternal uncle |
| puluese | -w | -m | -n | jaw (?) |
| pusasa | pususu | -m | -n | liver/lungs |
| putua | u | -m | -n | stomach |
| pwaha | poho | -m | -n | mouth |


| pwi- | $-w$ | $-m$ | $-n$ | vulva, vagina |
| :--- | :--- | :--- | :--- | :--- |
| susu- | B | $-m$ | $-n$ | female breast |
| tahapule | $-w$ | $-m$ | $-n$ | forehead |
| te | $-w$ | $-m$ | $-n$ | feces |
| teleja | telono | $-m$ | $-n$ | ear |
| te?i | $-w$ | $-m$ | $-n$ | parallel sibling |
| ut | $-i w$ | $-i m$ | $-i n$ | penis |
| we | $-w$ | $-m$ | $-n$ | cross sibling |

CLASS 2: Possession with independent postposed possessive markers

| cacah | ayu | aw | aPi | father (intimate) |
| :--- | :--- | :--- | :--- | :--- |
| leke-n | ayu | aw | aPi | wound |
| mah | ayu | awow | taPi | taro |
| mensow | ayu | awow | aPi | brother-in-law |
| motow | ayu | awow | aPi | knife |
| niw | ayu | awow | aPi | coconut |
| po-kepikan | ayu | aw | aPi | ankle |
| tuh | ayu | awow | taPi | sugarcane |

One noun was found that is possessed in many other languages, but takes no possessive markers in Loniu: ñaman 'fat, grease'.

It is unclear why the 3SG possessive pronoun for 'taro' and 'sugarcane' has an initial /t/ that is lacking in the other nouns cited here. According to Hamel (1994:44-45), /ta/ has the same function as / $\mathrm{a} /$, but is less commonly used. In trying to determine a difference, she suggests that /ta/ "appears to be used by some speakers in careful speech, for example while dictating a sentence in slow speech from the taped narratives." However, the data I collected does not meet these conditions, as there was no significant difference in eliciting the possessive paradigm for 'sugarcane' or 'taro', as against, e.g. 'coconut'. Moreover, a complete set of class 2 possessive pronouns was obtained for /tuh/ 'sugarcane', as shown in Table 6.7, where morpheme boundaries are provided to make it clearer that the possessive pronouns are derived from the equivalent personal pronouns by adding more than just /a/ or /ta/:

Table 6.7: The full set of class 2 possessive pronouns with/tuh/ 'sugarcane'

|  | 1IN | 1EX | 2 | 3 |
| :--- | :--- | :--- | :--- | :--- |
| SG |  | a-yu | a-wow | ta-Pi |
| DL | a-Pu | tato-Pu <br> ta-citu | to-Pow <br> PL | ta-Pato |

Comparison with Table 6.4 shows a fairly clear pattern of derivation of the possessive pronouns from the corresponding personal pronouns even though it shows little regularity: $a$ - is added to $y u$ and wow, ta- is added to $i y$, suPu, citu, utu, atow, and hituw with no other change, tato- is added to $u$, and there are two unique changes: ow adds $t o-$, and $t o P u$ replaces $t o$ - with $a$-.

In a typical Oceanic language the assignment of a noun to one type of possessive category or another is determined by fairly clear semantic considerations. Where the distinction is between alienable and inalienable possessive relationships the inalienable category includes body parts, the terms for 'name' and 'shadow/soul', and kinship terms, and the alienable category includes everything else, with a further subdivision into edible, drinkable and general possession. Loniu partly meets this expectation in that nearly all body parts and kin terms belong to possessive class 1, while other nominal categories are assigned to class 2. However, for reasons that are obscure, one body-part term, 'ankle' belongs to class 2, along with such alienable referents as taro, knife, coconut and sugarcane. Even more surprisingly, two kin terms, one for 'brother-inlaw', and the other an intimate term for 'father' (as opposed to the general term) also belong to class 2 . In the latter case in particular, this is quite the opposite of what one might expect.

Finally, at least two Loniu nouns have fossilized 3SG possessive markers or genitive markers of the shape $-n$, as in POC *muri-ña 'its rear' > muPin ~ mwiPin 'rear part', and POC *raqan-ña (> *ra-ra-ña) 'its branch' > aPan 'branch'. These show that the 3SG posssessive pronoun that applies to relationships of inalienable possession also applies in part-to-whole relationships with nouns that do not have the semantic properties normally found in such possessive constructions (body part terms, kin terms, name, shadow/reflection).
6.3.4. Demonstratives. Hamel (1994:99) describes a three-way contrast for demonstratives: 1. itips 'this (within sight of speaker)', 2. itiys 'this (relatively near speaker)', and 3. itiyen 'that (relatively distant from speaker)'. I also recorded a three-way contrast in the demonstrative system, but there is only a partial overlap in our data. The first two terms that I recorded are [díjo?] and [díjen], although, as already noted, [d] does not exist as a phoneme in the language. Hamel (1994:188) gives the same forms as itiys 'here, this; near speaker', and itiyen 'there, that; relatively distant from speaker'. Hamel's transcriptions are clearly the underlying forms in the language, and what I recorded was the rapid-speech versions, with intervocalic voicing, and deletion of the initial vowel. The examples of usage that I recorded are as follows:

| 9)itio mah <br> this taro <br> 'This is my taro' | ayu my |
| :--- | :--- |
| [díjo? ma háju?] |  |

11) itien tuh ayu
that sugarcane my
'That is my sugarcane'
Although demonstrative pronouns and semantically similar adverbs (this/here, that/there) are often represented by the same form in AN languages, the material I collected suggests that Loniu shows slight differences, as seen in sentences 12) and 13):

| 12) | motow ayu lePe tow | ie |  |  |
| :--- | :--- | :--- | :--- | :--- |
| knife | my | CONT | PRES | here |
|  | 'My knife is here' |  |  |  |

13) motow ayu itien [mótow áju? díjen]
knife my there
'My knife is there (near hearer)
For what I recorded as ie 'here', Hamel (1994:188) gives iye(n) '(dem.) this, here; possibly prefixed form of ye(n) 'be in a place', poss. short form of itiyen'. Whatever the correct interpretation is, the forms for the proximal demonstrative meaning 'this' (itio), and the semantically similar adverb meaning 'here' (ie) differ in these sentences. I was also told that itien in sentence 13) refers to location near the hearer, and that this contrasts with letow 'over there' (third person reference) in motow ayu letow 'My knife is over there'. I was inclined to doubt this, but the same contrast was made explicit in the following pair of questions:
```
14) itien cah ([dijén fah])
    that (near) what
    'What is that? (over there not far from you)
15) letow cah
    that (far) what
    'What is that? (way over there, far from both of us)
```

In summary, for Hamel's term 1 (itips 'this') I recorded etipow/itipo 'here', and she does not report my term 3 (letow). The reasons for this discrepancy are unclear, but may have to do with dialect differences within my database, as will be noted in greater detail below.
6.3.5. Locatives and directionals. A small number of sentences was recorded with locative or directional prepositions. As in other languages of the Admiralties, some of these may actually be nouns, as seen in the following examples. Note that nouns are not marked for definiteness, so the article chosen in the English translations is arbitrary:

| mwi | iy | ta | lo | mata |
| :--- | :--- | :--- | :--- | :--- |
| dog | um |  |  |  |
| 'A dog is in front of the house' | PRES | front | house |  |


| mwi | iy | ta | po-kelena | um |
| :---: | :---: | :---: | :---: | :---: |
| dog | 3SG | PRES | back/behind | house |
| 'A dog is behind the house' |  |  |  |  |


| netukan iy ta tata | um |  |  |
| :--- | :--- | :--- | :--- |
| bird | 3SG | PRES top | house |
| 'A bird is on top of the house' |  |  |  |


| netukan | sih | lePe tow tata | um | itio |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| bird | one | CONT | PRES? top | house | here |

'A bird is on top of the house here
20) mwat iy ta paPaha pat
snake 3SG PRES under stone
'A snake is under the stone'
21) ni iy tow lo-tie kuñ
fish 3SG PRES? LOC-inside basket
22) mwi iy ta tuen
dog 3SG PRES outside
'The dog is outside'
23) mwi iy ta hilow iy le lo tas
dog 3SG PRES run 3SG go LOC sea 'The dog is running toward the sea'
24) mwi iy ta hilow iy le lo po?o ke dog 3SG PRES run 3SG go LOC among tree 'The dog is running toward the forest'
25) mwi iy ta hilow me lih
dog 3SG PRES run come ?
'The dog is running toward us'
26) mwi iy ta hilow itipo
dog 3SG PRES run here
'The dog is running here'
27) mwi iy ta hilow iy le yoh
dog 3SG PRES run 3SG go away
'The dog is running away from us'
These limited examples raise a number of questions for which answers are not yet available. In particular, why is the generic locative marker lo required with 'front', 'inside', 'sea' and 'forest', but not with 'back', 'top' or under? (for 'sea' and 'forest' cf. Blust 1989). Hamel (1994:197) gives $l b$ with the meaning 'inside of, within the boundaries or limits of'. With lo-tie the sense of 'inside' works well, but with lo mata it does not. Here we might appeal instead to the notion 'within the boundaries or limits of', but then its absence in other sentences is puzzling. In addition, po-keleya was recorded as [pokalaya?], but I have altered it here, given the fairly transparent relationship between the notions 'behind, at the back of' and 'back (of a person)'. Having said this, I am reasonably sure that I was given the form with [a] rather than [ $\varepsilon$ ], since the difference between these vowels was regularly heard and transcribed in numerous other forms.
6.3.6. Questions. The following $w h$ - question words were recorded:

| how? : tatape | where? : eheh |
| :--- | :--- |
| how much/how many? : maceheh | who? : hih |
| what? : cah | why? : peri cah |
| when? : tukehe |  |

Examples in context, along with answers to them, appear below:
28) Wow a-la tatape

2SG AGR-go how
'How did you go?'
29) itien cah
that what
'What is that?'
30) tukehe ya curu kaw
when FUT 1PL.IN leave
'When will we leave?'
31) curu ko hoti eniyan le pwic curu kaw

1pl. ? take food go? finish 1 pl . leave
'After we finish eating we'll leave'
32) wow peti eheh

2SG from where
'Where are you from?
33) yu peti Drokow

1SG from Loniu
'I'm from Loniu'
34) hemo hih i le piline wow
? who 3SG go with 2SG
'Who went with you?'
35) peti cah i ma ki yew (ma) ki-le tesin

Why 3SG want FUT leave to AGR-go town 'Why does he want to go to town?'
36) i yew peti cah i ma ki-le cimicim 3SG leave because 3SG want AGR-go buy things
'He is leaving because he wants to go do some shopping'

Noteworthy features of the question words in Loniu include the following. First, both in Hamel's data and mine the words for 'how', 'what', and 'where' are generally postverbal, while 'when' is preverbal, and 'who' and 'why' are more variable in their distributional properties. I did not record the interrogative of quantity in sentence context, but in the examples in Hamel (1994:154) it generally follows the noun that it questions.

Second, there appears to be no monomorphemic interrogative of reason in Loniu. Rather, 'why' is expressed as 'from what (cause)?', a form that was invariably recorded as [péri tfah].

Third, while /hih/ was recorded for the personal interrogative, as in /yaPa-m hih/ 'What is your name?', or /we hih/ 'Whose sister? (male speaker)', /hemo hih/ was given in sentence 34). I was unable to determine what additional meaning /hemo/ contributes to this question, and find nothing in Hamel (1994) that provides further information.
6.3.7. Causatives. No causative morpheme was found in Loniu. Rather, in the three sentences that I recorded with a causative meaning this was expressed through use of the verb hineni 'to make, compel, cause to happen':

| 37) | iy hineni | yu | mitan |
| :--- | :--- | :--- | :--- | :--- |
|  | 3SG make | 1SG | sit-down |
|  | 'He made me sit down' |  |  |

39) iy hineni tupuna itio iy tey
3SG make boy this 3SG cry
'He made this boy cry'
A second morpheme meaning 'to make, do' which appears to be more neutral with regard to the use of force, is $t a$-, which may directly follow the homophonous present or progressive marker, seen in sentence 40):

| 40) | iy | ta | ta | ahani | lono | aPi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 3SG | PRES | make | spread | things | here |
|  | 'She is spreading things out here' |  |  |  |  |  |

6.3.8. The attributive suffix. It has already been shown that adjectives in other languages of Manus commonly end with $-n$, and Hamel (1994:67) establishes a similar pattern in Loniu, carrying the analysis further by noting alternations in which -n final stems "are clearly functioning as adjectives, in construction with a preceding head noun," while the same forms without the final consonant function as nouns "within an inalienable possessive construction." Thus, in her transcription, ni laP\&lewen 'a long fish' uses lapelewen descriptively (hence as an adjective), while lapelewe supu 'their length (referring to two referents being compared) is a possessed abstract noun. I collected only minimal information on this alternation (as with yeti
'pain' : yeti-an 'painful'), and refer the reader to Hamel (1994:67-70) for her more detailed description. However, I did note the high frequency of $n$-final forms for descriptive words that are often translation equivalents of English adjectives, and these are summarized in Table 6.8 to show that Loniu fits an areal pattern in which the POC attributive suffix *-ana appears to be fossilized in many languages, but may in fact be part of the synchronic grammar if alternations such as those shown above for Loniu also occur in other Admiralty languages for which descriptive materials are still very limited.

Table 6.8: Evidence for Loniu -n 'marker of attribution'

```
akesin 'thin (animates)
caken 'old (things)'
eluen 'far away'
emuPun 'wet'
hewin 'crooked, winding'
huyan 'good'
inen 'small'
kePen-kePen 'mottled'
koPun 'left (side)'
lan 'west'
mahun 'new, fresh'
mapitan 'raw'
meheun 'bitter'
melehan 'wide'
melemun 'soft'
mePeman 'red'
mePesan 'cooked'
mePeyen 'quick'
muan 'bad, defective'
muPun 'hungry'
mwenen 'straight'
mwiPin 'late, last'
napwanan 'big'
nen 'fast, quick'
```

```
nun 'spinning, rotating'
```

nun 'spinning, rotating'
ñaman 'sharp'
ñaman 'sharp'
naman 'sweet, tasty'
naman 'sweet, tasty'
ñeletun 'cold'
ñeletun 'cold'
ñemulun 'sour'
ñemulun 'sour'
yetahan 'hot'
yetahan 'hot'
yeti-an 'painful'
yeti-an 'painful'
okomwan 'dark'
okomwan 'dark'
okoten 'black'
okoten 'black'
opoan 'blue, green'
opoan 'blue, green'
paPahan 'right (side)'
paPahan 'right (side)'
piPen 'white'
piPen 'white'
piton 'hard'
piton 'hard'
poPoan 'rotten (fish, meat)'
poPoan 'rotten (fish, meat)'
posoen 'dry'
posoen 'dry'
pulutan 'sticky'
pulutan 'sticky'
puon 'short'
puon 'short'
soson 'dirty'
soson 'dirty'
tin 'dead'
tin 'dead'
toton 'dull'
toton 'dull'
tuan 'heavy'
tuan 'heavy'
tuenan 'correct, true'
tuenan 'correct, true'
tuhun 'light (weight)'

```
tuhun 'light (weight)'
```

While the $-n$ in most of these words probably is the last trace of the POC attributive suffix *-ana, the final nasal in other adjectives, as mwan 'male' and pihin 'female', belonged to the original base (POC *maRuqane, *papine). Apart from these 47 words, my data contains 22 others that are adjectival in nature, but do not end with -n, as cama 'swollen, copow 'bald', or Imwec 'rotten (of vegetable matter)'. Despite these exceptions, there is a clear skewing of form and function in Loniu adjectives, with about two-thirds of all examples ending with $-n$, whereas only about $10 \%$ of verbs have this phonological form.
6.3.9. Reciprocals and reflexives. No information was collected on reflexives, and the only reciprocal construction recorded was sentence 41), in which reciprocity is expressed through simple repetition of the dual pronoun:

```
41) toPu lePe tow lePe toPu
1DL CONT PRES look 1DL
'The two of us are looking at each other'
```

6.3.10. Imperatives. Very limited information was collected on imperative constructions. In general, the positive imperative is strucurally identical to the corresponding demonstrative sentence without a subject pronoun, and the dehortative or negative imperative simply adds the dehortative marker /topo/ 'don't' sentence-initially:

| e-me | etipow |
| :--- | :--- |
| 2SG.AGR-come | here |
| 'Come here!' |  |

43) a-la etien

2SG.AGR- go there
'Go there!'
44) e-me

2SG.AGR- come
lo tie-n inside here
'Come inside!’
45) yan (i) mah
eat ? taro
'Eat the taro!'
46) topo yan (i) mah
don't eat ? taro
'Don't eat the taro!
$\begin{array}{llllllll}\text { 47) } & \text { e-tewe } & \text { niw } & \mathrm{e} & \text { ni } & \text { kito } & \text { tata } & \text { cow } \\ & \text { 2SG.AGR-put } & \text { coconut } & \text { and } & \text { fish } & ? & \text { top } & \text { mat }\end{array}$
'Put the coconut and fish on the mat'

A puzzling feature of sentences 45) and 46) is the optional presence of a postverbal particle /i/ ([iP]). No information was collected on this element, and I have found nothing in Hamel (1994) that elucidates it.
6.3.11. Tense/aspect. The material that I was able to collect relating to tense and aspect in Loniu was limited, and raises a number of questions. To the extent possible I have tried to resolve these questions by reference to the fuller description provided by Hamel (1994), but in some cases even this has proven insufficient to gaining a complete understanding of the distribution and function of key grammatical morphemes. In the interest of simplifying the discussion I begin with the singular personal pronouns, repeating here the examples from section 6.3.2, and then relating the non-singular forms to these.

| 48) | yu <br> wow <br> iy |  | tow ta ta |  | sue sue sue | 'I am paddling' 'You are paddling' ' S /he is paddling' |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | yu | lePe | tow |  | yeniyan | 'I am eating' |
|  | wow |  | ta |  | yeniyan | 'You are eating' |
|  | iy |  | ta |  | yeniyan | ' $\mathrm{S} / \mathrm{he}$ is eating' |
|  | yu | lePe | tow | yan | mah | 'I am eating taro' |
|  | wow | le | ta | yan | mah | 'You are eating taro' |
|  | iy | le | ta | yan | mah | 'S/he is eating taro' |
|  | John | iy | ta | yan | mah | 'John is eating taro' |
|  | ñano | iy | ya | yan | mah | 'My mother is eating taro' |

Hamel (1994:224) gives Loniu /ta/ '(part.) pre-verbal continuative aspect marker', but neither of the forms that she writes as $t o w \sim t y$ '(intransitive verb, Class I) be in a place; stay, remain, live', or tow '(transitive verb, Class I) give, put; give birth to' appears to have a similar function, suggesting that she did not record /tow/ as an aspect marker. However, the distribution of /tow/ and $/ \mathrm{ta}$ / in the paradigm for 'to paddle a canoe' implies the same relationship between subject and verb, differing only in person (first-person vs. non-first person). This is further supported by the non-singular forms of the first person vs. non-first person in the intransitive form of the verb 'to eat', but breaks down in the transitive form the latter verb. Given this apparent contradiction I can only assume that the aspect marker recorded with the pronouns toPu, cito, $u$ and $u t u$ in section 6.3.2, paradigm 3) should be tow, and was incorrectly given to me as $t a$. If that is the case, then it is reasonable to suppose that both $/ \mathrm{ta} / \mathrm{and} / \mathrm{tow} /$ mark action in the present, differing only in first person vs. non-first person reference.

This then raises a question about the function of /lePe/ in the two paradigms for 'to eat'. Clearly, /lePe/ cannot distinguish transitive from intransitive, since it appears both when this verb takes an object, and when it does not. Moreover, in the transitive paradigm it appears only with the first person. It is tempting to see $/ \mathrm{le} /$ in the second and third person of the transitive paradigm for 'to eat' as a random contraction that happened in rapid speech, but I questioned this at the time of elicitation and was assured that /lePe/ following the first person subject pronoun cannot be /le/, and that /le/ following the non-first person subject pronoun cannot be /lePe/. Hamel (1994:106, 197) gives $1 \varepsilon$ Pi/l $\varepsilon$ P $\varepsilon$ '(part.) present continuative, simulfactive', which makes it functionally equivalent to $/ \mathrm{ta} /$ except in specifying ongoing action. Given the complementation of /tow/ and /ta/ by person, I can believe that /lePe/ and /le/ (the latter of which does not appear in Hamel (1994)) show a similar complementation, but none of this tells us why /lePe/ is needed to express 'I am eating' but not 'I am paddling', or for that matter, 'You are eating' or 'S/he is eating'. Moreover, while /tow/ seems to mark present action with first-person reference in the previously mentioned paradigm for 'to paddle a canoe', it occurs with third-person reference when preceded by /lePe/ in sentence 19), 'A bird is on top of the house here'.

With the non-singular pronouns the problems in understanding the function of the material that intervenes between subject and verb in this material that I collected become even greater. In the
paradigm for 'to paddle (a canoe)' /ke/ marks first person inclusive forms, not just first person, or just inclusive, while /makala/ (which may be bimorphemic, or trimorphemic) marks everything else, meaning first person exclusive forms, and non-first person forms, whether inclusive or exclusive, and the $/ \mathrm{la} /$ preceding $/ \mathrm{ta} /$ in the last three entries marks 2 DL , 3DL and 3 pl ., which hardly appear to form a category. Hamel (1994:106) identifies this /la/ with the verb 'to go', which may well be correct, and notes that it can precede /ta/, but this provides no explanation for why it occurs in just the last three members of the intransitive paradigm for 'to eat'.

In the hope of sorting this out in the brief time I spent with speakers of the language, I also elicited past and future constructions with the verb 'to eat', as shown here:
49) yu to yan mah piñehe 1 SG PAST eat taro yesterday
'I ate taro yesterday'
50) yu to in enu niw piñehe

1 SG PAST drink juice coconut yesterday
'I drank coconut water yesterday'
51) miti iwoh yu le Drokow
day before yesterday 1 SG go Loniu
'I went to Loniu the day before yesterday'
52) yu ma ki yen mah mahuw

1SG want FUT eat taro tomorrow
'I want to eat taro tomorrow'
53) mahuw a yu ki yen mah
tomorrow ? 1SG FUT eat taro
'I will eat taro tomorrow'
54) mahuw a wow yan mah
tomorrow ? 2 SG eat taro 'You will eat taro tomorrow'
55) mahuw a iy ki yen mah tomorrow ? 3SG FUT eat taro
'S/he will eat taro tomorrow'
56) mahuw a to ki yen mah tomorrow ? 1DL FUT eat taro
'The two of us (incl.) will eat taro tomorrow'
Sentences 49) - 51) are the only examples of a past construction that I elicited with an explicit time-marker relative to the time of the speech act, and since the first two of these have /to/ between the subject and verb, which does not appear in sentence 52) - 56), it is reasonable to
suppose that /to/ marks past time. However, I have no explanation for why /to/ is not found in sentence 51), unless there is a general rule that it is not required if a temporal adverb that precedes it has already made it clear that the action is past.

In addition to these sentences with temporal adverbs that specify past or future time, I was also given sentence pairs that contrast present and past action with /ta/ vs. /to/, but are otherwise identical, as in the following, where sentence 57) is repeated from section 6.3.5:

| mwi | iy | ta | lo | mata | um |
| :--- | :--- | :--- | :--- | ---: | :--- |
| dog | 3SG | PRES | LOC | front | house |
| 'A dog is in front of the house' |  |  |  |  |  |


| mwi | iy | to | lo | mata | um |
| :--- | :--- | :--- | :--- | :--- | :--- |
| dog | 3SG | PAST | LOC | front | house |
| 'A dog was in front of the house (but isn't now)' |  |  |  |  |  |

The sentences in my data with future reference present another array of interpretive problems. In each case the morphemes that carry interlinear glosses would appear sufficient in themselves to convey the meaning of the sentence, leaving the unglossed term without a known function.

In short, to the extent that I am able to comment on tense and aspect in my own field materials, $/ t o /$ appears to mark past or completed action, and both /le?e tow/ and /ta/ appear to mark present action, the former with first person reference and the latter with non-first person reference, although the absence of /lePe/ in /yu tow sue/ 'I am paddling', or in any of the nonsingular forms of 'to eat' is unexplained.
6.3.12. Miscellaneous. This section contains observations about grammatical details in my field data that are not addressed elsewhere. One of these is the occurrence of a prefix po- or less commonly, po?o-, which is found on a number of terms for body parts, but is not used in expressions that incorporate a body-part term to express a different meaning, as with po-teleya 'ear' (prefixed free form), po-teloŋo 'my ear', po-teleya-m 'your ear', po-teleŋa-n 'his/her ear', next to teleya pwe 'deaf' (lit. 'no ears').

The preceding example illustrates nominal negation by postposing the negative marker to the noun, and the negation of sentential propositions is expressed in the same way, namely by adding the negative marker $p w e$ to the positive statement, as in sentence 59)

| yu | kipi | la | piñehe | pwe |
| :--- | :--- | :--- | :--- | :--- |
| 1SG | PRF | go | yesterday | NEG |

'I didn't go yesterday'
As in many other AN languages, expressions of possession with a numeral such as 'I have two children' are formulated as subject-possessor (copula) number, hence 'My children are two', with no main verb 'have', a zero copula in most languages, and the number being the predicate. Loniu differs from this general pattern only in requiring a resumptive pronoun between the subject NP and numeral, as in sentence 60), where the numeral is effectively redundant:

| 60) | ñetu | suPu |
| :--- | :---: | :--- |
| child-my | 3DL | two |
|  | 'I have two children' |  |

Compare this with a similar structure in which the pronoun is not resumptive:
61) suPu ñetu-n maPamow

3DL children-? two
'There are two children'

Desiderative constructions in my data are marked by ma 'want to', which Hamel (1994:199) glosses as 'intentional or inchoative marker'. I have found no inchoative uses in my limited data, but $m a$ appears in several sentences that express a wish or desire to do something, as in:

| yu ma $\quad$ ki | yen | mah |
| :--- | :--- | :--- |
| 1SG want FUT eat | taro |  |
| 'I want to eat the taro' |  |  |

In nearly every case $m a$ and $k i$ occur in sequence. However, in sentence 63) they do not, and from this I am inclined to gloss $k i$ as a future marker, although this is problematic, since $y a$ is already established with that function:
63) mahuw a yu ki yen mah
tomorrow ? 1SG FUT eat taro
'I will eat taro tomorrow'
As in the majority of AN languages, the question 'What is you name?' uses the personal interrogative 'who' rather than the impersonal 'what'"
64) yaPa-m hih
name-2SG who
'What is your name?'
65) yoPo Lihieu
name-1SG Lihieu
'My name is Lihieu'
6.4. LEXICON. The following vocabulary partially duplicates the Loniu to English lexicon in Hamel (1994), but also adds to it. In a number of cases Hamel's glosses also improve on the more limited descriptions I was given of the meaning of some words. Where my data differs significantly from Hamel's in either form or meaning I indicate so with a parenthetic notation, as in ahe 'to lie down' (H: ehe), or pokIt 'deep sea far from the shore' (H: 'saltwater-coloured'). However, as already explained, I ignore Hamel's distinction between tense and lax mid-vowels, and therefore do not cite each of these discrepancies here.

## LONIU-ENGLISH VOCABULARY

/a/

1. $a_{-1}$ : (gloss uncertain; cf. komu, mat-2)
2. $a_{-2}$ : possessive marker (cf. co-2, wow, yu, etc.)
3. $a_{-3}$ : 2 SG agreement marker in 'Class II’ verbs such as la 'to go' (Hamel (1994:73)
4. acay : fork of a branch (H: 'gloss unclear, poss. a stick used as a tool')
5. ah : stick used for sewing sago leaf thatch in making roofing material (H: 'central stem of sago leaf, possibly any palm leaf')
6. ahani : to spread things out, as washed clothes to dry in the sun
7. ahe : to lie down (H: ehe 'lie down, sit, recline')
8. akesin : thin, skinny (people or animals)
9. am : lime spatula
ki am : lime spatula (for betel chew)
NOTE: ki am may be a literal translation of Tok Pisin stik kambang, which was the elicitation item used for this.
10. amat-1 : (gloss uncertain) poñ amat: large green sea turtle without a sharp beak
11. amat-2 : person, human being
12. amey : k.o. black wildfowl with a red comb
13. amot : to drown (H: cmot)
14. $a_{-1}$ : fresh water, river (cf. tas)
15. an-2 : termite
16. $a \eta$ : day
17. analow : a nut similar to eney, but shorter and fatter; the analow tree is much bigger than the eyey tree
18. aךey : to hear, listen (H: عŋع)
19. apulupun : a fish, D'Urville's long-tom: Strongylura urvilli (Valenciennes)
20. aPan : branch of a tree (probably $a$ Pa-n)
21. asi : to scratch an itch (H: as-i)
22. atow ~etow : 2pl., you (three or more); (H: ctow 'second person paucal')
23. aw: 2SG free form possessive pronoun; your
24. awah : a fish, various demoiselles: Pomacentrus spp. (H: 'poss. squirrelfish')
25. ay : blood, eyu, eye-m, eye-n
/c/
26. $c a$ : gloss uncertain (cf. melewa)
27. cacah : father (affectionate term used by small children), cacah ayu, cacah aw, cacah apih
28. cacuh : grandmother (affectionate term used by small children) (H: cacoh)
29. cah : what? (H: what; something)
peti cah : because, why?
30. cahapuyani : to strike, hit
31. cakay : traditional stone axe
32. caken : old (of things) (H: čakIn)
33. cam : outrigger float (H: cam, cama 'outrigger portion of canoe')
34. cama - $1^{\text {: to evaporate, dry up (H: čama 'get dry (e.g. reef)') }}$
35. cama-2 : swollen
pиe cama : filariasis, swollen testicles (from filarial infection)
36. can-1 : to cut (H: čan 'cut; clear')
a can 'you are cutting'
37. can-2 : path, road
pwaha can : path, road
38. can-3: sea urchin
39. cana-1 : crotch, caŋa-n
40. caya-2 : (gloss uncertain)
caya pituet : trivet, three stones that support a cooking pot over the fire
41. cayah : door of house (opening)
42. capak : tobacco
43. capeti : (gloss uncertain; cf. pit)
44. capuh : grandfather (affectionate term used by small children) (H: capoh)
45. catop : poisonous reef fish, stonefish: Synanceja horrida
46. cay : k.o. Malay apple with elongated fruit
47. cec : surfing with board or canoe, or body-surfing (H: č̌č 'skip across surface of water; body-surf')
48. cehe : amount? (cf. macehe)
49. celepuh : various triggerfish: Balistapus undulatus and Rhinecanthus spp. (H: čelipuh)
50. celepweni : to drop s.t.; to lose s.t.
51. celu : to arise, stand up
52. celuan : much, many ( $\mathrm{H}: \check{c} \varepsilon$ člewa)
53. ceŋi : flesh, muscle; body, ceŋi-w, ceŋi-m, ceŋi-n (H: ‘fruit; body or flesh; especially
good yams for feasts and gift exchanges')
ceŋi kaka : muscles of the leg; calf and thigh, ceךi koko, ceŋi kaka-m, ceŋi kaka-n
ceni i met: tired (lit. 'the flesh is dead')
сеуи i met 'I am tired' (lit. 'My flesh is dead')
54. cePiti : to cut wood (H: čaPiti)
55. ceweti : to mend, repair, as in mending a net or sewing clothes ( H : čعweti ~ seweti 'fasten or sew with rope or twine')
56. cicilie : traditional loincloth
57. cihi : cockatoo (H: ‘small parrot')
58. cikan : cave bat, small insectivorous bat
59. cilin : plant shoot (shoot of any plant) (H: čili 'sprout, esp. banana shoot')
60. ciliziy : to crush with the fingernails, of lice
ciliziy kut : to crush lice with the fingernails
61. cim : to buy, sell
cim-ani : to buy s.t.
cimi-cim : to shop for things
62. cin : to bounce off a surface
63. cinen : natural spirit (TP ‘marsalai'; H: ‘a demon or spirit')
64. cinime : sticky fingers, tending to pilfer
65. cip: opening? (H: ‘window’)
mata cip : window (lit. ‘eye of cip’)
66. cipo?o : charcoal
67. citu $\sim$ cito $\sim$ curu : 1PL.IN, we (three or more)
68. co-1 : crazy, insane (H: ‘foolish or crazy person')
69. co-2 : place (cf. ka)
co mwan a kihi : firewood shelf (lit. 'place of/for firewood')
70. cocoy: bush with small, very sweet dark purple or black berries
71. coea : thigh, coi-u, coia-m, coia-n (H čoweya ~čqweya)
72. coehi : to pour, to spill (H: čzwzhe (y))
73. coeti : to sew (H: čeweti)
74. coh : to seek shelter, as from the rain
75. colay : sailfish, striped marlin: Makaira audax (Philippi)
76. coloh : three (in '13', '23', etc.)
77. comun : traditional wooden dish, smaller than lus
78. con : to hunt, go hunting ( H : čyy 'hunt for wild pig')
79. conon : a fish, the Spanish mackerel
80. copon : (gloss uncertain; cf. pala)
81. copow : bald
82. coPoyan : to take revenge, return tit for tat ( H : čว Puya)
83. cow : large sleeping mat; pandanus rain cape
84. cu-1 : comb
85. cu-2 : a fish, black-finned long tom: Tylosurus melanotus (Bleeker)
86. сис ~ сиу : soup (H: ‘broth')
87. cuk : stone fish corral
88. culu : three, of bunches, or counting prongs on a fish spear culu put : three bunches (of betel nuts, coconuts, etc.)
89. culuay : standing; staying awake (cf. celu)
90. culumow : three, in counting children
91. culumwi : to burn (H: 'cook over fire; burn')
92. cumwi : to catch (as in catching a ball), (H: ‘catch; agree with')
93. cun-1 : to cook fish on wood or coconut frond placed on fire
94. cun-2 : dried coconut frond (used as torch)
95. cunehi : to husk coconuts
96. сир : help, assistance
cup-ani : to help someone
97. cur : a fish, Forster's se-pike: Callosphyraena toxeuma (Fowler)
/dr/
98. draka : betel pepper (TP)
99. drakaw : one-pronged fish harpoon (H: nrakaw 'pig spear')

NOTE: Likely borrowed, as native term seems to be ñah mata ho-kow.
100. dret: large green frog
101. Drokow : Loniu (place)
102. drolow: small wooden bowl (cf. lus), (H: ‘deep wooden bowl with rounded bottom; traditionally used for seriving women's food when they are in ritual isolation')
103. drow-1 : k.o. tree, the ironwood: Intsia bijuga
104. drow-2 : wet nasal mucus, snot
/e/
105. $e_{-1}$ : and (H: ‘and, or, but')
maPuyet e culuon : two hundred thirty
106. $e_{-2}$ : 2 SG agreement marker in 'Class I' verbs such as me 'to come' (Hamel (1994:73)
107. ehe : yes
108. eheh : where? (H: $\varepsilon h \varepsilon)$
109. eili : to call out, to hail s.o. (H: ili)
110. eit : putty nut: Parinari laurinum
111. ek : to grow, of plants (cf. mata)
112. eke: mushroom
113. eletu : egg, roe; brain (H: عlutu)
eletu kokoru: chicken egg
eletu ni : roe, fish eggs
eletu pala : brain (free form), eletu pelu, eletu pala-m, eletu pala-n
114. eliki : coconut oil (H: عleke $\sim$ elike)
115. elimay : mangrove crab
116. elomwi : to plant, bury (H: lomwi)
117. eluen : far away, distant (H: elewen 'long, far')
ko eluen 'a faraway place'
118. emen : lightning
119. emu?un : wet
120. emwani : to fetch water
121. eni : to collect, gather, as fruit (H: ini)
122. епи : liquid, juice; pus
enu mata : tears
enu niw : coconut water
епи-епи ut : semen, sperm
enu-n leke-n : pus (lit. 'suppuration of a wound')
123. eñow : a flowering plant: Hibiscus tiliaceus
124. eyey : kind of three-cornered nut that grows on a small tree (cf. aŋalow)
125. epi : sago palm, fried sago
epi uy: thorny sago
126. ери (gloss uncertain)

ери nime- : wrist
127. epwI : (gloss uncertain; possibly $\varepsilon p^{w} e$ 'only, just' in Hamel 1994:184)
sih epwI : kinsman, relative (= 'only one, just one'?)
128. eruculumow: seven (in counting children, ropes)
129. eru?umow : eight (in counting children, ropes)
130. erusomow : nine (in counting children, ropes)
131. esun : gall, ink of a squid
132. /ete/ : liver (free form), ete-w, ete-m, ete-n
133. etepew : k.o. tree with leaves that cause itching when touched
134. etIn: (gloss uncertain; cf. ŋelepu)
135. etip : to seek, search for
etip kut : to delouse, search for lice in the hair
136. etipow: here (cf. itipo) (H: itips)
137. ewani : to pull (on a rope) (H: iwani 'pull, drag, pull out or up')
138. ey : odor, scent, ey-n
/h/
139. $h a$ : one, in counting fathoms
140. hah : four (in '14', '24', etc.)
141. hak : to strike against s.t., of a thrown object
142. hakap: one, in counting leaves
143. hamow : four (in counting children)
144. han : to laugh
145. $h a y$ : to feed (animal, person)
146. hay-1 : (gloss uncertain; cf. ñu)
147. hay-2: west monsoon (cf. kup)
148. hayah: few
149. helisay : to laugh (H: helesay 'be happy')
150. helow : to run (H: hilow)
151. hemo : (gloss uncertain; cf. hih)
152. heno : first, before (H: hans ~ hens)
153. het : sago grub
154. hewin : crooked, winding, as a path or river
155. hi- : prefix to female personal names and words designating females
156. hih : who? (H: he)
hemo-hih: who?
NOTE: The speakers with whom I worked stated that this word rhymes with $\operatorname{sih}$ ([sIh]) 'one', but this cannot be true in Hamel's data, since she has /he/ 'who?' vs. /sih/ 'one')
157. hikeroh: k.o. small butterfly or moth that leaves a substance on the water that kills fish
158. hilow : to run (H: hilow 'run, fly, swim; generally, move rapidly, whether on the ground, in the water, or in the sky; flow')
159. himwa : twins (H: 'gloss unclear, poss. (female?) twins')
160. hineni : to make s.o. do s.t., compel, cause
161. hiñaw : widow

NOTE: This word probably has the female prefix hi-, and so imply es a base ñaw that should occur with a different prefix for widowers.
162. hisueh: k.o. pandanus with edible fruit
163. hitow: 3pl., they, them
164. ho : one, in counting prongs on a fish spear
165. homow : one (in counting children, ropes)
166. hoŋey : to sniff, smell s.t. (H: huŋع)
167. hosi : to tie, bind by wrapping around (H: husi)
168. hoti : to get, receive, take (H: huti 'take, hold, carry in hands')
kohoti : to take
169. huti : to bring, convey

NOTE: Probably = hoti.
170. hutun : thick, as a plank (H: 'thick; heavy')
171. huyan : good (H: huya 'goodness' + -n '3SG possessor')
ma-huyan : living, alive
/i/
172. $i \sim i y: 3 \mathrm{SG}, \mathrm{s} / \mathrm{he}$ (personal pronoun)
$a-$ Pi $\sim a-$ Pih: 3SG free form possessive pronoun; his/her
NOTE: Presumably $a+i(y)$, but heard only as [PaPiP] and [PaPih] (cf. taPih)
173. ie : here
174. Imwec : spoiled, rotten, of vegetable matter (cf. kilipaca, poPoan)
175. in : to drink, to suck
yu le?e tow in enu niw 'I am drinking coconut water (now)'
176. inen : small, younger (as sibling)
177. ini : to find (cf. eni)
178. is : exclamation used when someone is telling a tall story to shame him into backing down or stopping
179. isi : to break wind, fart
180. iso : confused?
mata-n iso : stray, get lost (lit. 'eyes confused'?)
181. iti ~ itiPit : sexual intercourse
supu ta iti su?u 'They are having intercourse'
182. itien : that, there
183. itio : this, here
184. itipo : here (cf. etipow)
185. iw-1 : to call to s.o.
iy ta iw ' $\mathrm{S} / \mathrm{he}$ is calling'
iy wi iw 'S/he is calling'
186. iw-2 : (gloss uncertain; cf. meti)
187. iwoh: (gloss uncertain; cf. miti)
/k/
188. $k a_{-1}$ : fireplow; shore plant used to make fireplow (H: 'k.o. bush')
189. $k a_{-2}$ : place (cf. co)
ka mwan : hearth, cooking place
190. kacan : floor of a house
191. kak : starfish (Crown-of-thorns?)
192. kaka : foot, leg, koko, kaka-m, kaka-n
kaka muan : crippled, lame (lit. 'bad leg')
193. kalih: wave at sea, surf, breakers
194. kalipuey : a fish, smooth flutemouth: Fistularia petimba (Lacépède)
195. kalon : red tree ant (H: ‘ant')
196. kaluy : wooden headrest, pillow
197. kaman : male; men's house
lo komwan : men's house
198. kamwat : black ant
199. kamwet : tattoo
200. kan : food
201. kanas : mullet
202. kanaw : small black sea bird
203. kap : string, fish line, any string made of fiber (H: 'k.o. tree which produces a natural fibre used to make string or thread, which is then used to make belts and to string beads and dogs' teeth')
204. kapini : wing, lateral fins of fish (H: ka-peni)
205. kapok: silk cotton tree: Ceiba pentandra (TP)
206. kaPah : rain cloud (H: ‘cloud’)
207. kaPahay : coconut inflorescence, coconut flower spathe
208. kaPopwen : rabbitfish: Siganid spp. (H: kaPupwen 'k.o. fish, poss. species of spinefoot')
209. kas : k.o. small bamboo
210. katah : frigate bird
211. katu?uhi : hunchback, hunched over, stooping (H katupuhe 'bend down')
212. kaw : to leave, depart
213. kawa : medium-sized basket used to carry sago
214. kay : to wade through shallow water
215. $k e \sim k e y \sim k i$ : wood, tree
216. keceniw : k.o. small sea anemone
217. kecepwe : cave bat, small insectivorous bat
218. kehea : shoulder
po-kehea : armpit (free form), po-kehe-u, po-kehea-m, po-kehea-n
219. keheah: afternoon
220. kehi : to search for s.t.
221. kekeñah : sharp-nosed rainbow fish: Cheilio inermis (Forskål)
222. kelaw-1 : bachelor, unmarried man of any age (H: ‘unmarried person')
223. kelaw-2 : convict surgeonfish: Acanthurus triostegus (Linn.)
224. kelelon : to set, of the sun yan kelelon : evening, sunset
225. keleja: back po-keleya : back (prefixed free form) : pokeleyo, pokeleŋa-m pokeleya-n
226. kelepe : tail (of dog, pig, fish), kelepe-n
227. keli : a fish, smallest k.o. grouper or honeycomb rock-cod: Epinephelus merra (Bloch) (cf. ketihi, kot, pucikero, yapoPiw)
228. kenePiw: adze for shaping canoe hulls
229. keni : large needle for mat-making
230. keñewe : neck (free form), keñewu, keñewe-m, keñewe-n (H: kunewe)
231. kepase : cheek and chin area (free form); external gills of a fish, kepase-w, kepase-m, kepase-n
232. kePen-kePen : mottled, of coloration
maPa-n kePen-kePen 'His/her skin has patches of different color'
233. kePen : red parrot
234. kePowoh : green grasshopper (cf. kosi) (H: kePiwoh)
235. kereneway: small frog that jumps far (H: kerinaway)
236. keripow : heron
237. kesi-1 : a fish, the small-toothed emperor: Lethrinella microdon (Valenciennes)
238. kesi-2 : rib (free form), kesi-w, kesi-m, kesi-n
239. kesus : coconut crab
240. keti : early growth stage in oyster (cf. silimwat)
241. ketihi : a fish, small k.o. grouper or leopard-cod: Plectropoma maculatum (Bloch) (cf. keli, kot, pucikero, yapoPiw)
242. ketuŋ : thunder (H: katul)
243. $k i$ : future marker ( $\mathrm{H}: k+i$ 'potential prefix for 1 SG and 3 SG actors)
244. kiec : outrigger booms, outrigger connecting sticks (H: kiyec ~ kiyey)
245. kihi : firewood
246. kili $:$ (gloss uncertain = 'direction'?; cf. mwenen )
247. kilih: an object, thing referred to
kilih salay: hatched, of an egg
248. kilipaca : rotten, decayed, of wood (cf. Imwec, poPoan)
249. kiPi : perfective marker with la 'to go' (Hamel 1994: 74, 193)
250. kit : octopus
251. kito : (gloss uncertain; cf. sentence 47)
252. ko-1 : place, village
253. ko-2 : weather, wind
254. koce?eku : twilight, beginning of night
255. kocoh $_{-1}$ : comb of a fowl
256. kocoh -2 ~ kocow : (gloss uncertain; cf. motow) (H: koco)
257. koho : flying fish (H: kJhoh)
258. kohu (gloss uncertain)
kohu lolo : pus
259. kokoru : chicken, rooster (TP)
260. koloñah : k.o. thin bamboo with long internodes
261. kolu : throat
kolu i sop : hoarse (lit. 'my throat is closed')
262. kolumamwa : pity, compassion, sympathy, love; sorry
263. komu : word, talk, language amat peri huti a komu : messenger, herald (lit. 'person bringing talk')
264. koñoPum: saliva
265. kopow : k.o. small black poisonous marine fish that swims in schools; it has barbels like a catfish
266. kopuca : mangrove
267. /koputu/ 'navel' : koputu, koputu-m, koputu-n
268. koPokaw : sweet potato (TP)
269. koPow : gray, of hair pala ko?ow : gray hair, pelu ko?ow, pala-m ko?ow, pala-n ko?ow
270. koPowow : a fish, orange-striped emperor: Lethrinus obsoletus (Forskål)
271. koPun: left side
nime koPun : left hand
272. kosi : brown grasshopper (cf. ke?owoh)
273. kot : middle-sized grouper (cf. keli, ketihi, pucikero, yapoPiw)
274. kow-1 : fence
275. kow-2 : fishhook, prong on a fish spear
276. $k u$ : clay cooking pot
277. kuen : bow for pounding sago
278. kuli : rudder, steering paddle in canoe
279. kulihi : skin (of animal), bark
kulihi ki 'bark of a tree’
kulihi pow 'pig skin'
kulihi wi : rind, peeling of a type of fruit
kulihi-n: scab, rough skin covering sore
280. kulucu : bending part?,
kulucu nime (free form) elbow, kulucu nimo, kulucu nime-m, kulucu nime-n
281. /kum/ : hair of the head (cannot occur alone)
kum-pala : head hair (free form), kum-pelu, kum-pala-m kum-pala-n
282. kun : breadfruit
283. kuni : to carry on the back (H: 'carry suspended from the head')
284. kuñ : flat coconut leaf bag or pouch slung over the shoulder and used to carry small items;
coconut leaf container used to carry sago
285. kup : east monsoon (cf. hay)
286. kupuca : swamp, swampy ground
ŋо?o kupиса : mangrove swamp
287. kupwen : fishnet (usually means casting net)
kupwen na kanas: large rectangular net used to catch mullet
kupwen na mat : hand net (used around dry reef)
kupwen na tenih : large triangular net used to catch sardines
288. kusa : k.o. medium-sized bamboo
289. kut : louse
290. ku? : horned squirrelfish: Holocentrus cornutus (Bleeker)
/1/
291. $l a$ : to go, walk (all persons except 1 SG and 3 SG ; cf. $l e_{-1}$ ) a la 'You go'
292. lac: coral
293. lacuy : withered? (cf. palapa)
294. lah : black stingray that stays in the mud of the mangrove swamps
295. lakahani : to massage ( H : 'touch, feel')
296. lakay: shrimp
297. laman : deep sea starting just beyond the reef
298. lan : south wind
299. lay : sky (said to be rarely used)
300. layat : to sail, sailing
301. lapak : a flat, bottom-feeding fish, various sole: Heteromycteris hartzfeldi (Bleeker) and Achirus pavoninus (Lacépède)
302. las: k.o. flattish fish similar to the mackerel
303. law : long fishnet, some 30-45 meters in length, laid out in a V-shape by men in canoes and used to catch parrotfish and turtles
304. lawat: cuscus, opossum
305. $l e_{-1}$ : to go, walk (1SG and 3SG form; cf. la)
i-le ' $\mathrm{S} / \mathrm{he}$ is going'
306. le-2: to, toward (cf. li)
can le Lugos 'the road to Lugos' (possibly identical to $l e_{-1}$ )
307. le-3: with (instrumental)
308. lehe : tooth, tusk (free form), lehe-w, lehe-m, lehe-n
lehe mwi : money, traditional currency (strings of dog's teeth)
lehe pow : tusk of a pig
309. leke : wound (free form), leke ayu, leke aw, leke aPih (H: leken 'sore, wound, scratch')
310. lele : to look at s.t. or s.o.
311. leley: bow

NOTE: Since there are few land animals to hunt this probably was used mainly in war; cf. Ohnemus 1998.
312. lemilemin : sennit, cordage made of coconut fiber (H: lemilemi 'root hairs of yams other tubers; the hair-like growth on the husk of the coconut')
313. leти ~ loти : body hair, fur, feathers (H: lэти)
lети nime : hair of the arms, lети nimo, lети nime-т, lети nime-n
lети роРо-mata : eyebrow, eyelash (free form), lети ро?о-теtи, lети роРо-таta-m,
leти poPo-mata-n
leти puluese : beard (free form), leти puluese-w, leти puluese-m, lemu puluese-n
lemu pwi-n : pubic hair (female)
leти uti-n : pubic hair (male)
lomu-n kokoru : chicken feathers
lomu-n ñetukan : feather of a bird, pinion
314. ley : shore, beach
pwaha ley : shore, beach
315. leqin : rain
316. lePe-1 : to look, see
317. $l e P e_{-2}$ : marker of present continuative (Hamel 1994:197)
toPu le?e tow yeniyan 'We two (incl.) are eating'
318. lePero: intend to, will
319. letow : that, there (far from hearer)
320. ley: ginger
321. lih: (gloss uncertain; cf. me)
322. likIn: node in bamboo or sugarcane
323. lilip : k.o. black wildfowl that digs a hole about a meter deep to bury its eggs; probably megapode
324. lilos: lost, astray, unable to find one's way
$i$ ki lilos 'S/he will be lost'
325. limbun : black palm (TP)
326. limeh : five (in '15', '25', etc.)
327. limemow : five (in counting children, ropes)
328. lo : in, inside, within
lo an : lake (lit. 'in the fresh water')
lo um : village (lit. 'in the house')
lo yay : cave (lit. 'in the cave')
329. lolo : (gloss uncertain; cf. kohu)
330. lolow : k.o. small rattan (cf. wahawah, wesiw)
331. lon : to sink
332. loŋo : things (H: loŋวw)
333. loPo: leaf
lopo ke : leaf of a tree; traditional woman's grass skirt
loPo na epi : sago leaf
loPo niw : coconut frond; torch made of coconut frond
334. los : to fall (as from a height)
i los 'It's falling'
335. losow : marsupial rat, bandicoot
336. lot : boil, abscess (cf. okahak, samwak) (H: ‘skin disease involving heavy rash; possibly a type of ringworm')
337. lotow : tree common in mangrove swamps
338. low : pus in the ear
339. lus-1 : nit, egg of a louse
340. lus-2 : traditional large wooden bowl (cf. drolow)
/m/
341. - $m$ : 2SG possessor; your
342. ma-1 : (gloss uncertain; cf. huyan, ow)
343. ma-2 : numeral prefix
344. ma-3 : ripe

теге-та : ripe
345. ma-4 : to want to, intend to
346. mac : tangled, as string
347. macaw : channel, passage through the reef (H: 'ocean passage between two islands')
348. maceheh : how much?, how many? (H: macehe)
349. macoloh $_{-1}$ : three (in serial counting)
350. macoloh-2 : six (in counting fish)
macoloh e seleha : seven (in counting fish)
351. maculu : three (in counting fathoms)
352. maculuem : three (in counting houses)
353. maculuey: three (in counting trees)
354. maculukap : three, in counting leaves
355. maculumow : three (in counting ropes)
356. maculuyat : three hundred
357. maculuyon : thirty
358. mah : taro
359. mahaem : four (in counting houses)
360. mahaey: four (in counting trees)
361. mahah-1 : eight (in counting fish)
mahah e seleha : nine (in counting fish)
362. mahah-2 : four (in serial counting)
363. mahakap : four, in counting leaves
364. mahamow : four (in counting ropes)
365. mahayat : four hundred
366. mahayon : forty
367. mahun : new, fresh (H: 'new, newborn')
368. mahuw : tomorrow (H: mahu)
369. mai : black-barred surgeonfish: Acanthurus gahhm (Forskål)
370. makala: (gloss uncertain)
u makala suwe 'The two of us (excl.) are paddling' (= ma $+\mathrm{ka}+\mathrm{la}$ ?)
371. makuwu : to heal, of a wound
372. malimeh-1 : five (in serial counting)
373. malimeh -2 : ten (in counting fish)
374. malimekap : five, in counting leaves
375. malimeyat : five hundred
376. malimenon : fifty
377. malimeyey : five (in counting trees)
378. malimiyem : five (in counting houses)
379. malin : k.o. tall tree whose bark is used as a sling to carry firewood
380. mama : strong, straight tree with small leaves that grows in mangrove swamps; used in building houses
381. mamaci : ashamed, embarrassed
pule-n mamaci : ashamed, embarassed ('shameful face')
382. manaw : k.o. parrotfish
383. mapen : morning (= ma pen?)
384. mapitan : raw, uncooked
385. mapoPen : green coconut
386. тари koPoh: dawn, daybreak
387. mapun : thousand
mapun sih: one thousand
mapun Puoh : two thousand
388. maPa-1 : skin (of human), body (free form), moРо, maРa-m maРa-n (H: ‘skin; close to')
389. maPa-2 : two, of bunches
maPa puy : two bunches (of betel nuts, coconuts, etc.)
390. maPamow-1 : 3DL, the two of them
391. maPamow-2 : two, in counting children, ropes
392. maParu- : take away, remove, subtract
393. maParu-coloh: seven, in serial counting
394. maParu-culuem : seven, in counting houses
395. maParu-culuey: seven, in counting trees
396. maParu-culukap : seven, in counting leaves
397. maParu-culuyat : seven hundred
398. maParu-culuךon: seventy
399. maParuPuem : eight, in counting houses
400. maParuPuey: eight, in counting trees
401. maParuPukep : eight, in counting leaves
402. maParuPuyet : eight hundred
403. maParuPuŋon : eighty
404. maParu-Puoh : eight, in serial counting
405. maParu-sakap: nine, in counting leaves
406. maParu-sayat : nine hundred
407. maParu-sem : nine, in counting houses
408. maParu-sey: nine, in counting trees
409. maParu-sih: nine, in serial counting
410. maParu-soyon : ninety
411. maPu: two, in counting fathoms
412. maPuem : two, in counting houses
413. maPuey: two, in counting trees
414. ma?ukep : two, in counting leaves
415. mapuyet : two hundred
416. maPuŋon : twenty
417. maPuoh-1 : four, in counting fish
mapuoh e seleha : five, in counting fish
418. maPuoh-2 : two, in serial counting
419. marapIñek : fallow land, land out of current use (= mata plñek?)
420. marmar : rain tree: Samanea saman (TP)
421. mas : k.o. fish with long nose and sharp teeth
422. masayat : one hundred
423. masih: all, every
masih pucey: altogether
424. masoyon: ten, in counting anything
masonon e sih : eleven
masonon e uoh: twelve
425. masow : not yet (H: ma sow)
426. mat- $1^{\sim}$ met : dead
amat iy met : corpse (lit. 'dead person')
427. mat-2 : dry reef; low tide (H: 'reef')
mar a puklt : reef near the shore of an island (cf. moso)
mat mahun : new dry reef, reef recently exposed by lowering tide
mat cakIn : dry reef that will soon be under water again
te?e mat : area between the shore and reef, sometimes left dry during low tide
428. mata-1 : eye; front; blade, point; focal point, metu, mata-m, mata-n
poro-mata- : eye
mata an : spring of fresh water
mata pwe : blind (lit. 'no eyes')
mata sus : nipple of the breast, mata susu, mata susu-m, mata susu-n
mata-n toton: dull, of a blade
429. mata-2 : to grow, of people or animals (cf. ek)
430. mawonoem : six, in counting houses
431. mawonoh: six, in serial counting
432. mawonokap : six, in counting leaves
433. mawonoyat : six hundred
434. mawonoŋon : sixty
435. mawonoyey : six, in counting trees
436. may-1 : k.o. large sea anemone
437. may-2 : k.o. thickset black fish, about 40 centimeters long with a white spot, and a barb near the tail
438. mayah : sea eagle
439. me : to come
e me 'You come'
me heno : to be first (in arriving)
me mwiPIn : to be last (in arriving)
me-lih : to come (?)
440. meheun : bitter (H: mehiyun 'bad-tasting, sour')
441. melehan: wide ( $\mathrm{H}:$ malahan)
442. melemun : soft, like a banana
443. melen : cucumber (TP)
loPo melen : an edible plant: Hibiscus manihot
444. melewa : spirit of the dead, ghost, melewo, melewa-m, melewa-n ca-melewa : shadow, reflection, ca-melewo, ca-melewa-m, ca-melewa-n
445. melisawa : parent-in-law (free form), melisewu, melisawa-m, melisawa-n (H: melesewa 'man's brothers-in-law and his sisters-in-law who are older than his wife; also woman's brothers-in-law who are older than her husband')
446. melui : blue-lined surgeonfish: Acanthurus lineatus (Linn.) (H: meliwi)
447. menih ~ meniy: kind of bee, probably bumblebee (H: menih 'large black bee')
448. mensow : brother-in-law (free form), mensow ayu, mensow awow, mensow apih
449. menuay-1: predatory bird, hawk, eagle
450. menuay-2 : white spotted stingray which jumps out of the water
451. me?e-: (gloss uncertain; cf. ma)
452. mePe-2 : the Malay apple: Syzygium gomata (H: mع? ${ }^{2} w$ 'k.o. fruit')
453. me?eman : red (cf. теРе та) (H: mePiman)
454. meアesan : cooked (= me?e-san?) (H: mعPis 'become cooked, done')
455. me?eyen : quick (H: m\&Piyen)
456. mere $\sim$ meri $:$ toward, in the direction of ( $=m e+r e$ ?)
457. mese Pen : veranda, front part of a house
458. meti : to sleep (H: mete)
meti-iw 'sleeping'
yu ma ki meti 'I want to sleep'
pulu-metu 'I'm sleepy'
459. mimim : urine (H: 'urinate')
ma ki-le-mimim : to want to urinate
i ma ki-le-mimim: S/he wants to urinate/is going to urinate
460. min : to sit
mi-tan : to sit down
461. miti : (gloss uncertain)
miti iwoh: day before yesterday, two days ago
462. moloa : nape of the neck (free form), molou, moloa-m, moloa-n
463. moloam: whale
464. momotani : to spit out food
465. momwak : squid with two long tentacles
466. mon : bead anklets
467. monoy : long-snouted unicornfish: Naso unicornis (Forskål)
468. топ̃ : long red or yellow sweet pandanus fruit (H: 'gloss unclear, poss. yellow-coloured')
469. moñoŋow : yellow ( H : oŋowa)
470. mosas : long-barbelled goatfish: Parupeneus macronemus (Lacépède) (H: mwasas)
471. moso : reef in deep sea (cf. marapukIt under mata)
472. mosos : to vanish
473. moto : (gloss uncertain; cf. mwat)
474. motow : cutting tool. knife, axe
motow kocoh : bush knife
motow mwatiy : k.o. axe used to fell sago trees
motow pipetow : small axe shaped like the mwatiy and used to fell trees for building
475. moyap : foreigner (applied to Caucasians and Asians) (H: yap)
476. mu : a fish, the pearl-spotted spinefoot: Siganus oramin (Linn.)
477. mиап : bad, defective (H: 'bad, evil')
478. mucizat : to sweat, perspire
i ta mucinat ' $\mathrm{S} / \mathrm{he}$ is sweating'
479. muli : citrus fruit (TP)
480. тити : earth oven (TP)
481. титит : jellyfish
482. тиРи : rear part, stern, behind; one that comes last' (cf. mwiPin ~ muPin)

тиРи tun : stern of a canoe
483. muPun : hungry
484. musim : a common shore tree: Casuarina equisetifolia
485. mut : to vomit (H: emot)
a mut 'You are vomiting'
/mw/
486. mwalas : k.o. tall grass on the sea floor where the mullet hide
487. mwalih : story, narration
488. mwan-1 $^{2}$ : fire
489. mwan-2 : male? (cf. ñetu)
490. mwaPay : calm, still (of unruffled water)
491. mwat : snake
moto mwat : sea snake (or eel?)
492. mwatiy: axe (H: mwati)
493. mway-1 : sand crab (H: mwey 'k.o. beach crab')
494. mway -2 : k.o. wild taro with sap that causes itching: Alocasia macrorrhiza
495. mwe : buttocks, mwe-w, mwe-m, mwe-n
496. mwece : fibers (H: mwici)
mwece niw : coconut husk
497. mwenen $\sim$ monen : straight, correct kili mwenen pwe : wrong, in error (lit. 'kili not straight')
498. mweniani : easy ( $\mathrm{H}:$ mweniye)
499. mwenie $\sim$ munie $:$ slow (possibly $=$ mweniani)
500. mwi: dog
501. mwiPin ~ muPin: late, last; rear part (cf. тиРи)
mиPin tahItuw : youngest child, last-born child
502. mwiPiw : sword grass: Imperata cylindrica
/n/
503. -n-1: (gloss uncertain; cf. suРи ñetu-n maPamow 'There are two children')
504. -n-2 : 3SG possessor; his/her
505. -n-3 : genitive marker
506. nanah : good (expression used by small boys for a story, but not for people, food or materials)
507. napwanan : big; older (of siblings)
leke napwanan : a big wound
508. nas : heavy pointed wooden stick used to split sago trunks, and as digging stick in planting
509. nen-1 : fast, quick, as people, or canoes
510. nen-2 : forest tree whose hard bark is used to make needles for sewing sago thatch (H: part of the palm leaf, used for sewing palm leaf thatch')
511. $n i$ : fish
512. nihineh : to dream ( H : nihiyani 'dream about')
513. nime : hand, arm (free form), nimo, nime-m, nime-n
514. nin : nail (TP nil)
515. niw : coconut
516. noh $_{-1}$ ~ nohonoh : fearful, afraid
517. noh-2 : poisonous red thorny reef fish, red fire fish: Pterois volitans (Linn.)
518. nun-1: rotating fast, spinning, like a propeller blade
519. nun-2 : unpleasant pressure in ears when submerged at a depth
520. nunun : shaking of the earth, earthquake
/n/
521. $\tilde{n} a h$ : fish spear (H: 'spear')
nah mata ho-kow: one-pronged fish spear
nah mata u-kow : two-pronged fish spear
nah mata culu-kow : three-pronged fish spear
522. $\tilde{n} a k$ : to climb (a ladder, coconut tree)
523. nalat : stinging nettle, Laportea sp.
524. naman-1 : fat, grease
525. ñaman-2 : sharp, of point or blade
526. naman-3 : sweet; tasty

NOTE: Probably the same as ñaman-ı, since these two concepts are treated as one in many
Oceanic languages.
527. ñamon: mosquito
528. nane ~ yane : mother (free form), ñano/ñanu, ñani-m, ñani-n
529. ñani : to eat
530. ñañay-1 : algae that grows on bottom of canoes
531. $\tilde{n} a \tilde{n} a y-2$ : sea grass that grows on sea floor in shallow water (considered distinct from ñañay-1 by speakers)
532. ñapulu: spouse (free form), ñapulu, ñapulu-m, ñapulu-n
533. nat : tall tree with edible sweet green fruit, probably Palaquium sp.
534. ñatama : father (free form), ñatomo, ñatama-m, ñatama-n ñatama-n pwe, ñane-n pwe : orphan (lit. 'no father, no mother')
535. ñatupu: grandfather
536. ñek: pronged fork used to remove food from the cooking pot
537. ñela : dew?
538. neletun: cold (food, water, weather)
an ñeletun 'cold water'
ko ñeletun 'cold weather'
539. ñemulen : sour
540. ñetu: child (free form), ñetu, ñetu-m, ñetu-n
ñetu mwan : bachelor, young unmarried man
ñetu-n ta putua-n : pregnant (= 'Her child is in her stomach')
su?
541. ñetukan: bird
542. ñihi : to wash clothes or dishes
543. ño : tide, current
544. $\tilde{n} o h$ : to put something inside a container
545. ñohoani : to swallow
546. ñoPoño : fresh water spring near or on the beach
547. ñorñor: tidal wave
548. now : a tall tree with wood used in building houses
549. $\tilde{n} u$ : to bathe, wash oneself in water
$\tilde{n} u$-hay: to bathe, wash oneself in water
ñu-welaw : to dive, submerge
550. nuhey: to shave
551. $\tilde{n} u k$ : small growth stage of squid
552. $\tilde{n} u m w i$ : to scrape the meat out of a coconut
553. numwih: to bail out a canoe that has taken in water
a ñumwih 'Bail it out! Start bailing!'
554. ñuñ : to move slightly, budge, shift

556. ñиРо : to spit (H: yano?oh)
/n/
557. yah-1: fathom (H: yahan)
ha-ŋah: one fathom
maアu-ทeh: two fathoms
maculu-yah: three fathoms
558. yah-2 : lime (for betel chew)
559. yahani : (gloss uncertain; cf. so-2)
560. yan-1: sun
561. yan-2 : thick-bodied barracuda: Agrio posphyraena (Walbaum)
562. yaŋ: to run amuck, go berserk
563. уаРа- : name, уоРо-, уаРа-т, уаРа-п
yaPa-m, hil 'What is your name?'
564. yara: hole through something (?; cf. poyaratin)
565. yas : nervous, upset
566. yay: hole in the ground, cave
lo yay: cave
567. yelepu: fly (insect)
ŋеlepu etIn : stinging March fly
568. уеsи: smoke
yesu mwan: smoke of a fire
569. yesuha: breath, yesuho, yesuha-m, yesuha-n $(\mathrm{H}:$ yosoha $)$
hoti yesuha-m : to breathe (lit. 'to get your breath')
570. yetahan : hot (of food, water, sun) (H: yatehi 'heat')
571. yeti : pain (H: 'hurt, be painful')
yeti-an : painful
pala yeti: headache
572. yici: wall
nici um : wall of a house
573. yo-1: intestinal worm (tapeworm?)
574. yo-2 : nose, snout, beak; prow

роРо-уо : nose
poРо-ŋo ñetukan : beak of a bird
po?o-ทo pow : snout of a pig
yo tun : prow of a canoe
575. yoh-1: to blow, of the wind
576. yoh-2 : far; away
577. yoni : mole on the skin
578. уоРо-1: (gloss uncertain; cf. kириса)
579. уоРо-2 : root; vein, vessel
no?o ki : root of a tree
yopo nime : blood vessel on the back of the hand

580. yotoha: to snore, to grunt, of a pig
yotoha amat : to snore, of a man
581. уияи: (gloss uncertain)
pwaha ŋиsи: lip (free form), poho ŋиsu, pwaha ŋиsu-m, pwaha ŋиsu-n
/o/
582. o-1: (gloss uncertain; cf. teke)
583. o-2 : pitch black, as a cloudy or moonless night
584. o-3: to spill
585. oc : to jump
586. ohoy: to draw; to write
587. ohu-ohu-n : dust
588. okahak : boil in the armpit (cf. lot, samwak)
589. oket : dry coconut
590. okomwan : dark
591. okoten : black
592. olicomи : lobster
593. oloh: bailer for a canoe
594. omon : to return (to a place)
iy omon la ko 'He is returning to the village'
595. oŋehi : to count ( H : эŋァhe)
596. oŋoŋehe : to think ( H : эŋว?วŋวһe)

NOTE: Evidently a reduplicated form of oyehi 'to count'.
597. opoan : blue, green
598. otiPi : to string together, as fish or flowers
599. ow-1: to play
ma-Pow 'you play'
600. ow-2 : rounding-up of fish by shaking coconut leaves in water (H: 'k.o. fish trap')
601. ow-3: 2DL, you two, the two of you
602. oy: call made on recognizing a passing person, or in response to a call from someone unseen in the forest
/p/
603. pa-1 : littoral tree whose bark is chewed with the meat of young coconuts by small boys as a substitute for betel nut
604. pa-2 : k.o. pandanus with narrow, light green leaves (H: 'k.o. plant with long slender leaf; coconut species')
605. pac: fish that is similar to a sardine but smaller; it lives in mangrove swamps
606. pah : tree with bark fibers used to make baskets
607. pahaw : oars for boat (H: 'long, two-man paddle')
608. pala: head (free form), pelu, pala-m, pala-n pala copon: cape, point of land jutting into the sea
609. palake?eme : tongue (free form), palake?eme, palake?eme-m, palake?eme-n (H:
palakePime)
610. palapa: coconut frond palapa lacuy : dry coconut frond
611. palawa : flower (TP)
612. pamat: thornless sago
613. pamboñ : eagle ray
614. pan : dove, pigeon
615. panah : small bluish-green fish with silvery-white and black stripes, and projecting lower jaw, barred garfish: Hemirhamphus commersoni (Cuvier)
616. paPaha: under, beneath
617. paPahan : right side nime paPahan : right hand
618. paPay : seagull
619. paPoh: near
620. paramanan : intermediate stage of coconut growth between green coconut and dry coconut
(H: 'green coconut, from which coconut water is extracted')
621. pasani : to know things, be expert at something (H: pesani)
622. pasaw: dry (H: pwasaw)
kolu-m pasaw 'You are thirsty' (lit. 'Your throat is dry')
623. pat: stone
624. pata ~ para: stem, stalk, trunk
para-kaka: leg from knee to ankle, para-koku, para-kaka-m, para-kaka-n
pata ke : trunk of a tree
para-nime- : arm above the wrist
para niw : trunk of coconut tree
625. pay: smoking rack for fish and firewood rack above the hearth
lo-pay : smoking rack for fish and firewood rack above the hearth
626. payow : foam, bubbles from crashing surf (cf. posasa tas)
627. pehe : to defecate
pehe Pan: diarrhea
i ta pehe Pan: S/he has diarrhea
628. pehena-1 : gecko
629. pehena-2 : to steal
630. pele : area? (H: 'an area to the side of, near, around')
pele um: cleared ground in village
631. pelemat : flying fox, fruit bat (H: pelimat)
632. peleyan : up (H: 'up in the house (houses are traditionally built on stilts or posts); up in the air; on top')
633. pelePip : tongs
634. peley : sail of a canoe
635. peli : opposite bank, other side, as of a river
636. peliaw : skipjack tuna, bonito
637. pelit : natural spirit (TP 'marsalai')
638. pelu : to fight over a man, of two women; to compete for someone's attention
639. pen : dish made of pounded taro with coconut oil, taro pudding
640. penuw : passage through the mangrove roots
641. pen: night
lo pey : night, 'Good evening' (greeting when meeting at night)
642. pepe : k.o. pandanus with broad, dark green leaves and inedible fruit (H: pepe 'k.o. plant')
643. pe?e : handle, pe?e-n
pe?e kow : fishing pole, made of sago midrib (lit. 'fishhook handle')
pe?e motow : handle of a knife or axe
644. pePetie : abdomen, belly (free form), peアeti-w, pePetie-m, peアetie-n
645. pere?em : to fry anything except sago (TP praim)
646. peti $\sim$ peri -1 : come from
yu peri Drokow 'I come from Loniu'
647. peti-2 : (gloss uncertain; cf. cah)
648. petuoh : dusky parrotfish: Callyodon niger (Forskål)
649. pew : shark
650. pey : small type of hermit crab; bait in fishing (cf. puokop) (H: 'k.o. mud whelk')
651. piciluw : obsidan spear head
652. picinah : long yam without thorns (cf. sue)
653. pihilum : firefly
654. pihin : female, woman
655. piline?i : with (comitative), accompanying (H: peliyعPi)
656. pilum : placenta, afterbirth

NOTE: Possibly a borrowing of Tok Pisin bilum 'carrying net'
657. piñehe : yesterday
658. pipetow : (gloss uncertain; cf. motow) (H: ‘axe-type tool used for making canoes')
659. pipow : caterpillar (H: 'k.o. caterpillar, somewhat poisonous')
660. pißen : white
661. pi३ihan : to itch (H: piPah)
662. piri : same (?)
u piri ay : kinsman, relative (lit. 'We two (excl.) same blood'?)
663. piriloyow : k.o. tree with large green leaves
664. piriy: (gloss uncertain; cf. puco)
665. pit : to drift, be carried on a current capeti-pit : to float
NOTE: I recorded [pıt], which Hamel (1994:213) disambiguates as /pet/ 'float, drift'.
However, cognates in other languages show unambiguous /i/, as in Ere tal-pit 'to float',
Nauna pit 'to drift', pi?-pit 'to float', Ahus a-pit 'to drift', or Pak pir 'to float', pir-pir 'to drift', and I conclude that the Loniu base for 'to float' is /pit/. The residue in capeti-pit remains unclear. The option that this is $c a$ - with reduplication of the base encounters a problem in that the base vowel appears in two different forms (perhaps the basis for
Hamel's analysis). But whether capeti- or just $c a$ - is separated from the base makes little difference, since in either case the residue in unparalleled in my data or Hamel's.
666. piti : star
667. pitiPo : bone (free form), pitiPu, pitiPo-m, pitiPo-n (H: pctiPo)
pitiPo ni : fish bone
pitipo para-koku : shin bone
668. piton : hard, of substances like stone; difficult, as a task
669. pitow : a common shore tree: Calophyllum inophyllum
670. pituet : trivet, three stones that support a cooking pot over the fire (H: petuwet)
671. po--1 : (body-part prefix; cf. kehea, sus; possibly left unanalyzed in other words)
672. po-2 : viscous liquid; sap, coconut milk, residue of coconut oil, po-n : its sap
po niw : coconut cream
673. pohow : sago refuse (fibers discarded after washing the powder out)
674. poke : (gloss uncertain, but possibly same as poke -2 )
netu poke : illegitimate child, bastard
675. poke-2 : seed (H: puwe)
676. pokepikan : ankle (free form), pokepikan ayu, pokepikan aw, pokepikan aPih

NOTE: Probably po-kepikan.
677. poke?e : little finger, pinky (posibly po-ke?e) (H: poke?i)
pokeアe nime : little finger, poke?e nimo, poke?e nime-m, poke?e nime-n
678. pokIt : deep sea far from the shore (H: ‘saltwater colored')
679. pokiteni : to curse, put a curse on someone
680. poleah : double-headed parrotfish: Bolbometopon muriaticus (Valenciennes) (H: pweleyah )
681. polonow : k.o. fairly large bamboo
682. polonow : sexual intercourse (polite form; cf. iti)
683. poñ : sea turtle, the green turtle: Chelonia mydas
poñ kePen : hawksbill turtle: Eretmochelys imbricata
684. ponaratin: anus (possibly po-yara-te-n)
685. popituh : k.o. medim-sized clam
686. popwilow : butterfly
687. poPo-1 : (gloss uncertain; cf. sas)
688. poPo-2 : within, among (cf. lemu)
poPo-kaka-: sole of foot (lit. 'within the foot'), po?o-koko, po?o-kaka-m, po?o-kaka-n
popo lo ke : forest (lit. 'among the trees')
poPo-nime- : palm of the hand (lit. 'within the hand'), po?o-nimo, poPo-nime-m, poPo-nime-n
689. poPoan : spoiled, rotten, of fish or meat; stench (cf. Imwec, kilipaca)
690. poРоŋo : nose, beak, snout (free form), poРоךо, poРоךо-m, poРоךо-n (possibly po-Роךo)
po?oŋo ñetukan : beak of a bird
porono pow : snout of a pig
691. poPot : green trigger fish: Pseudobalistes flavimarginatus (Rüppell)
692. poPotoPo : black
693. poro : (gloss uncertain;cf. soson)
694. pos : canoe paddle
695. posasa : foam, bubbles
posasa tas : foam, bubbles from crashing surf (cf. payow)
696. posoen : dry
kan posoen 'dry food'
697. poto : thorn
698. potoey : to hold in the hand; to embrace ( $\mathrm{H}:$ potowe)
699. potoŋuy : a fish, white-tailed and black-tailed footballer: Dascyllus spp.
700. pow : pig
701. pu: banana
702. pucepak: smoking pipe
703. pucey : together
704. puci : to leak, leaking, as a roof
705. puciew : k.o. wild breadfruit that becomes yellow when ripe
706. pucikatay : snail (H: pwicikatay)
707. pucikero : largest type of grouper (cf. keli, ketihi, kot, yapoPiw)
708. pucirIya : centipede
709. puco : island
piriy puco : island
710. pucon : rat, mouse
711. pue-1 : betel palm and nut; fruit
pиe he-puŋ : one bunch of betel nuts
pue $k i$ : fruit of a tree
712. pие-2: testicles, pиe-w, рие-m, pиe-n
713. pueap : shell beads (H: puwzyap 'store-bought beads' = puwe 'seed' + yap 'foreigner')
714. pueaw : cinnamon tree: Cinnamomum xanthoneuron
715. puedrIli : giant clam, Tridacna sp.
716. pueni : mother's brother, maternal uncle (free form), pueni-w, pueni-m, pueni-n
717. puey : crocodile
718. puh : bamboo basket trap for fish or eels
719. puhi : to puff, blow hard
720. puke : k.o. small clam
721. pula : wild taro
722. pule : face? (cf. mamaci, tahapule)
723. puli-1 : mountain (H: pwili ~ puli)
724. puli-2: various toadfish: Arothron sp.
725. puliah : fork on the outrigger that holds the connecting sticks in place
726. pulu: (gloss uncertain; cf. meti)
727. puluese : (jaw?; cf. leти)
728. pulutan : sticky, adhesive
729. pun-1 : betel leaf
730. pun-2 : moon, month
731. punay: sea cucumber, sea squirt
732. puñet : mud, clay (H: pwenet )
733. puŋ : a bunch, as of bananas or betel nuts
734. puŋey : ridge of the roof ( H : 'roof of a house')
735. puokop : large type of hermit crab (cf. pey)
736. puon : short in length or height (H: ‘short; round')
737. pupuhic : to assemble, gather (as for a meeting)
738. риРи : the back side of something (H: 'root, base, bottom')
pu?u pala- : occiput, back of the head
739. риРиси: foramen таgnum, place where the spine enters the cranium (= риРи си?)
740. puァисиluy : corner, as of a room
741. puralew : silver batfish: Monodactylus argenteus (Linn.)
742. puret: to work
743. pusasa : liver (free form), pususu, pusasa-m, pusasa-n (H: puscsa 'lung; poss. also heart')
744. pusihayon: scorpion
745. put-1 : a common shore tree: Barringtonia asiatica
746. put-2 : fishnet float (possibly $=$ put $_{-l}$, since floats are sometimes made of Barringtonia wood)
747. putua : stomach, intestines (free form), putuo, putua-m, putua-n
putua ŋeti : angry (lit. 'have a stomach ache')
putua puokop : unidentified fish (= 'belly' + 'hermit crab/bait')
/pw/
748. $p w a$ : the smell of a corpse
749. pwah : various fish, Moses perch: Lutjanus russelli (Bleeker), and black-spot sea perch:

Lutjanus fulviflamma (Forskål)
750. pwaha : mouth, poho, pwaha-m, pwaha-n
pwaha pew 'the mouth of a shark'
751. pway : to say, tell (H: pwa 'say; think')
752. pwe-1 : marker of negation, no, not
753. pwe-2 ~ pwepwe : shell, pwepwe-n
pwe niw : coconut shell
pwepwe yah: lime gourd (for betel chew)
pwepwe pala- : skull
pwepwe poñ : turtle shell
754. pwecuh : shellfish with elongated black shell, mussel (= pwe cuh?)
755. pwehew : elephant ear taro (huge leaves)
756. pwem : threadfin coralfish: Anisochaetodon auriga (Forskål)
757. pwen : to capsize, of a boat
758. /pwi/: vagina, pwi-w, pwi-m, pwi-n
759. pwic-1 : to finish s.t.
curu ko hoti eniyan le pwic curu kaw 'After we eat we'll go'
760. pwic-2 : very small black fish
761. pwici ~puci: claw, nail, scales
pwici ni : fish scales
puci nime : fingernail, puci nimo, puci nime-m, puci nime-n
762. pwitan: Trochus shell (used for armbands)
/r/
763. re : to (compression of mere?)
764. rurun : a swing
/s/
765. $s a$ : to collect, gather
766. sah : to plane or trim with an adze
767. salay : to break, broken (H: 'large crack in canoe')
768. samwak: boil in the groin (cf. lot, okahak)
769. sap : to wipe, as rain from the skin with a towel
770. sas : croton (H: ‘k.o. tree')
poPo sas : croton
771. se : all, everyone (H: sch 'third person plural')
772. sehesa : false; to lie, tell a falsehood (H: sehisa)
773. sehi : to peel, as yams (H: ‘chip, carve, sharpen, whittle')
774. seleha: one, in counting fish (H: salaha)
775. sem : one (in counting houses)
776. semeti : to tie a knot (H: seweti)
777. sen : to split, as firewood
778. ses : to dart toward s.t., as a shark sensing prey
779. sesema : to cough
780. sewe : to dance (of women)
781. sey: one (in counting trees)
782. sih: one (in serial counting), two (in counting fish) sih e seleha : three (in counting fish)
783. silimwat : full-grown oyster (cf. keti)
784. si३ihi : to carry on the shoulder
785. sisin : children's game of tag
786. so-1 : to pierce the skin, as a splinter
787. so-2 : to throw away, discard
e-so yahani po?oŋo-m 'Blow your nose'
788. sokuh : deep, as of water
789. soliani : to rub something into the skin (liniment, etc.) (H: soliyeni)
790. sop : to close, as the eyes; to be full, of the stomach
putuo i sop 'I am full from eating' (lit. 'My stomach is closed')
791. sopoPoti : to stab
792. soPiy: to shoot (H: soPi 'pierce or spear')
793. sos : to dirty the water, purpling of water caused by refuse from sago flour during rinsing
794. sosohon : to talk in one's sleep
795. soson : dirty (H: sos 3 )
poro-soson : dirty
NOTE: Possibly connected with sos.
796. $s u: 3 \mathrm{pl}$., they, them
797. sue-1 : to paddle
798. sue-2 : short yam; has small round leaves, and some have thorns (cf. picinah)
799. suehi : to fry sago
800. suey : to smoke (fish or meat) (H: tahasuwe)
801. sun : the action of removing wet sago flour from a canoe in which it has been pounded, and putting it in a basket (H: 'scoop with hands')
802. sunani : to push
803. suPu: 3DL, the two of them
804. sus : female breast, susu, susu-m, susu-n
po-sus : breast milk
805. susu: flood caused by heavy rains
806. susualaw : rainbow (H: susuyclaw)
807. suti : to pluck, pull out, as weeds from a garden
808. $t a_{-1}$ : to fight, of individuals (cf. yen)
809. ta-2 : to make, do
810. ta-3: (possessive marker; cf. $i \sim i y$ )
ta-Patow : 2pl. free form possessive pronoun; your
ta-hitow : 3pl. free form possessive pronoun; their
$t a-$ Pi $\sim t a$-Piy: 3SG free form possessive pronoun; his/her (cf. $i \sim i y$ )
ta-Pow: 2DL free form possessive pronoun; your
ta-Putu: 1PL.IN free form possessive pronoun; our
811. ta-4 : present tense marker for $2^{\text {nd }}$ and $3^{\text {rd }}$ persons
ta ek: to grow, be growing (of vegetation)
wo ta tuah pue 'You are chewing betel'
812. tacitu : 1PL.EX free form possessive pronoun; our
813. tah : conch shell, triton shell, trumpet
814. taha : anything to be smoked (fish, meat, etc.)
815. tahapule : forehead, face (free form), tahapule-w, tahapule-m, tahapule-n tahapule kaka- : knee cap
816. tahawowoh: to fly (H: woh)
817. tahItuw : last one (in sequence)
818. takueli : to dig, excavate
819. taku?ow : to bark, of a dog (H: tako?o(w) 'to cry out, usually in anger')
820. talay : sardine
821. tamana : men's traditional penis shell dance (with white cowrie attached to penis)
822. tan : earth, soil; down e me tan ‘Come down!'
823. tay : to cry, weep; to vocalize, of an animal kokoru ta tay 'The rooster is crowing' pow ta tay 'The pig is grunting'
824. tapicey: to squeeze, as a fruit to get the juice
825. tapiok : tapioca (TP)
826. tarayutu : dorsal fin of fish (=/tata yutu/?)
827. tas : sea, saltwater (cf. an)
828. tasu? : 3DL free form possessive pronoun; their
829. tata ~ tara: top, tata-n
tara puli : peak of a mountain
tata um : roof of a house
830. tatape : how, in what way? (H: tetape)
831. tato Pu: 1DLEX free form possessive pronoun; our
832. taw : k.o. tree with round fruit and bark used to poison fish; fish poison
833. tawan: a fish, the banded grunter: Eutherapon theraps (Cuvier)
834. tawohowoh: to flap the wings, as a bird about to take to flight
835. tay-1 : to beat, to pound (as sago pith into flour) (H: taya 'beat, catch, kill')
836. tay-2 : circumcision; to circumcise
837. tay-3 : fishing, catching fish
838. te: feces (free form), te-w, te-m, te-n
te-te: waste material
te-te mata: eye matter, mucus in the corner of the eye te-te mwan: ashes
839. teheta: full, of a container
840. teke : base, bottom, teke-n (H: 'bottom, base; origin')
teke-lehe : gums (free form), teke-lehe-w, teke-lehe-m, teke-lehe-n
teke-o : base of a tree
teke-tet : foot of a ladder
841. tekelemwet : earthworm (H: tekelimwet)
842. tekeni : to throw (as a stone), to throw away, as trash (H: takeni)
843. teku: charcoal?
844. teleya : ear (H: tcliŋa)
po-teleya: ear (prefixed free form), po-teloyo, po-teleya-m, po-teleya-n
teleya pwe : deaf (lit. 'no ears')
845. telus : a shore tree with edible nut: Terminalia catappa
846. temenani : to ask (a question)
847. temey : slitgong (H: ‘drum')
848. tenih : sardine
849. tepelewani : to turn (H: (ta)peluwani)
tepelewani ceni-m 'Turn around' (lit. 'turn your body')
tepelewani ma?a-m 'Turn around' (lit. 'turn your body')
tepelewani pala-m 'Turn your head!'
850. tePe : top, upper surface ( $\mathrm{H}: t \varepsilon$ Pi)
te?e tun : canoe platform
851. tePi : parallel sibling (free form), tePi-w, tePi-m, tePi-n
tePi inen : younger same sex sibling
tepi napwanan : older same sex sibling
852. tePiy: to hit (with fist, stick), to kill (H: taPi)
853. tePun : cerumen, ear wax

NOTE: Probably te un, but then un is unidentified.
854. tesalay: to split (H: (ta)sala)
855. tesin : (gloss uncertain; given for 'town', but this cannot be original)
856. tet : ladder
857. tewe $\sim$ tewey: to give, put, place s.t.
858. tie : the inside part, interior
$e$-me lo tie-n 'Come inside!'
859. tien : there
860. tihow : first-born child (H: ‘first-born male child')
861. tiko : middle (H: tiko? )
tiko ay : noon, midday, 'Good day!' (greeting)
862. tin : dead; period of mourning for five days after a person's death
863. tipieni : to drag (H: 'push over, roll s.t. long and thin, like a log, a body, a cigarette')
864. tiPi : to plait, to weave (mats, baskets)
865. tiw : Samoan goatfish: Mulloidichthys samoensis (Günther)
866. to-1 : marker of past action
867. to-2 : punting pole (used for canoe in shallow water)
868. toan : to open the eyes wide
869. tok : a fish, the black trevally: Siganus spinus (Linn.)
870. tolaw : east; east wind (H: 'north wind')
871. top : large basket used to carry food
top to Pow : small colorful basket used as decoration
872. toро-1 $^{2}$ : negative imperative, dehortative: don't
873. topo-2 : upper chest
topo-Pete 'chest (lit. 'over the heart)', topo-Pete-w, topo-Pete-m topo-Pete-n
874. topohoŋ : dragonfly
875. topoPoŋi : to pinch
876. topotap : high tide
877. topun : taboo (H: təpu)
878. toPow : (gloss uncertain; cf. top)
879. toPu: 1DLIN, the two of us
880. tos: k.o. tree with hard, round, yellow fruit
881. toton: dull, of the blade of a tool
882. toto Pay : early morning (time first cock crows)
883. tow-1 : present tense marker for $1^{\text {st }}$ person
884. tow-2 : to stay, remain (possibly identical to the preceding)
885. tu-1 : housepost
886. tu-2 : k.o. shellfish found in mangrove swamps
887. tuah : to chew, as betel nut
888. tuan : heavy
889. tue : to boil
890. tuen : outside (H: tuwe)
891. tuenan : correct, true (H: tuwenan 'truth, real thing')
892. tuey : freshwater eel
893. tuh : sugarcane (H: toh)
894. tuhun : light in weight
895. tukehe : when?
896. tulip : k.o. tree with edible leaves: Gnetum gnemon (TP)
897. tun : boat, outrigger canoe (H: tun/ton)
yo tun : prow of a canoe (lit. 'nose of canoe')
898. tupuna : boy (H: tupunah)
899. tириюе?еу: a fish, half-banded sea perch: Lutjanus semicinctus (Quoy and Gaimard)
900. tus : k.o. medium-sized white fish
/u/
901. $u_{-1}$ : dugong
902. $u_{-2}$ : 2DLEX, we two (but not the addressee)
$a-? u$ : 1DLEX free form possessive pronoun; our
903. $u_{-3}$ : stuck in the mud (as in a swamp)
904. u-4 : two, in counting prongs on a fish spear
905. ue?e : to shiver, as from cold
906. um : house, umwe-n
umwe-n ñetukan : bird's nest
umwe-n wilaw : spiderweb
907. un-1 : (gloss uncertain; cf. $t e$ )
908. un-2 : maggot
909. uoh : two (in '12', ‘22', etc.')
910. upiri : same?
upiri Pay: kinsman, relative (= 'same blood'?)
911. ut : penis (free form), uti-w, uti-m, uti-n
912. utu : 1PL.EX, all of us (three or more, but not the addressee)
913. uy: (thorn?; cf. epi)
/w/
914. $-w$ : 1SG possessor; my
915. $w a$ : to lash s.t. in place (as a spear head to the shaft)
916. wahawah : k.o. medium-sized rattan (cf. lolow, wesiw) (H: wahaw 'k.o. cane plant')
917. walay : a fish, John's sea-perch: Lutjanus johni (Bloch) (H: 'k.o. fish, poss. Thumb-print emperor')
918. was : rope, vine, bowstring
919. wati : monitor lizard (H: ‘lizard')
920. we-1 : cross sibling, we-w, we-m, we-n
we napwanan: older sister (male speaker)
921. $w_{-2}$ : a fish, the ashen drummer: Kyphosus cinerascens (Forskål)
922. wecic : broom
923. welaw : (gloss uncertain; cf. $\tilde{n} u$ )
924. wePi : to sing (H: 'song')
925. wesiw : k.o. large rattan (cf. lolow, wahawah)
926. wewe : mango
927. wi-1 : (gloss uncertain; cf. $\left.i w_{-1}\right)$
928. wi-2: k.o. tree and its edible green fruit with fibrous pit, probably the Polynesian plum, Spondias dulcis
929. wilaw : spider
930. wiPi ~ wiri : dolphin
931. wo ~ wow: 2SG, you
a-wow: 2 SG free form possessive pronoun, your
932. won : sand
te?e won : surface of the sand?
933. wonoh : six (in '16', '26', etc.)
934. wonomow : six (in counting children, ropes)
935. wosan : red substance in fish gills
/y/
936. $y a$ : future marker
937. yacehi : to slap (H: celi)
938. yakaPani : to hide
939. yakulumwani : to pull together, unite
yakulumwani nime- : to make a fist (lit. 'pull the hand together')
940. yayayay : to swim (H: 'gloss unclear, poss. swim on surface')
941. yapoPiw : mid-sized grouper (cf. keli, ketihi, kot, pucikero)
942. yaPitey : to caulk a leaking canoe
943. yas : small canoe or trough in which sago pith is pounded in preparation for eating
944. yati : to bite, to lick (H: yeti)
945. yatuey : to recognize, know a person
946. yaya : mother, mother's sister (term of address)
947. yelepi : to want, desire (H: yelipi)
948. yelimaw : to yawn
949. yen : to fight in battle (cf. $t a_{-2}$ )
950. yeniyan : to eat ( H : yencyan)
951. yePi : rippling, of the surface of water
952. yesay : to whet, sharpen a blade (H: yasa(y))
953. yesiy : to sneeze
954. yetuak: blister
955. yew-1 : to go, leave (H: yaw)
956. yew-2 : tree in the fig family with multiple aerial roots, the banyan
957. yia : year (TP)
958. yoPosi : to walk, to step (H: yoPose)
959. $y u: 1 \mathrm{SG}, \mathrm{I}$, me (personal pronoun) (H: yo)
$a-y u:$ my (marker of alienable possession)

### 6.4.1 English-Loniu Index

| abdomen | $:$ | pePetie |
| :--- | :--- | :--- |
| above | $\vdots$ | tera |
| abscess | $\vdots$ | lot, okahak, samwak |
| accompanyinjg | $\vdots$ | piliyePi |
| to adhere | $\vdots$ | pulutan |
| adze | $:$ | kenePiw |
| afraid | $\vdots$ | noh $\sim$ nohono |
| afterbirth | $\vdots$ | pilum (TP) |
| afternoon | $\vdots$ | keheah |
| algae | $:$ | ñañay |
| alive | $:$ | ma-huyan |
| all | $:$ | masih, se |
| among | $:$ | popo |
| amuck | $:$ | yay |
| and | $:$ | e |
| angry | $:$ | putua yeti |
| ankle | pokepikan |  |


| anklet (of beads) | : | mon |
| :---: | :---: | :---: |
| ant |  | kalon, kamwat |
| anus |  | poyaratin |
| area |  | pele (?) |
| to arise |  | celu |
| arm |  | nime |
| arm above wrist |  | para-nime- |
| armpit |  | po-kehea |
| ash |  | te-te mwan |
| ashamed |  | pulen mamaci |
| to ask (a question) |  | temenani |
| to assemble |  | pupuhic |
| astray |  | lilos |
| at |  | meri |
| aunt (maternal) |  | yaya |
| axe |  | cakay, motow mwatiy, motow pipetow |
| bachelor |  | kelaw, ñetu mwan |
| back (anat.) |  | po-keleya |
| back (side of s.t.) |  | puPu |
| bad |  | muan |
| bag |  | kuñ |
| to bail (canoe) |  | ñumwih |
| bailer (for canoe) |  | oloh |
| bald |  | copow |
| bamboo |  | kas, koloñah, kusa, polonow |
| banana |  | pu |
| bandicoot |  | losow |
| bark (of tree) |  | kulihi |
| to bark (dog) |  | taku?ow |
| base |  | teke |
| basket |  | kawa, top |
| basket trap (for fish) |  | puh |
| bastard |  | ñetu poke |
| bat (fruit) |  | pelemat |
| bat (insectivorous) |  | cikan, kecepwe |
| to bathe |  | ñu |
| beach | : | pwaha ley |
| beads |  | pueap |
| beak | . | po?oŋo |
| beard | : | lemu puluese |
| to beat (sago pith) |  | tay |
| before |  | heno |
| behind | : | muPIn ~ muPu |
| belly |  | pePetie |
| to bend |  | yakulumwani |


| bending part | : | kulucu (?) |
| :---: | :---: | :---: |
| beneath | : | paPaho |
| berserk | : | yay |
| betel leaf | : | pun |
| betel nut | : | pue |
| betel pepper | : | draka |
| big | : | napwanan |
| to bind | : | hosi |
| bird | : | ñetukan |
| bird sp. | : | amey, cihi, kanaw, katah, kePey, keripow, lilip, mayah, menuay, pan, paPay |
| to bite | : | yati |
| bitter | : | meheun |
| black | : | okoten, poPoto ${ }^{\text {a }}$ |
| blade | : | mata |
| blind | : | mata pwe |
| blister | : | yetuak |
| blood | : | ay |
| blood vessel | : | yoPo nime |
| to blow (wind) | : | yoh |
| blue | : | o?oan |
| boat | : | tun |
| body | : | maPa |
| boil (on skin) | : | lot, okahak, samwak |
| to boil (water) | : | tue |
| bone | : | piti?o |
| bottom | : | teke |
| to bounce | : | cin |
| bow (weapon) | : | leley |
| bowl | : | drolow, lus |
| bowstring | : | was |
| boy | . | tupuna |
| brain | : | eletu pala |
| branch | : | apan |
| breadfruit | : | kun, puciew |
| to break | : | salay |
| breakers | : | kalih |
| breast (female) | : | sus |
| breath | : | yesuha |
| to breathe | : | hoti yesuha-m |
| to bring | : | huti |
| broken | : | salay |
| broom | : | wecic |
| brother-in-law | : | mensow |
| bubbles | : | payow, posasa |



| coconut (green) | mapoPen |
| :---: | :---: |
| coconut husk | mwece niw |
| coconut oil | eleki |
| coconut (stage) | paramanan |
| coconut water | enu niw |
| cold | ñeletun |
| to collect | eni, sa |
| comb (for hair) | cu |
| comb (of fowl) | kocoh |
| to come | me |
| to come from | peti $\sim$ peri |
| compassion | kolumamwa |
| to compel | hineni |
| to compete for (man) | pelu |
| conch shell trumpet | tah |
| confused | iso (?) |
| to convey | huti |
| to cook (fish) | cun |
| cooked | mePesan |
| coral | lac |
| corner (of room, etc.) | puPuculuy |
| corpse | amat iy met |
| correct | tuenan |
| to cough | sesema |
| to count | oŋehi |
| crab sp. | elimay, kesus, mway, pey, puokop |
| crazy | co |
| crippled | kaka muan |
| crocodile | puey |
| crooked | hewIn |
| crotch | caya |
| to crush (as lice) | cilipiy |
| to cry | tan |
| cucumber | melan (TP) |
| currency (traditional) | lehe mwi |
| current | ño |
| to curse | pokiteni |
| cuscus | lawat |
| to cut | can, cePiti |
| to dance (men) | tamana |
| to dance (women) | sewe |
| dark | okomwan |
| to dart toward | ses |
| dawn | mapu ko?oh |
| day | aŋ |
| dead | mat |



| east | tolaw |
| :---: | :---: |
| easy | mweniani |
| to eat | ñani, yeniyan |
| eel (freshwater) | tuey |
| eel (marine) | moto-mwat |
| egg | eletu |
| eight (children, etc.) | eruPumow |
| eight (fish) | mahah |
| eight (houses) | maParuPuem |
| eight hundred | maParuPuyet |
| eight (leaves) | maParuPukep |
| eight (serial counting) | maParu-Puoh |
| eight (trees) | maParuPuey |
| eighty | maParuPuyon |
| elbow | kulucu nime |
| embarrassed | pulen mamaci |
| to embrace | potoey |
| to evaporate | cama |
| evening | yan kelelon |
| every | masih |
| everyone | se |
| to excavate | takueli |
| exclamation | is |
| eye | mata |
| eyebrow | lemu po?o-mata |
| eyelash | lemu po?o-mata |
| face | pule (?) |
| to fall | los |
| fallow land | marapIñek |
| false | sehesa |
| far | eluen, yoh |
| to fart | isi |
| fast | nen |
| fat (n.) | ñaman |
| father | cacah, ñatama |
| fathom | yah |
| fearful | noh ~ nohono |
| feather | lemu ~ lomu |
| feces | te |
| to feed | hay |
| female | pihin |
| fence | kow |
| to fetch water | emwani |
| few | hayah |
| fibers | mwece |
| fifty | malimejon |


| to fight (in battle) | yen |
| :---: | :---: |
| to fight (individuals) | ta |
| fin (dorsal) | tarayutu |
| fin (lateral) | kapini |
| to find | ini |
| finger | poke?e nime |
| fingernail | puci nime |
| to finish | pwic |
| fire | mwan |
| firefly | pihilum |
| fireplow | ka |
| firewood | kihi |
| first | heno |
| first born son | tihow |
| fish | ni |
| fish corral | cuk |
| fishhook | kow |
| fishing | tay |
| fishing pole | pePe kow |
| fish line | kap |
| fish net | kupwen, law |
| fishnet float | put |
| fish roundup | ow |
| fish sp. | apulupun, awah, catop, celepuh, colay, coŋon, cu, cur, kanas, kalipuey, kaPopwen, kekeñah, kalaw, keli, kesi, ketihi, koho, kopow, ko?owow, kot, ku?u, lapak, las, mai, manaw, mas, may, melui, monoy, mosas, mu, noh, yan, pac, panah, peliaw, petuoh, pew, poleah, po?ot, potoyuy, pucikero, puli, puralew, putua puokop, pwah, pwem, pwic, talay, tawan, tenih, tiw, tok, tupuye?ey, tus, walaŋ, we, yapo Piw |
| fist | yakulumwani nime |
| five (children, etc.) | lime-mow |
| five (fish) | maPuoh e seleha |
| five (houses) | malimiyem |
| five hundred | malimeyat |
| five (leaves) | malimekap |
| five (serial counting) | ma-limeh |
| five (trees) | malimeyey |
| to flap (wings) | tawohowoh |
| flesh | ceŋi |





| leg (lower) | para kaka |
| :---: | :---: |
| to lick | yati |
| to lie | sehesa |
| to lie down | ahe |
| light (weight) | tuhun |
| lightning | emen |
| lime (for betel) | yah |
| lime gourd | pwepwe yah |
| lime spatula | (ki) am |
| linker | a |
| lip | pwaha yusu |
| liquid | enu |
| liver | ete |
| lobster | olicomu |
| loincloth | cicilie |
| long | eluen |
| Loniu | Drokow |
| to look | ele?ey, lele |
| to lose s.t. | celepweni |
| to get lost | mata-n iso, lilos |
| louse | kut |
| to love | kolumamwa |
| lungs | pusasa |
| maggot | un |
| to make | ta |
| Malay apple | cay |
| male | kaman, mwan (?) |
| man | kaman |
| mango | wewe |
| many | celuan |
| to massage | lakahani |
| mat | cow |
| me | yu |
| to meet | pupuhic |
| to mend | ceweti |
| men's house | kaman, lo komwan |
| messenger | amat peri huti a komu |
| midday | tiko ay |
| middle | tiko |
| milk (breast) | po sus |
| mole (on skin) | yoni |
| money | lehe mwi |
| monitor lizard | wati |
| monsoon, east | kup |
| monsoon, west | hay |
| moon/month | pun |


| morning morning (still dark) | mapen toto Pay |
| :---: | :---: |
| mosquito | ñamon |
| moth | hikeroh |
| mother | ñane, yaya |
| mottled | kePen-ke?en |
| mountain | puli |
| mourning period | tin |
| mouse | pucon |
| mouth | pwaha |
| much | celuan |
| mucus in eye corner | te-te mata |
| mud | puñet |
| muscle | ceni |
| mushroom | eke |
| mussel | pwecuh |
| my | ayu, -w |
| nail | nin (TP) |
| name | паマa |
| nape of neck | moloa |
| navel | koputu |
| near | paPoh |
| neck | keñewe |
| needle | keni, nin (TP) |
| nervous | yas |
| nest (of bird) | umwe-n ñetukan |
| new | mahun |
| night | pen |
| nine (children, etc.) | erusomow |
| nine (fish) | mahah e seleha |
| nine (houses) | maParu-sem |
| nine hundred | maParu-sayat |
| nine (leaves) | maParu-sakap |
| nine (serial counting) | maParu-sih |
| nine (trees) | maParu-sey |
| ninety | maParu-soŋon |
| nipple (of breast) | mata sus |
| nit | lus |
| no | pwe- |
| node (in bamboo) | likIn |
| noon | tiko ay |
| nose | po?oŋo |
| not | pwe- |
| not yet | masow |
| nut | analow, eŋey |
| oars | pahaw |


| object | kilih (?) |
| :---: | :---: |
| obsidian | piciluw |
| occiput | puPu pala |
| octopus | kit |
| odor | ein |
| old (of things) | caken |
| older (of siblings) | napwanan |
| one (of children, etc.) | homow |
| one (of fathoms) | ha |
| one (of fish) | seleha |
| one (of houses) | sem |
| one hundred | masayat |
| one (of leaves) | hakap |
| one (of prongs) | ho |
| one (serial counting) | sih |
| one (of trees) | sey |
| on top of | tera |
| to open eyes wide | toan |
| opening | cip? |
| opossum | lawat |
| opposite shore | peli |
| our | apu, tacitu, taPutu, tatopu |
| outrigger booms | kiec |
| outrigger float | cam |
| outside | tuen |
| oyster | keti, silimwat |
| paddle (of canoe) | pos |
| to paddle (canoe) | sue |
| pain | yeti |
| painful | yeti-an |
| palm (black) | limbun (TP) |
| palm (of hand) | po?o-nime |
| pandanus | pa, pepe |
| pandanus fruit | moñ |
| parent-in-law | melisawa |
| passage | macaw, penuw |
| past tense | to |
| path | (pwaha) can |
| peak (of mountain) | tata puli |
| to peel (as yams) | sehi |
| penis | ut |
| perfective marker | kiPi |
| person | amat |
| perspiration | mucinat, ñuñu?o |
| to pierce | so |
| pig | pow |


| to pilfer | cinime |
| :---: | :---: |
| pillow | kalon |
| to pinch | topo Poni |
| pipe (for smoking) | pucepak |
| pitch black (night) | o |
| to pity | kolumamwa |
| place | co, ka, ko |
| to place | tewe $\sim$ tewey |
| placenta | pilum (TP) |
| to plait | tiPi |
| to plane (with adze) | sah |
| to plant | elomwi |
| plant sp. | cocoy, eñow, hisueh, ka, loPo melen (TP), mePe, mwalas, mwiPiw, nalat, ñañay, po?o sas |
| to play | ow |
| to pluck | suti |
| point (of knife, etc.) | mata |
| pot (for cooking) | ku |
| pouch | kuñ |
| to pound (sago pith) | tay |
| to pour | coehi |
| pregnant | ñetu-n ta putua-n |
| present (of action) | lePe, ta, tow |
| pressure (in ears) | nun |
| prong (of spear) | kow |
| prow (of canoe) | yo tun |
| to puff | puhi |
| to pull | ewani |
| to pull out | suti |
| to pull together | yakulumani |
| punting pole | to |
| pus | enu-n leke-n, kohu lolo |
| to push | sunani |
| to put | tewe $\sim$ tewey |
| to put inside | ñoh |
| putty nut | eit |
| quick | mePeyen, nen |
| rain | lenin |
| rainbow | susualaw |
| rain cape | cow |
| rat | pucon |
| rattan | lolow, wahawah, wesiw |
| raw | mapitan |
| rear part | muPin $\sim$ muPu, mwiPin |
| to receive | kohoti |




| sibling (parallel) | te?i |
| :---: | :---: |
| to sing | we?i |
| to sink | lon |
| sister (male speaker) | we |
| to sit | mitan |
| six (children) | wonomow |
| six (fish) | ma-coloh |
| six (houses) | mawonoem |
| six hundred | mawonoyat |
| six (leaves) | mawonokap |
| six (serial counting) | mawonoh |
| six (trees) | mawonoyey |
| sixty | mawonoyon |
| skin (of animal) | kulihi |
| skin (of human) | mapa |
| skull | pwepwe pala |
| sky | lay |
| to slap | yacehi |
| to sleep | meti |
| slitgong | temey |
| slow | mwenie ~ munie |
| small | inen |
| smell (of corpse) | pwa |
| to smell s.t. | honey |
| smelly (of fish, meat) | popoan |
| smoke | yesu |
| to smoke (fish, meat) | suey |
| smoking rack | (lo) pay |
| snail | pucikatay |
| snake | mwat |
| to sneeze | yesin |
| to sniff | honey |
| to snore | yotoha |
| snot | drow |
| snout (of pig) | po-Poŋo |
| soft | melemun |
| soil | tan |
| sole of foot | po?o-kaka |
| to be sorry | kolumamwa |
| soup | cuc ~ cuy |
| sour | ñemulen |
| spear (fish) | ñah |
| spear head (obsidian) | piciluw |
| sperm | enu ut |
| spider | wilaw |
| spiderweb | umwe-n wilaw |


| to spill | coehi, o |
| :---: | :---: |
| spinning | nun |
| spirit (of the dead) | melewa |
| spirit (nature) | cinen, pelit |
| to spit | nu?o |
| to spit out (food) | momotani |
| to split (firewood) | sen, tesalay |
| spoiled (fish, meat) | po?oan |
| spoiled (vegetables) | Imwec |
| spouse | ñapulu |
| to spread out | taPahanih |
| spring (of water) | mata an, ño?oño |
| to squeeze | tapicey |
| squid | momwak, ñuk |
| to stab | sopo?oti |
| stalk | pata |
| to stand up | celu |
| to be standing | culuay |
| star | piti |
| starfish | kak |
| to stay | tow |
| to steal | pehena |
| stem | pata |
| to step | yoPosi |
| stern (of boat) | muPIn ~ muPu |
| to stick to | pulutan |
| still (water) | mwaray |
| stingray | lah, menuay, pamboñ |
| stomach | putua |
| stone | pat |
| stooping | katuPuhi |
| story | mwalih |
| straight | mwenen ~ monen |
| to stray | mata-n iso |
| to strike | cahapuyani |
| to strike against | hak |
| string | kap |
| to string together | otiPi |
| stuck in the mud | u |
| to submerge | ñu welaw |
| subtract | maParu |
| to suck | in |
| sugarcane | tuh |
| sun | yan |
| sunset | yan kelelon |
| surf | kalih |


| to surf, go surfing | : | cec |
| :---: | :---: | :---: |
| to swallow | : | ñohoani |
| swamp | : | kupuca |
| sweat |  | mucinat, ñuñu?o |
| sweet | : | ñaman |
| sweet potato | : | koPokaw (TP) |
| to swim | : | yaŋajay |
| swing (n.) | . | rurun |
| swollen | : | cama |
| sympathy | : | kolumamwa |
| taboo | : | topun |
| tag (game) | : | sisin |
| tail | : | kelepe |
| to take | : | hoti |
| to talk | : | komu |
| to talk in one's sleep | : | sosohon |
| tangled | : | mac |
| tapioca |  | tapiok (TP) |
| taro | : | mah, mway, pula, pwehew |
| taro pudding | : | pen |
| tasty | : | ñaman |
| tattoo | : | kamwet |
| tears | : | enu mata |
| to tell | . | pway |
| ten (fish) | : | malimeh |
| ten (serial counting) | : | ma-soyon |
| termite | : | an |
| testicles | : | pue |
| that | : | i-tien |
| their | : | tahituw, tasuPu |
| them | : | hitow, maPamow, suPu |
| there | : | letow, tien |
| they | : | hitow, maPamow, suPu |
| thick (as plank) | : | hutun |
| thigh | : | ceni kaka, coea |
| thin, skinny | : | akesin |
| thing to be smoked | : | taha |
| things | : | loyo |
| to think | : | oŋonehe |
| thirsty | : | kolu pasaw |
| thirty | : | maculuyon |
| this | : | i-tio |
| thorn | : | poto |
| thorny | : | uy |
| thousand |  | mapun |
| three (in counting) |  | ma-coloh |


| three (bunches) | culu |
| :---: | :---: |
| three (children, etc.) | culu-mow |
| three (fathoms) | ma-culu |
| three (fish) | sih e seleha |
| three (houses) | ma-culu-em |
| three (leaves) | ma-culu-kap |
| three (trees, etc.) | ma-culu-ey |
| three (ropes) | ma-culu-mow |
| three hundred | maculuyat |
| throat | kolu |
| to throw (as stone) | tekeni |
| to throw away | so, tekeni |
| thunder | ketuy |
| tidal wave | ñorñor |
| tide (flow) | ño |
| tide (high) | topotap |
| tide (low) | mat |
| to(ward) | le, re |
| to tie | hosi |
| tired | ceni i met |
| tobacco | capak |
| tomorrow | mahuw |
| tongs | pele?ip |
| tongue | palake?eme |
| tooth | lehe |
| top | tata, tePe |
| tree | ke $\sim$ key |
| tree sp. | drow, etepew, kapok (TP), kopuca, lotow, malin, mama, marmar (TP), musim, nen, ñat, ñow, pa, pah, pitow piriloŋow, pueaw, put, taw, telus, tos, tulip (TP), wi, yew |
| trivet | cayapituet |
| Trochus shell | pwitan |
| true | tuenan |
| trunk | pata |
| to turn | tepelewani |
| turtle | poñ, poñ amat, poñ ke?en |
| tusk | lehe pow |
| twenty | maPuyon |
| twilight | koce?eku |
| twins | himwa |
| two (bound form) | uoh |
| two (bunches) | maPa |
| two (children, etc.) | maPamow |
| two (fathoms) | maPu |


| two (fish) | sih |
| :---: | :---: |
| two (houses) | maPuem |
| two hundred | maPuyet |
| two (leaves) | maPukep |
| two (prongs) | u |
| two (serial counting) | ma-Puoh |
| two (trees) | maPuey |
| uncle (maternal) | pueni |
| uncooked | mapitan |
| under | paPaho |
| to unite | yakulumwani |
| up | peleyan |
| upset | yas |
| to urinate | mimim |
| urine | mimim |
| us | citu, to Pu, u, utu |
| vagina | pwi |
| to vanish | mosos |
| vein | yopo |
| veranda | mesePen |
| village | ko, lo um |
| vine | was |
| viscous liquid | po |
| to vocalize | tay |
| to vomit | mut |
| to wade | kay |
| to walk | la, le, yo Posi |
| wall | 1ici |
| to want | ma, yelepi |
| to wash (clothes, etc.) | ñihi |
| water (fresh) | an |
| water (salt) | tas |
| wave (at sea) | kalih |
| we | citu, to Pu , u, utu |
| weather | ko |
| to weave | tiPi |
| to weep | tay |
| west | lan |
| wet | emwurun |
| whale | moloam |
| what? | cah |
| when? | tukuehe |
| where? | eheh |
| to whet | yesay |
| white | piPen |
| who? | (hemo)hih |


6.5. HISTORICAL PHONOLOGY. As in most other languages of the Admiralties, CVCVC word shapes were regularly reduced to CVC in Loniu by loss of the final consonant prior to PADM, and loss of the derived final vowel at a later time, except in obligatorily possessed nouns. Unlike most languages of the Admiralties, Loniu also retained (or restored) POC lastsyllable vowels in the free forms of obligatorily possessed nouns, as in POC *mata 'eye' > Loniu mata 'eye (free form)'. Phonological erosion 'from the right' has resulted in a relatively high frequency of monosyllabic content morphemes as compared with POC or many of its descendants, but because of the retention of last-syllable vowels in the free forms of obligatorily possessed nouns this situation is somewhat less extreme in Loniu than elsewhere in the Admiralties. Table 6.9 illustrates canonical reduction in non-possessed forms.

Table 6.9: Canonical reduction of Proto-Oceanic word forms in Loniu
POC
*ane
*baluc
*draRaq
*inum
*kamaliR
*loto
*mate
*mwata
*nopu
*patu
*quloc
*salan
*tasik

## Loniu

an
pan
ay
in
kaman
lot
mat $\sim$ met
mwat
noh
pat
un
can
tas
termite
dove, pigeon
blood
to drink
men's house, male
boil, abscess
to die; dead
snake
stonefish
stone
maggot
path, road
sea, saltwater

A summary of major sound changes to the POC consonants in Loniu appears in Table 6.10:
Table 6.10: Loniu reflexes of POC consonants

| POC | Loniu |
| :---: | :---: |
| *pw | pw |
| *bw | ? |
| *mw | mw, m |
| *W | w |
| *p | p - (in nouns), h (elsewhere) |
| *b | p |
| *m | m |
| * | t |
| *d | Ø/? |
| * | c- (in nouns), s (elsewhere) |
| *n | n |
| *r | Ø/? |
| *dr | Ø/? |
| *1 | $1-,-n$ |
| * | Ø/? |
| * | c |
| * | n |
| *y | y |
| *k | k- (in nouns), Ø (elsewhere) |
| *g | k (?) |
| * y | ๆ |
| *q | $\emptyset$ |
| *R | $\emptyset, ~ у$ |

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

In word-initial position there are seven known reflexes of POC *mw in Loniu, all of which occur in the sequence *mwa-. In one of these *mw remains unchanged: *mwata $>$ mwat 'snake'. One other form shows variation between $m w$ - and mo-: *mwanene $>$ mwenen $\sim$ monen 'straight'. Four others show invariant *mw- > mo-, and the last shows *mw >m- without rounding of the low vowel: *mwamwaki > momwak 'large cuttlefish', *mwanoRe $>$ monoy 'unicornfish', *mwaña > moñ 'Pandanus conoideus', *mwasasi > mosas 'goatfish', and *mwapo(q) > mah 'taro'. The last etymology may be incorrect, as there is an alternative POC form *mapu 'taro', and most languages of the Admiralties could reflect either word. However, Admiralty forms such as Lindrou mwah and Sori mwap support the inference that POC *mwapo(q) continued as PADM *mwapo.

In medial position POC *mw remained unchanged in the only available etymology, namely *mwamwaki > momwak 'large cuttlefish'.

POC *w underwent no change in any position: *waiwai > wewe 'mango', *kanawe > kanaw 'seagull', *kawil > kow 'fishhook', *lawaq > law 'kind of fish net', etc.

As an onset, POC *p became Loniu $p$ - in nouns, which constitute by far the largest percentage of the etymologies, and $h$ elsewhere (word-initially in non-nouns, and intervocalically in words of any class):
*p- > p- in nouns: *padran > pa 'Pandanus tectorius', panapa > panah 'needlefish/garfish', *paRa > pay 'storage rack above the hearth', *patu > pat 'stone', *pose > pos 'canoe paddle', *puaq > pue 'betel nut', *pulan > pun 'moon, month', etc.
*p- > $h$ - in non-nouns: *payan > hay 'to feed'.
*-p- > h regardless of word class: *apaRat > hay 'west monsoon' (expected **ahay), *katapa > katah 'frigate bird', *noponopo $>$ nohonoh 'fearful, intimidated', *papine $>$ pihin 'female; woman', *sapa > cah 'what?', *topu > tuh 'sugarcane', etc.

In one word *p which came to be intervocalic disappeared: *sa-ya-puluq > ma-soyon 'ten'(expected $* *$ ma-sayahun, but $/ \mathrm{h} /$ deleted, the vowel sequence $/ \mathrm{au} /$ contracted to $/ \mathrm{o} /$, and the penultimate vowel of $* *$ masayon assimilated to the vowel of the final syllable).

In one other word the loss of intervocalic *k produced a derived vowel sequence after *p in *puki > *pui, and this then resyllabified to -wi, leading to the reinterpretation of $* \mathrm{p}$ as $p w$ - in /pwi-/ 'vulva, vagina'.

POC * b is fairly rare, but in those examples I have found it became / $\mathrm{p} /$ in all positions, thus merging with $* \mathrm{p}$ as Loniu /p/ word-initially in nouns, but remaining distinct from *p in other environments:
*b- > p-: *baluc > pan 'dove, pigeon', *boni > pey 'night', boRok > pow 'pig'.
*-b- > -p-: *Rabia > epi 'sago palm and flour', *tabu-na > topun 'taboo', *tubu > ña-tupu 'grandfather'.

As in most languages, *m is historically stable. In Loniu it remained unchanged in all positions:
*m- > m-: *mata > mata- 'eye', *mate > mat ~met 'to die; dead', *mawap > yeli-maw 'to yawn', *mimiq $(>$ *mimimiq $)>$ mimi- $m$ 'urine', *muquy $>m u$ 'a fish, spinefoot sp.'.
*-m- > -m-: *kamaliR 'men's house' > kaman 'men's house; male', *laman > lama-n 'deep sea', *lima $>$ ma-lime- $h$ 'five', *qalimanu $>$ elimay 'mangrove crab', *tama $>\tilde{n} a$-tama 'father'.
*-m-> -m: *-mu >-m '2SG possessor'. *Rumaq > um 'house', *saman > cam 'outrigger float', PADM *mosimo > musim 'a shore tree: Casuarina equisetifolia'.

POC *t remained unchanged in all positions.
*t->t-: *talise >talus 'a shore tree: Terminalia catappa', *tanoq > tan 'earth, soil; down', *tasik $>$ tas 'sea, saltwater', *tete $>$ tet 'ladder', *tokon $>$ to 'punting pole', *topu > tuh 'sugarcane', *tuRu > tu 'housepost', etc.
*-t- > t: *katapa > katah 'frigate bird', *koton > kot 'large grouper sp.', *kutu > kut 'louse', *mutaq > mut 'to vomit', *mwata > mwat 'snake', *patu > pat 'stone', *potok > poto- 'thorn', *sa-ya-Ratus > masayat 'one hundred', etc.

BUT: *tolu > ma-colo-h 'three', with irregular $* \mathrm{t}>c$.
POC *d, which did not occur word-finally, is unattested in initial position, and in my data it occurs medially in only two forms, where it disappeared (presumably by first merging with *r and then becoming glottal stop, which merged with zero word-finally).
*-d- > Ø: *madar > ma 'ripe', *pudi > pu 'banana'.
POC *s- usually became $c$ - regardless of word class. In original medial position it normally did not change, whether it remained intervocalic or became final:
*s- > c: *salan > can 'path, road', *salay > can 'spiny sea urchin', *saman > cam 'outrigger float', *saya > cay 'bifurcation/crotch', *sapa > cah 'what?', *sipiri > cihi 'cockatoo', *sulu > cun 'to burn/to roast', etc.
*-s- > s: *kinase > kanas 'mullet', *kasusu > kesus 'coconut crab', *lisaq > lus 'nit, louse egg', *mwasasi > mosas 'goatfish', *pose > pos 'canoe paddle', *talise > talus 'a shore tree: Terminalia catappa', etc.

Exceptions to the general pattern include *susu > sus 'female breast' (perhaps the second sibilant prevented the first one from undergoing fortition), and *mata sawaq > macaw 'passage through the reef'. The last of these forms was earlier bimorphemic, and possibly still is. In either case *s $>c$ may have happened to *sawaq before the initial consonant came to be intervocalic.

More difficult to explain is *salaton > ñalato 'stinging nettle', with a unique replacement of *s by a palatal nasal.

With one exception to be noted, POC * n remained unchanged in all positions.
*n- > n: *na > na 'genitive marker', *nipi > nihi-neh 'to dream', *niuR > niw 'coconut', *nopu > noh 'stonefish', etc.
*-n- > $n$ : *ane > an 'termite', *inum > in 'to drink', *kanawe > kanaw 'k.o. seagull', *kupwena $>$ kupwen 'long fishing net', *onom > ma-wono-h 'six', *panako ( $>$ *pa-panako) > pahena 'to steal', *papine > pihin ‘female; woman', *qone > won 'sand', *dranum > an 'fresh water', etc.

BUT: *natu > ñetu- 'child, offspring'. No other witness for the ${ }^{n} / \mathrm{n}$ distinction supports a palatal nasal in this form, leaving the initial consonant in Loniu unexplained.

POC *r disappeared in all positions, but intervocalically it now appears as gottal stop as a result of the general synchronic constraint against sequences of like vowels or unlike vowels of equal or ascending height.
*r- > Ø: *dranum > an 'fresh water', *rorom 'dark' >o 'pitch black', *ruyuy >u'dugong'.
*-r- > Ø: *koro > ko 'village', *kuron > ku 'clay cooking pot', *matiruR > meti 'to sleep', * ñoro $>\tilde{n o}$ 'rough sea/current', *sipiri > cihi 'cockatoo', *sura > cu 'comb'
*-r- > ?: *kuriap > wiPi ‘dolphin', *muri > muPin ~ mwiPin 'late, last; rear', *raqan (> *dra-dra > rara) $>a$ a $a-n$ 'branch', *rua ( $>$ *ruo-pu $>$ *ma-ruo-pu) $>$ ma-Puo-h 'two (in serial counting)'.

BUT: *qarita > eit 'putty nut', and next to *kuriap > wipi Loniu has the doublet wiri 'dolphin', with unexplained retention of *r.

POC $* \mathrm{dr}$ merged with $* \mathrm{r}$ as zero (or glottal stop, under the same conditions as those just stated).
*dr- > Ø: *d(r)amut > am 'lime spatula', *drayi > ay 'day', *draRaw > ay 'blood', *padran > pa 'Pandanus tectorius'

POC *l remained a lateral liquid as syllable onset, but merged with $*_{\mathrm{n}}$ as an alveolar nasal in coda position:

```
*l- > l-: *lako > la 'to go, walk', *laman > lama-n 'deep sea', *layit > lay 'sky', *lawaq > wi-
law 'spider', *lima > ma-lime-h 'five', *lom > lo 'in, inside', *loto > lot 'boil, abscess', etc.
```

*-l- > -l-: *pa-layaR > peley 'to sail/a sail', *qalimayu > elimay 'mangrove crab', *salatoy > nalato 'stinging nettle', *talina > (po)teleya 'ear', *talise > talus 'a shore tree: Terminalia catappa', *tokalaur > tolaw 'north wind/east wind', *tolu > ma-colo-h 'three'.
*-l- > -n: *baluc > pan 'dove, pigeon', *kamaliR > kaman 'men's house; male', *kuluR > kun 'breadfruit', *pulan > pun 'moon, month', *quloc > un 'maggot', *salan > can 'path, road', *sa-ya-puluq > ma-soyon 'ten'.

BUT: *-l- > $n$ - in *qalima > nime- 'hand'.
POC *c did not occur word-initially, and only two examples appear in intervocalic position in my data, where it became a predictable, or nearly predictable glottal stop after merging with *r:

POC *-c- > P: yacan > yaPa- 'name', *taci 'younger parallel sibling' > te?i 'parallel sibling'.
POC $* \mathrm{j}$ is also rare, and attested only intervocalically, where it became $c$ :
POC $* \mathrm{j}>c$ : *kiajo $>$ kiec 'connecting sticks for outrigger', *laje > lac 'branching coral',
POC * $\tilde{n}$ is unchanged in all positions, even as syllable coda, where it tends to be unstable in most languages of the Admiralties.

* $\tilde{n}->\tilde{n}$-: ñaman > ñama-n 'tasty, delicious', *ñamuk > ñam-on 'mosquito', *ñaRo > hi-ñaw 'widow', ñatuq > ñat 'a tree: Palaquium sp.', * ñoro > ño 'rough sea/current'.
*-ñ- > -ñ: *mwaña > moñ 'Pandanus conoideus', *poñu > poñ 'the green turtle: Chelonia mydas'.

BUT: *-ña >-n '3SG possessor’.
The palatal glide did not occur word-initially in POC, although many daughter languages added it before *a- (Blust 1990). It occurred only as a syllable onset in medial position, where it remained unchanged. However, as a derived syllable coda it sometimes remained a palatal glide, sometimes is a palatal glide varying with zero, and sometimes it disappeared completely:
*-y-> -y-: *aya > yaya- 'maternal aunt, mother's sister'
*-y- > -y: *pa-layaR 'to sail' > peley 'a sail', *puqaya > puey 'crocodile', *saku layaR > colay 'sailfish'.
*-y->-y~ - Ø: *kayu > key ~ ke 'tree, wood'
*y > - : *ruyuy > $u$ 'dugong'
POC *k usually is unchanged word-initially, but disappears in medial and derived final position:
*k- > k-: *kanase > kanas 'mullet', *kani 'to eat' > kan 'food', *kawil > kow 'fishhook', *kiajo $>$ kiec 'outrigger boom', *kupwena $>$ kupwen 'long fishing net', *kuRita $>$ kit 'octopus', etc.
*-k->-Ø: *kasika > kesi 'a fish: Small-tooth emperor', *lako > la 'to go, walk', *panako (> *papanako) > pehena 'to steal', *puki > pwi- 'vulva, vagina', *saku layaR > colay 'sailfish', *tokalaur > tolaw 'north wind/east wind', *tokon $>$ to 'punting pole'.

In one known form it was retained in derived final position: *mwamwaki > momwak 'large cuttlefish'.

POC *g is attested in just one known Loniu form, in which it disappeared:
*g- > $\emptyset: *-g u>-w ' 1 S G$ possessor'
POC ${ }^{*} \mathrm{y}$ is unchanged in all positions.
*y->y-: *yacan > yaPa- 'name', *yapa > yah 'fathom', *yusuq > pwaha yusu 'lip'.
*-ŋ->-ŋ-: *talina > (po)telena- 'ear'.
*-n- > -n: *boni > pen 'night', *drayi > ay 'day', *layit > lay 'sky', *payan > hay 'to feed', *puyun > puø 'bunch, cluster', *qalimanu > elimay 'mangrove crab', *sa-ŋa-puluq > ma-sonon 'ten', *sa-ya-Ratus >ma-sayat 'one hundred'.

POC *q disappeared in all positions.
*q- > Ø: *qapatoR > het 'sago grub', *qarita > eit 'putty nut', *qasu > esu- 'gall (bladder)', *qate $>$ ete- 'liver', *qisaq $>$ is 'negative interjection', *qutin $>$ uti- 'penis', etc.
*-q- > Ø: *laqia (> *laya) > ley 'ginger', *maqati > mat 'ebb tide, dry reef', *muqun > mu 'a fish: spinefoot sp.', *pitaquR > pitow 'a shore tree: Calophyllum inophyllum', *pituqon > piti 'star', *puqaya > puey 'crocodile', *taqe > te- 'feces'.

In two known forms that show parallel changes, *q disappeared and a velar nasal was added before a low vowel that became initial: *qalo > yan 'sun', *qalu > yan 'barracuda sp.'. Both may be loanwords, but the addition of a velar nasal before initial vowels (although found in Palauan) is unknown in any language of the Admiralties. These irregular changes, which are of some diagnostic value, will be discussed below in connection with the linguistic position of Loniu within the Admiralties.

POC *R became a palatal glide in some forms, where it merged with POC *y, but disappeared in others without stateable conditions.
*R-> Ø: *Rabia > epi 'sago, sago palm', *Rumaq > um 'house'.
*-R- > y: *apaRat > hay 'west monsoon', *draRaq > ay 'blood', *mwanoRe > monoy 'unicornfish', *paRa > pay ‘storage rack above the hearth', *suRuq 'juice, sap' > cuy 'soup',
*-R- $\varnothing$ : *boRok > pow 'pig', *kuRita > kit 'octopus', *maRuqane > mwan 'male' (only in netu mwan 'bachelor'), *ñaRo > hi-ñaw 'widow', *quRi > wi 'a plant with edible fruit: Spondias dulcis', *sa-ya-Ratus > ma-sayat 'one hundred', *tapuRi > tah 'conch shell trumpet', *tuRu > tu 'housepost'.

As seen with *ñaRo > hi-ñaw 'widow', the assignment of *mwanoRe $>$ monoy to $* \mathrm{R}>y$ rather than $* \mathrm{R}>\emptyset$ is arbitrary, since if $* \mathrm{R}$ disappeared, the resulting vowel sequence $*$-oe would have diphthongized to -oy.

BUT: Also *suRuq 'juice, sap' > cuc 'soup'.
In addition to the Loniu reflexes of POC consonants, epenthetic glides developed under certain conditions. These fall into two categories. First, before *o or *Co (where the initial consonant was lost), a /w/ developed as onset. Notably, glide epenthesis did not occur before word-initial *u (and the sequence $w u$ - is therefore non-occurring in Loniu):

Ø > w/\#__o: *koe (> oe) > wow ~ wo '2SG', *onom > ma-wono-h 'six', *qone > won 'sand'.
The second environment in which epenthetic glides developed was between a mid or high vowel and a following unlike vowel. This was the virtually unavoidable transitional glide in phonemic sequences such as /ia/, /ua/ and the like. Both Hamel (1994) and my field materials show what appears to be free variation between word-final homorganic glides and their absence, as already noted for $/ \mathrm{key} / \sim / \mathrm{ke} /($ usually [kı?]) 'tree, wood'. This is equally true for phonemic glides inherited from POC, and for historically secondary glides that developed as automatic transitions and became phonemic through loss of a final syllable:
*-iV $(>\mathrm{iyV})>\mathrm{iy}: ~ * i \mathrm{ia}>i y \sim i{ }^{\prime} 3 \mathrm{SG}$ ', s/he'.

* $\mathrm{OV}(>\mathrm{owV})>o w \sim o: * \mathrm{koe}>$ wow $\sim$ wo ' 2 SG ', you'.

The retention of final glides under this condition is attested only in the personal pronouns. In cases such as *kasika (> *kasia) > kesi 'a fish: Small-tooth emperor', *Rabia > epi 'sago palm', or *tue >tu 'k.o. clam' final glides do not occur.

The development of the vowels in Loniu is complex and presents unresolved problems. First, as seen with the parenthetic notations in the appended vocabulary, Hamel (1994) and my fieldnotes often disagree on the shape of a given morpheme, almost always because of differences in the vowels. Setting that aside and looking only at my own material, here are some of the issues that it presents in relation to the Regularity Hypothesis:

POC *a usually remained unchanged (many examples in section 6.6.). However, very often it became /e/, as shown in Table 6.11:

Table 6.11: Examples of POC $* a>/ e /$ in Loniu

POC
*kasika
*kasusu
*kayu
*kiaco
*laqia
*lima
*matiruR
*natu
*pa-layaR
*panako
*puaq
*puqaya
*qalima
*qalimanu
*qapatoR
*qarita
*qasu
*qate
*Rabia
*taci
*taliya
*tanipa

Loniu
kesi
kesus
key $\sim$ ke
kiec
ley
ma-lime-h
meti
netu-
peley
pehena
pue
puey
nime-
eliman
het
eit
esu-
ete-
epi
tePi-
(po)telena-
tenih
a fish: Small-tooth emperor
coconut crab
tree, wood
outrigger boom
ginger
five
to sleep
child, offspring
to sail/a sail
to steal
betel nut
crocodile
hand
mangrove crab
sago grub
putty nut
gall (bladder)
liver
sago palm
younger parallel sibling
ear
sardine

In many cases this change appears to be conditioned by the presence of $* \mathrm{i} / \mathrm{y}$ (or less commonly, *e) in an adjacent syllable. Where a front vowel was present in POC but has disappeared in Loniu there is no assimilatory fronting, suggesting that last-syllable vowels were lost before the fronting of $*$ a in the remaining syllables (e.g. *ane > an 'termite' next to *qate > ete- 'liver', *drani > ay 'day' next to *kasika > kesi 'a fish: Small-tooth emperor', *kani 'to eat' > kan 'food' next to *matiruR > meti 'to sleep', etc.). This much is patterned, and allows the statement that *a was fronted to /e/ if a front vowel or glide was found in an adjacent syllable. However, it leaves kesus, ñetu-, pehena, pue-, het and esu- as potential exceptions to regularity. Nonetheless, all of these except pehena, and het are adjacent to a syllable that contains $/ \mathrm{u} /$, and there appear to be no exceptions in Loniu forms that have a POC source. Given these additional examples, then, it can be stated that POC $*$ a > Loniu /e/ if a high vowel (either $* \mathrm{i}$ or $* \mathrm{u}$ ) appeared in an adjacent syllable. As noted by Hamel (1994:26-27) the historical change *a > /e/ adjacent to a high vowel is reflected synchronically in phonological alternations triggered by the $3^{\text {rd }}$ SG prefix $i$ - in examples such as mat 'to die; dead' next to $i-m e t$ ' $\mathrm{s} / \mathrm{he}$ died, is dead'.

This leaves just *qapatoR > het 'sago grub', and *panako (> *pa-panako) > pehena 'to steal' as genuine exceptions to regularity, along with *papine > pihin 'female; woman', and the sporadic rounding of *a in POC *kawil > kow 'fishhook', and PADM *cawa > cow 'sleeping mat' (cp.
*kanawe > kanaw 'seagull', *sawaq > ma-caw 'channel', *tawan > taw 'Pometia pinnata', etc., with no rounding).

POC *i, *e, *o and *u generally remained unchanged, and where this is not the case the change appears to be genuinely sporadic. Cases noted include the following:
*i > e: *nipi-nipi > nihi-neh 'to dream'
*o > e: *boni > pen 'night'
*o > u: *topu > tuh 'sugarcane', PADM *mosimo > musim 'a shore tree: Casuarina equisetifolia'
*u > o: *tolu > ma-colo-h 'three'
In addition *lipon > lehe- 'tooth' may be a valid etymology with irregularities in both vowels; if so these changes took place rather early, as they are reflected in several languages of the eastern Admiralties, either in whole or in part, although the POC vowels were still present in PADM (cf. Likum lihe-, Penchal lip, lihí, lihì-m, liha-n 'tooth', where the first vowel is regular, and Wuvulu lifo- 'tooth', where both vowels are regular).

Other changes to the POC vowels in Loniu include semivocalization and apocope. Where a high or mid vowel came to be both final and postvocalic due to loss of an intervening consonant, it resyllabified to a glide and was retained in Loniu, as seen in the following examples:

| *boRok | $>$ | pow | pig |
| :--- | :--- | :--- | :--- |
| *niuR | $>$ | niw | coconut |
| *ñaRo | $>$ | hi-ñaw | widow |
| *pitaquR | $>$ | pitow | a shore tree: Calophyllum inophyllum |
| *tokalaur | $>$ | tolaw | north wind/east wind |

In one other known case the historically derived sequence -ui resyllabified as wi-, not -uy: *quRi > *qui > wi 'a plant with edible fruit: Spondias dulcis'.

Finally, an antepenultimate vowel that was initial in POC, or that became initial through loss of a preceding consonant, was lost in Loniu in three of the four cases in which these conditions apply:

| *apaRat | $>$ | hay | west monsoon |
| :--- | :--- | :--- | :--- |
| *qalima | $>$ | nime- | hand |
| *qapatoR | $>$ | het | sago grub |

For Admiralty languages in which the initial vowel is retained in the first and last of these cf. Ere ahay 'wind', Nauna ahay 'west wind’, Baluan apay 'east wind' Bipi, Lindrou yahay 'west wind', and Ere ahet, Titan aet, Nauna kahek 'sago grub'.

### 6.6. LONIU REFLEXES OF PROTO-OCEANIC AND PROTO-ADMIRALTY

|  | POC | PEADM | LONIU |  |
| :---: | :---: | :---: | :---: | :---: |
| 001. | *ane | *ane | an | termite |
| 002. | *apaRat | *yapaya | hay | west monsoon |
| 003. | *aya | *yaya | yaya- | maternal aunt |
| 004. | *bakewak | * bakewa (?) | pew | shark |
| 005. | *baluc | *balu | pan | dove, pigeon |
| 006. | *boyi | *boni | pen | night |
| 007. | *boRok | * boo | pow | pig |
| 008. |  | *bulaka | pula | elephant ear taro |
| 009. |  | *cawa | cow | sleeping mat |
| 010. | *d(r)amut | *drami | am | lime spatula |
| 011. | *dranum | *dranu | an | fresh water |
| 012. | *drani | *drani | ay | day |
| 013. | *draRaq | *draya | ay | blood |
| 014. | *-gu | *-gu | -w | 1SG possessor, my |
| 015. | *ia | *ia | iy | 3 SG , he, she |
| 016. | *ikan | *nika | ni | fish |
| 017. | *inum | *inu | in | to drink |
| 018. |  | *kabV | kap | fiber used for nets |
| 019. |  | *kagV | kak | k.o. starfish |
| 020. | *kamaliR | *kamali | kaman | men's house; male |
| 021. | *kanase | *kanase | kanas | mullet |
| 022. | *kanawe | *kanawe | kanaw | k.o. seagull |
| 023. | *kani | *kani | kan | to eat/food |
| 024. | *kasika | *kasika | kesi | small-tooth emperor |
| 025. | *kasusu | *kasusu | kesus | coconut crab |
| 026. | *katapa | *katapa | katah | frigate bird |
| 027. | *kawil | *kawi | kow | fishhook |
| 028. | *kayu | *kayu | key ~ ke | tree, wood |
| 029. | *kiajo | *kiaco | kiec | outrigger boom |
| 030. | *koe | *koe | wow | 2 SG , you |
| 031. | *koro | *koro | ko | village |
| 032. | *koton | *koto | kot | large grouper sp. |
| 033. | *kuluR | *kulu | kun | breadfruit |
| 034. |  | *kuñV | kuñ | coconut leaf basket |
| 035. | *kupwena | *kupwena | kupwen | long fishing net |
| 036. | *kuriap | *kuri | wiPi $\sim$ wiri | dolphin |
| 037. | *kuron | *kuro | ku | cooking pot |
| 038. | *kuRita | *kuita | kit | octopus |
| 039. | *kutu | *kutu | kut | louse |
| 040. | *laje | *lace | lac | branching coral |
| 041. | *lako | *lako | la | to go, walk |
| 042. | *laman | *lama | lama-n | deep sea |


| 043. | *layit | *layi | lay | sky |
| :---: | :---: | :---: | :---: | :---: |
| 044. | *laqia | *laya | ley | ginger |
| 045. | *lawaq | *lawa | law | k.o. fish net |
| 046. | *lawaq | *lawa | wi-law | spider |
| 047. | *lima | * lima-pu | ma-lime-h | five |
| 048. | *lipon | *lipo- | lehe- | tooth |
| 049. | *lisaq | * lisa | lus | nit, louse egg |
| 050. | *lom | *lo | lo | in, inside |
| 051. | * loto | * loto | lot | boil, abscess |
| 052. | *madar | *mada | ma | ripe |
| 053. | *mai | *mai | me | to come |
| 054. | *maqati | *maqati | mat | ebb tide, dry reef |
| 055. | *maRuane | *mwane | mwan | male (?) |
| 056. | *mata | * mata | mata- | eye |
| 057. | *mate | *mate | mat $\sim$ met | to die; dead |
| 058. | *matiruR | *matiru | meti | to sleep |
| 059. | *mawap | *ma-mawa | yeli-maw | to yawn |
| 060. | *mimiq | *mi-mimi | mimi-m | urine |
| 061. |  | *mosimo | musim | Casuarina sp. |
| 062. | *-mu | *-mu | -m | 2SG possessor |
| 063. | *muquy | * muqu | mu | a fish, spinefoot sp. |
| 064. | *muri | *muri | muPi-n ~ mwiPi-n | late, last, rear |
| 065. | *mutaq | *muta | mut | to vomit |
| 066. | *mwamwaki | *mwamwaki | momwak | large cuttlefish |
| 067. | *mwanene | *mwanene | mwenen $\sim$ monen | straight |
| 068. | *mwanoRe | *monoye | monoy | unicornfish |
| 069. | *mwaña | *moña | moñ | Pandanus conoideus |
| 070. | *mwapo(q) | *mwapo | mah | taro |
| 071. | *mwasasi | *mwasasi | mosas | goatfish |
| 072. | *mwata | *mwata | mwat | snake |
| 073. | *na | *na | na | genitive marker |
| 074. | *natu | *natu | ñetu- | child, offspring |
| 075. | *nipi | *nipi-nipi | nihineh | to dream |
| 076. | *niuR | *niw | niw | coconut |
| 077. | *noponopo | *noponopo | nohonoh | fearful, intimidated |
| 078. | *nopu | * nopu | noh | stonefish |
| 079. | *-ña | *-na | -n | 3SG possessor |
| 080. | *ñaman | *ñama-na | ñama-n | tasty, delicious |
| 081. | *ñamuk | *ñamu | ñam-on | mosquito |
| 082. |  | *ñapa | ñah | fish spear |
| 083. | *naRo | *ñoo | hi-ñaw | widow |
| 084. | *ñatuq | *ñatu | ñat | a tree: Palaquium sp. |
| 085. | *ñoro | *ñoro | ño | rough sea/current |
| 086. | *yacan | * 1 ara | yаPa- | name |
| 087. | * 1 apa | * 1 apa | yah | fathom |
| 088. | * y usuq | * yusu | pwaha yusu | lip |


| 089. | *onom | *ono-pu | ma-wono-h | six |
| :---: | :---: | :---: | :---: | :---: |
| 090. | *padran | * badra | pa | Pandanus tectorius |
| 091. | *pa-layaR | *baleya | peley | to sail/a sail |
| 092. | *panako | *ba-banako | pehena | to steal |
| 093. | *panapa | * banapa | panah | needlefish/garfish |
| 094. | *payan | *paya | hay | to feed |
| 095. | *papine | *bepine | pihin | female; woman |
| 096. | *paRa | * baya | pay | storage rack |
| 097. | *pat | *pa-pu | ha-h | four |
| 098. | *patay | * bata | pata- | stem, trunk of tree |
| 099. | *patu | *batu | pat | stone |
| 100. | *pitaquR | *bitaqu | pitow | Calophyllum spp. |
| 101. | *pituqon | * bitiqo | piti | star |
| 102. | *poñu | *boñu | poñ | green turtle |
| 103. | *pose | * bose | pos | canoe paddle |
| 104. | *potok | * boto | poto- | thorn |
| 105. | *puaq | *bua | pue | betel nut |
| 106. | *pudi | *budi | pu | banana |
| 107. | *puki | *buki | pwi- | vulva, vagina |
| 108. | *pulan | *bula | pun | moon, month |
| 109. | *puyun | *buyu | puy | bunch, cluster |
| 110. | *pupu | *bupu | puh | basket trap for fish |
| 111. | *puqaya | *buqaya | puey | crocodile |
| 112. | *puta | *buta | put | fishnet float |
| 113. | *putun | *butu | put | Barringtonia asiatica |
| 114. | *qalima | *lima | nime- | hand |
| 115. | *qalimayu | *qalimayu | elimay | mangrove crab |
| 116. | *qalo | *qalo | yan (?) | sun |
| 117. | *qalu | *qalu | yan | barracuda sp. |
| 118. | *qapatoR | *qapeto | het | sago grub |
| 119. | *qarita | *qarita | eit | putty nut |
| 120. | *qasu | *qasu- | esu- | gall (bladder) |
| 121. | *qate | *qate- | ete- | liver |
| 122. | *qayawan | *qaiwa | ew | banyan |
| 123. | *qisaq | *qisa | is | negative interjection |
| 124. | *qone | *qone | won | sand |
| 125. | *quioc | *quio | un | maggot |
| 126. | *quRi | *qui | wi | Spondias dulcis |
| 127. | *qutin | *quti | ut | penis |
| 128. | *raqan | *dra-dra | aPa-n | branch |
| 129. | *rorom | *roro | 0 | dark/pitch black |
| 130. | *rua | *ruo-pu | ma-Puo-h | two |
| 131. | *ruyuy | *ruyu | u | dugong |
| 132. | *Rabia | *yabi | epi | sago palm and pith |
| 133. | *Rumaq | *uma | um | house |
| 134. | *saku layaR | *colaya | colay | sailfish |


| 135. | *salan | * cala | can | path, road |
| :---: | :---: | :---: | :---: | :---: |
| 136. | *salay | * cala | can | spiny sea urchin |
| 137. | *salaton | *lalato/ñalato | ñalat | stinging nettle |
| 138. | *saman | * cama | cam | outrigger float |
| 139. | *saya | * caya- | cana- | bifurcation/crotch |
| 140. | *sa-ya-puluq | *sajapulu | ma-soyon | ten |
| 141. | *sa-ya-Ratus | *sajatu | ma-sayat | one hundred |
| 142. | *sapa | * capa | cah | what? |
| 143. | *sawaq | *mata cawa | macaw | passage through reef |
| 144. | *sipiri | *cipiri | cihi | cockatoo |
| 145. | *sulu | *sulu | cun | to burn/to roast |
| 146. | *suluq | *sulu | cun | coconut leaf torch |
| 147. | *sura | *cura | cu | comb |
| 148. |  | *suro | cur | k.o. barracuda |
| 149. | *suRuq | *cuyu | cuy ~ cuc | juice, sap/soup |
| 150. | *susu | *susu | sus | female breast |
| 151. | *tabu-na | *tabuna | topun | taboo |
| 152. | *taci- | *tari- | te?i- | same sex sibling |
| 153. | *talina | * talina- | (po)telena- | ear |
| 154. | *talise | *talise | telus | Terminalia catappa |
| 155. | *tama | *tama | ña-tama- | father |
| 156. | *tanipa | *tanipa | tenih | sardine |
| 157. | *tanoq | * tano | tan | earth, soil; down |
| 158. | *tanis | * tayi | $\operatorname{tay}$ | to cry |
| 159. | *tapuRi | *dapuy | tah | conch shell trumpet |
| 160. | *taqe | *te | te- | feces |
| 161. | *tasik | *tasi | tas | sea, saltwater |
| 162 | *taumata | *damata | amat | person, human being |
| 163. | *tawan | *tawa | taw | Pometia pinnata |
| 164. | *tete | *tete | tet | ladder |
| 165. | *tokalaur | *tokalau | tolaw | north wind/east wind |
| 166. | *tokon | * toko | to | punting pole |
| 167. | *tolu | *tolu-pu | ma-colo-h | three |
| 168. | *topu | *topu | tuh | sugarcane |
| 169. | *toRas | *doa | drow | ironwood |
| 170. | *tubu | *tubu | ña-tupu | grandfather |
| 171. | *tue | *tue | tu | k.o. clam/shellfish |
| 172. | *tuRu | *tu | tu | housepost |
| 173. | *waiwai | *wewey | wewe | mango |
| 174. |  | *watiV | wati | monitor lizard |

6.7. THE LONIU-BIPI CONNECTION. From the first modern reports on languages of the Admiralties there have been claims that Loniu and Bipi --- located at opposite ends of Manus island with many distinct languages separating them --- form a genetic unit. The first such claim was perhaps that of Smythe (1970:1214), who grouped Sisi and Bipi with Loniu and Papitalai on the basis of general typology, a classification reflected in Healey's (1976:352) general review of
the literature. Other remarks to the same effect were made by Blust (in Healey 1976:360), Ross (1988:319-320), and Hamel 1994:3). My own first experience of Manus involved landing at Momote, and shortly thereafter meeting a Bipi man who volunteered the information that Bipi was very similar to the Loniu language spoken not far from the airstrip. Unfortunately, most of these claims have been made without the benefit of evidence. ${ }^{2}$

Alone among these commenters, Ross (1988:317) has tried to situate Bipi within a larger Manus Network on the basis of exclusively shared phonological innovations. On the basis of three sound changes shared with Lindrou, and/or Sori-Harengan (merger of ${ }^{\mathrm{c}} \mathrm{and}{ }^{*} \mathrm{~s}$, $\mathrm{F}_{\mathrm{t}} \mathrm{>} \mathrm{k} / \ldots$ \#, and *ñ y/__\#), he assigned Bipi to the West Manus Network, with an immediate genetic affiliation with its neighbors rather than with Loniu, Papitalai or other languages at the eastern extremity of Manus. A preliminary examination of the data can certainly lead to this conclusion, as Bipi has undergone several striking phonological adaptations to the West Manus language area, as shown in Table 6.12, which compares sound changes in Bipi with Lindrou in the West Manus Network, and Loniu in the East Manus Network (those shared with Lindrou are bolded):

Table 6.12: A comparison of phonological innovations in Bipi with Lindrou (West Manus network) and Loniu (East Manus network)

| POC | Bipi | Loniu | Lindrou |
| :---: | :---: | :---: | :---: |
| *pw | pw | pw | bw |
| *mw | mw | $\mathrm{mw} / \mathrm{m}$ | mw |
| *W | w | w | gw |
| *p | $\mathrm{p} / \mathrm{h}$ | $\mathrm{p} / \mathrm{h}$ | b/h |
| *p | p | p | b |
| *m | m | m | m |
| * ${ }_{\text {t }}$ | dr/t-, -k | t | t/d/dr-, -k |
| * ${ }^{\text {d }}$ | x | Ø/? | r |
| * | s | c/s | S |
| * | n | n | n |
| *r | x | Ø/? | r-, -n |
| * dr | x | Ø/? | dr |
| *1 | 1-, -n | $1-,-n$ | 1-, -n |
| * ${ }^{\text {c }}$ | x | Ø/? | r ? |
| *j | S | c | s |
| * | ñ | ñ | ñ |
| * y | $y \sim j$ | y | y, Ø |
| *k | k/Ø | k/Ø | k/? |
| *g | $\emptyset$ | k ? | $\emptyset$ |

[^1]| * ${ }^{\text {g }}$ | n-, -k | 1 | k/n |
| :---: | :---: | :---: | :---: |
| *q | $\emptyset$ | $\emptyset$ | $\emptyset$ |
| *R | $\emptyset$ | y/Ø | y/Ø |

As noted by Ross (1988:316-320), there are no phonological innovations that appear to be shared exclusively by Bipi with Loniu, although the phonological histories of these languages are quite similar --- something that could be said with regard to many of the languages of Manus. In comparing Bipi with Lindrou the matter is different, as there are at least three phonological innovations that are shared by Bipi and Lindrou apart from Loniu. The first of these is $*_{\mathrm{t}}>d r$ in nouns, where the fusion of the common noun article *na with the base-initial consonant produced a prenasalized alveolar trill in Bipi and Lindrou, but not in Loniu, except in the possible loanword drow 'ironwood tree: Intsia bijuga'. The second is the highly distinctive change $* \mathrm{t}>k$ in coda position, in the first two languages, and the third is the change of ${ }_{\mathrm{y}} \mathrm{t}$ to $k$ under certain conditions in both Bipi and Lindrou.

Briefly, not much should be made of the $* \mathrm{t}>d r$ - innovation in nominal bases, since a similar change of *t to $d$-, $d r$, or $n d$ - is widespread in the languages of the East Manus Network, including at least Nali, Ere, Titan, Leipon, Papitalai, Kuruti, and Lele, and is also found as $t r$ - in Lenkau and $r$ - in Penchal of the Southeast Admiralties. In short, the $* \mathrm{t}>d r$ - change in nouns in Bipi and Lindrou is best treated as a shared retention from Proto-Eastern Admiralty.

Equally unconvincing as subgrouping evidence is the ${ }^{\mathrm{y}} \gg k$ change, which is distinctively different in Bipi and Lindrou. First, Lindrou merged ${ }^{*} \mathrm{y}$ with $* \mathrm{n}$ preceding a high front vowel, as in POC *boni > Lindrou ben (but Bipi pik) 'night', POC *drayi > Lindrou len (but Bipi xak) 'day', or POC *tanis > Lindrou a-den (but Bipi tak) 'to weep, cry'. Second, Lindrou reflects POC ${ }^{*} \mathrm{y}$ as a palatal nasal in other environments in which it either remained a velar nasal or became a velar stop in Bipi, as in POC *taliya > Lindrou drañe- (but Bipi draliye-) 'ear', or POC *yacan > Lindrou ñara- (but Bipi kaxa-) 'name'. Third, in my data Bipi reflects ${ }^{\mathrm{y}} \mathrm{\eta}$ as $k$ only in coda position, whereas in Lindrou the velar nasal has become $k$ in onset position in at least *saya > saká- (Bipi saya-n) 'fork of a branch', and *sayasaya > sakasak 'starfish' (ultimately from the same base as the preceding).

On the other hand, the *t > -k change in Bipi and Lindrou is clearly an innovation, and one that is common to most languages of the West Manus Network, including at least Lindrou, Likum, Drehet, Mondropolon, Sori (where it continued to -?). At first blush this would seem to be clear evidence for placing Bipi within the West Manus Network, as was done provisionally by Ross (1988:317). However, Bipi speakers could well have imitated this change once they were bilingual in Lindrou, and recognized the recurrent correspondence of Bipi $-t$ to Lindrou $-k$. Moreover, in at least some etymologies Lindrou merged derived final $*_{\mathrm{k}}$ and $* \mathrm{t}$, while Bipi invariably lost final *k before the *t > -k shift, as in POC *kutu > Bipi, Lindrou kuk 'head louse', but POC *kalika
Bipi kali, Lindrou kalik 'rock cod, grouper' (in several other etymologies in my database Lindrou also lost derived final *k, as in *lako > la 'to go', or PADM *nika > ni 'fish' in both languages). This suggests that Bipi acquired the $* \mathrm{t}>-k$ change by contact rather than by inheritance from a Proto-West Manus ancestor.

Similarly, it is easy to find lexical innovations that Bipi shares exclusively with other languages of western Manus, as Bipi, Lindrou, Likum adray, replacing POC, PADM *topu 'sugarcane'. However, it must be kept in mind that innovations which appear to be exclusively shared by Bipi with its neighbors can plausibly be attributed to contact, whereas if Bipi evolved in western Manus this explanation does not exist for innovations that are exclusively shared by Bipi with Loniu, or other languages of eastern Manus. It follows that if a substantial body of innovations can be assembled which are shared only by Bipi and Loniu (in the broad sense, where 'Bipi' encompasses Bipi and Sisi, and 'Loniu' encompasses Loniu, Papitalai and Naringel) these are most plausibly attributed to a period of uniquely shared history before the Bipi and Sisi people arrived in western Manus.
6.7.1. Lexical evidence for Bipi as a member of the East Manus Network. The search for exclusively shared lexical innovations connecting Loniu and Bipi apart from all other languages has proven difficult. The most promising cases I have found to date are listed below. So far as is presently known, items 1-8 are shared exclusively by Loniu and Bipi, while items $9-11$ are shared only by Loniu, Bipi and Leipon, spoken on Pityilu island (see Capell 1962: Map VI), and items 12-19 are shared by Bipi with a somewhat larger collection of languages in the eastern part of Manus, but are otherwise unknown in other languages.
(1) POC *ñamuk, PADM *ñamu but Loniu, Bipi ñamon 'mosquito'. A number of languages in the Admiralties reflect *ñamuk regularly as namu, nam or ñam. Only Loniu and Bipi show an additional -on as part of the expected ñam. It is possible that this innovation resulted from an identification of two pestivorous biting insects, the mosquito and the sandfly, with a reflex of POC *qone 'sand' being added to the regular reflex of POC *ñamuk prior to the separation of the two language communities.
(2) POC *layo, but Loniu yelepu, Bipi kalapux 'housefly'. Reflexes of POC *layo 'housefly' are found among Admiralty languages both in languages of the Western Islands (Wuvulu-Aua, Seimat), and in the Southeastern islands. The languages of Manus and its immediate satellite islands show a variety of terms, but only Loniu and Bipi appear to reflect a form of the shape *yalapur, with $* \mathrm{r}>x$ in Bipi and ${ }^{\mathrm{r}} \mathrm{r}>$ P in Loniu being regular developments (word-final glottal stop is non-phonemic in Loniu, and consequently is not written). The other issues with this comparison involve the correspondence of a velar nasal in Loniu with a voiceless velar stop in Bipi, and the vowels. As already seen, the nasal-stop correspondence for velars is regular in coda position, as with POC *tanis > Loniu tay, Bipi tak 'to weep, cry', or *paŋan > Loniu hay, Bipi hak 'to feed', but the change ${ }^{n} \mathrm{y}>k$ - in onset position is sporadic. Other examples include POC *yacan > Loniu yaPa-, Bipi kaxa- 'name', and several words without known POC or PADM etymologies, as Loniu jatahan, Bipi kadrahan 'hot (of water, food, the weather)', and Loniu yeti-an, Bipi kadrien 'ache, pain; painful' (both found in other languages of Manus, but not in languages of the Western Islands or the Southeast Admiralties). As seen already, the change $* \mathrm{a}>e$ in Loniu appears to have been conditioned by the presence of a high vowel in an adjacent syllable, whether it was palatal or labial, and this evidently happened after the loss of the final -VC.
(3) POC *kasu, but Loniu yesu, Bipi yas or kasu-yas 'smoke'. POC *kasu 'smoke' is preserved in many Admiralty languages, usually in combination with the word for 'fire', but this
form was either sporadically altered or replaced by a reflex of *yasu in Loniu and Bipi, and nowhere else. The alternative Bipi form kasu-ŋas suggests that the native form was retained and combined with the word for 'smoke' borrowed from some language of western Manus.
(4) Loniu tamana 'men's dancing' (Hamel 1994), Bipi tamana 'to dance (general term)'. Several other languages of the Admiralties reflect *mana which, as Hamel (1994:200) points out, also refers to the white egg cowrie. Throughout at least the island of Manus a traditional men's performance that evidently was intended to assert one's masculinity, was the white penis shell dance, in which a white egg cowrie was attached to the penis and prominently exhibited by swinging the shell as part of the dance movement. Cognate forms in other languages include Titan manah, Likum mana and Lindrou mana. While this was explicitly described as a men's dance for most of these languages, Bipi tamana was said to refer to dancing of any kind, and hence of both sexes. What is uniquely distinctive here is the appearance of the initial syllable in both Loniu and Bipi.
(5) POC *mariri, but Loniu, Bipi nala 'to feel cold; shiver'. The semantics here vary somewhat. I recorded Bipi ñala 'shivering, as with cold', and Hamel (1994) lists Loniu ñala 'cold wind; to be or become cold'. Ahus neletun, Pak neldun, Likum nalaPan, Levei nalaPay, Lindrou ñala?an 'to be cold, of food or water' may be cognate forms with an attributive suffix, a form that also occurs as Loniu ñeletun 'to be cold', but Loniu and Bipi ñala are distinguished by occurring as unsuffixed disyllables.
(6) Loniu, Bipi piton 'hard (as unripe fruit)'. This comparison is compromised by two factors: 1) a semantic category that is not well-defined, and 2) a number of gaps in attestation. Leipon toton shares the final syllable, and Lindrou boto?on may be cognate, with with an irregular correspondence for the vowel of the first syllable. Although the absence of a reconstruction for this meaning either in POC or PADM makes it impossible to demonstrate that this is a replacement innovation, the word shape in this meaning is uniquely shared by Loniu and Bipi.
(7) POC *kaRo, but Loniu asi, Bipi xas 'to scratch'. Since this can be either a transitive or intransitive verb, I assume *ras-i, with the transitive suffix in the Loniu reflex, but not in Bipi. This added assumption somewhat weakens the comparison, which nonetheless shows regular sound correspondences if, in fact, the Loniu form reflects the suffixed base, and the Bipi form does not. No other language recorded has a form that is compatible with this reconstruction.
(8) POC *mapat, but Loniu tuan, Bipi drawan 'heavy'. Loniu has tuan for expected **tawan, but these forms are likely to be cognate, and depart widely from all other forms recorded in the Admiralties.
(9) Loniu helow/hilow, Bipi hulaw, Leipon ko hilow' 'to run'. A problem with attempting to elicit verbs in Admiralty languages is that speakers are not accustomed to abstracting the verb itself from the larger context in which it occurs. In particular, a verb like 'to run' was normally given with a pronominal prefix, and unless at least the singular paradigm was collected it was not always clear whether the form obtained was just the verb, or the prefixed verb 'I am running', 'you are running' or 's/he is running' (or sometimes the imperative form 'Run!'). This was naturally exacerbated by elicitation through Tok Pisin, in which 'to run' is ron igo, where a third
person subject is implied. Nonetheless, Leipon ko hilow is the only other form collected which shows regular sound correspondences with Loniu. The Bipi vowel is aberrant, but a lesson any comparativist is sure to learn quickly in working with these languages is that the consonant correspondences are to be valued more highly than the correspondences of the vowels, which are quite variable (for example, I recorded Loniu helow, while Hammel (1994) has hilow). With this provision in mind it seems safe to conclude that Titan kwilow, Pak kwiliw 'to run' are cognate with one another, but are distinct from the cognate set given here.
(10) POC *Ruqa 'neck', but Loniu keñewe/kzñu - , Bipi koñe-, Leipon keñwe 'neck'. The major problem with using this comparison as evidence for a Loniu-Bipi-Leipon subgroup is the appearance of Seimat kinawe- 'neck'. However, since Seimat clearly subgroups with Wuvulu and Aua, which retain a reflex of POC *Ruqa, it appears that Seimat kinawe- is an innovation that could not have happened in a language immediately ancestral to it and languages of the Eastern Admiralties. For this reason I treat it as a chance resemblance.
(11) POC *qalo, but Leipon, Bipi yan, Leipon yal'sun'. Most languages of the Admiralties reflect POC *qalo. If the forms in Loniu, Bipi and Leipon are cognate with these, they show an unexplained initial velar nasal which is distinctive for them.

Some other comparisons include these three languages (where Loniu and Papitalai are counted as one) plus one, two or three others, and may point to a larger subgroup centered in eastern Manus that additionally includes Nali, Ahus, and possibly Titan and Lele. Examples that have come to my attention include the following:
(12) POC *qalu 'barracuda' : Loniu, Bipi yan, Leipon, Nali yal 'large barracuda sp.'. Words for barracuda were recorded in many Admiralty languages, most of which reflect *qalu, but only these four point to a form with an initial velar nasal.
(13) *kolaya 'back (anat.) : Loniu po-kelaya, Bipi koliya, Leipon kolya, Ahus koloya 'back (anat.)'. A word for 'back' was recorded in all 26 language communities in the Admiralties for which I have data, and no other cognates were found.
(14) POC *tubuq/tupuq, but Loniu $\varepsilon k$, Bipi $x e k$, Papitalai rek, Leipon rik'to grow', Lele kin lek 'it is grown'. This appears to be a relatively straightforward innovation in a language ancestral to Loniu (including Papitalai), Bipi, Leipon, and Lele.
(15) *puon 'short' : Loniu, Bipi puon, Leipon, Titan bruon, Ahus nembuon 'short'. Again, this is a word that recorded in most of the 26 Admiralty languages for which I have data, and reflexes of *buon are known only from these five.
(16) *putua- 'belly' : Loniu putua 'belly; guts', Bipi putue- 'belly', pala-putue- 'guts', Leipon putua-, Titan patua- 'belly'. Once more, words for both 'belly' and 'guts' were recorded for virtually all 26 Admiralty languages for which I have data, and members of this cognate set are restricted to the languages cited here.
(17) POC *pia, but Loniu huyan, Bipi huyen, Leipon, Ahus huyan, Kuruti huyen 'good'. A number of other languages in the eastern Admiralties, including at least Papitalai, Nali, Ere, Titan, Kele, Pak, Lenkau, Lou, Penchal and Nauna, reflect *hian, and it is unclear which form is original. On purely phonetic grounds one wound expect *huyan > hian rather than the reverse, but on distributional grounds *hian appears to be the older form.
(18) *pway 'so say, tell, speak': Loniu. Bipi pway, Pak pway, Ahus pwa 'to say, tell, speak'. A word for this meaning was recorded in most languages of the Admiralties for which I collected data, and nothing similar was found anywhere else.
(19) *busasa ‘liver/lungs': Loniu pusasa- 'liver/lungs', Bipi pises, Papitalai brusas, Ahus mbusasa-, Pak pusas 'liver'. Again, cognate forms are unknown outside these languages.
(20) *taPi 'to hit/kill' : Loniu taPi 'to hit', Bipi tay 'to kill', Papitalai a-riPiy, Ahus a-tePiy 'to hit', Nali a-ray, i-rihiy (?), Lele i-rey 'to hit'. This word is widespread in eastern Manus, but is unknown in the western part of the island.
(21) *wilaw 'spider (web)' : Loniu wilaw 'spider', Bipi wilaw, Leipon, Ahus, Pak welaw 'spider web', Titan nakap welaw 'spider'. Nothing similar was recorded anywhere else in the Admiralties.
(22) *macehe 'how much/many?': Loniu macehe, Bipi sehe, Papitalai mocehi, Leipon maseh, Ahus cahe, Titan ceh, Kele sehe, Lele maseheye 'how much/how many?'. Again, cognate forms are unknown outside these languages.

In addition, a small number of comparisons that are almost restricted to Loniu and Bipi include one or two additional languages that clearly lie outside this group (the position of Pak will be treated at the end of sketch 7). Examples are:
(1) *pucol 'rat' : Leipon pucon, Bipi poson, Leipon pucol 'rat'. Over nearly all of the rest of Manus, languages reflect *buley (Ere, Kuruti, Kele bruliy, Titan, Ahus, Papitalai bruley, Likum pwiley, Levei pwilip, Pelipowai piley, Drehet pwilip, Mondropolon puliy), or *buney (Nali, Lele bruney, possibly Pak ney). The single language that spoils the broth is Sori, which has boson, a regular reflex of *pucol. While this is clearly an innovation in relation to POC *kusupe 'rat', more than one type of rat may have been terminologically distinguished in PADM or PEADM.
(2) *rain 'smell, odor' : Loniu ein, Bipi xain 'smell, odor'. Nothing similar is found in any of the languages of Manus, but Lou rein 'smell, odor suggests that this is a retention from ProtoEastern Admiralty.
(3) *malisawa 'brother-in-law/sister-in-law' : Loniu melisawa-, Bipi malisawa-, Papitalai melsow 'brother-in-law/sister-in-law'. This is generally absent elsewhere, but Lindrou molosow, Sori marisow in the same meaning suggest that this is a retention from a language ancestral to all of those spoken on Manus and its immediate satellites.
(4) *muan 'bad': Loniu, Bipi muan, Papitalai, Nali mo-mwan, Titan muan, Ere mo?an, Kuruti mo?on, Kele mwan 'bad'. All of these languages appear to belong to an East Manus group, but Nauna, which has tente man 'bad' is clearly not a member.

To further complicate matters, Pak may have a number of loans from Loniu, although in some cases a motivation for borrowing is difficult to discern, as with Loniu, Bipi drow 'nasal mucus, snot', a form known in only one other language of the Admiralties, namely Pak dow.
6.7.2. Structural evidence for Bipi as a member of the East Manus Network Undoubtedly, one of the most striking structural innovations shared almost exclusively by Bipi and Loniu, and one which clearly separates Bipi from other languages of western Manus, is found in the system of singular possessive pronouns reflecting POC *-gu ' 1 SG ', *-mu ' 2 SG ', and *-ña ' 3 SG '. While virtually all languages reflect the non-first person forms as $-m$ and $-n$, reflexes of $*$-gu show considerable variation across languages, and considerabe allomorphy within languages. This has already been illustrated in Bipi Table 6.4, and by Hamel (1994:27-29), but is partially repeated here to place it in a broader context. Table 6.13 shows the reflexes of POC *-a-gu, *e-gu, *o-gu, $*_{i-g u}$, and $* u$-gu in each of the 26 Admiralty language communities for which I have data (NDP $=$ no direct possession) $:^{3}$

Table 6.13: Reflexes of POC *-gu '1SG possessor; my' in languages of the Admiralties

| POC | *a-gu | *e-gu | *i-gu | *o-gu | *u-gu |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Nali | O | e | i | O | u |
| 2. Ere | uCa | 0 | i | ? | o/u |
| 3. Loniu | O | ew | iw | O | u |
| 4. Lou | on | en | in | on | uy |
| 5. Bipi | o | ew | iw | o | u |
| 6. Titan | O | e | i | o | u |
| 7. Likum | ak | ek | ik | ok | uk |
| 8. Levei | ak | ek | ik | ok | uk |
| 9. Nauna | NDP | NDP | NDP | NDP | NDP |
| 10. Lindrou | ak | ek | ik | ok | uk |
| 11.Pelipowai | ak | Ik | ik | ok | uk |
| 12. Ahus | ak | ek | ik | ok | uk |
| 13. Pak | ok | ek | ik | ok | uk |
| 14. Leipon | aw | ew | iw | o | u |
| 15. Seimat | ak | ek | ik | ok | uk |
| 16. Penchal | i | i | (?) | u | u |
| 17. Wuvulu | aw | ew | 1w | ow | u |
| 18. Drehet | ok | ek | ik | ? | uk |
| 19. Sori | a | e | i | 0 | u |
| 20. Papitalai | a | e | 1 | 0 | u |
| 21. Kuruti | o | e | 1 | u | u/uk |

[^2]| 22. Mondropolon | ak | ek | ik | ok | uk |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 23. Lenkau | on | en | in | on | un |
| 24. Lele | o | e/o | i | o | u |
| 25. Kele | a | e | i | o | u |
| 26. Aua | aw | ew | iw | o | u |

A few languages require special explanations. First, Ere is exceptionally complex. While high vowels show a zero reflex of the 1 SG possessive marker and some apparent suppletion, as in POC *qutin > ut 'penis' : wiri, wiri-m, wiri-n, or POC *susu > sus 'female breast' : susu, susu-m, suso-n/susu-n, the 1 SG possessive marker triggers a change in the penultimate vowel, as in POC *mata 'eye' > mura, mira-m, mira-n, although this may have happened only after low vowel dissimilation (Blust 1996b), since it is also seen in POC *tina 'mother' $>$ *tine $>$ tuno, tine-m, tine-n. The mid-front vowel appears as $o$, as just seen in the singular possessive paradign for 'mother', and in POC *lima 'hand' : lumo, lime-m, lime-n, and no possessive paradigms for nouns with stem-final -o could be found. Second, Nauna uses direct possession only with a few kin terms, and ndirect possession for all others, as mat 'eye' (mat araw, mat aro, mat erey), or cay 'blood' (caen ayi, caen o, caen $i$ ).

What stands out in this table is the pattern in Loniu and Bipi, which is identical, and the pattern in Leipon, Wuvulu and Aua, which differs only in the treatment of *a-gu. Wuvulu and Aua clearly do not subgroup with any language of eastern Manus, but since Leipon shares several unambiguous innovations with Loniu and Bipi, this raises the question of larger subgroups in eastern Manus that might include Bipi. However, to draw a conclusion that need not await further comparative data, it is quite clear that, whatever its closest subgrouping connections turn out to be, on the basis of 1 SG possessive constructions Bipi does not group closely with other languages of western Manus, all of which (Likum, Levei, Lindrou, Pelipowai, Drehet, Mondropolon) have an invariant $-k$, which appears to have been the Proto-Admiralty pattern.

A structural peculiarity shared only by Loniu and Bipi in the data at my disposal is the absence of a possessive paradigm for the noun meaning 'fat, grease'. In every other language which makes use of direct possession this noun patterns like most body parts, as seen in Table 6.14:

Table 6.14: Singular possessive marking for 'fat, grease' in languages of the Admiralties

| Language | 1SG | 2SG | 3SG |
| :--- | :--- | :--- | :--- |
| Nali | nomo | nama-m | nama-n |
| Ere | namoPo | namaPa-m | namaPa-n |
| Titan | yo dri | dri-m | i dri-n |
| Likum | nama-k | nama-m | nama-n |
| Levei | nomo-k | nomo-n | nomo-n |
| Lindrou | namma- | namma-m | namma-n |
| Pelipowai | pawi-k | pawi-m | pawi-n |
| Ahus | namaPa-k | namaPa-m | namaPa-n |
| Pak | hulili-k | hulili-m | hulili-n |
| Leipon | napana-w | napana-m | napana-n |


| Seimat | wia-k | wia-m | wia-n |
| :--- | :--- | :--- | :--- |
| Wuvulu | pau | pau-m | pau-na |
| Drehet | nomo-k | nama-n | nama-n |
| Kuruti | namaPo | namaPa-m | namaPa-n |
| Mondropolon | lamma-k | lamma-m | lamma-n |
| Lele | nomo | nama-m | nama-n |
| Aua | wia-w | wia-m(u) | wia-na. |

However, in both Loniu and Bipi my efforts to elicit possessive forms for this word were rejected, the form in each case being limited to ñaman, with fossilized 3SG possessive suffix $-n$.

Equally striking is the system of alienable possessive marking, which is virtually identical for Bipi and Loniu, but very different in the languages of western Manus that neighbor Bipi. For convenience the relevant portions of the descriptions are summarized in Table 6.15, along with data for other languages where my fieldnotes contain the relevant forms:

Table 6.15: Markers of alienable possession

| No. | Base | 1SG | 2SG | 3SG |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| 1. | Nali | at-o | ata-m | ata-n |
| 2. | Ere | tura | tira-m | tira-n |
| 3. | Loniu | ayu | awow | aPi |
| 4. | Lou | ko-n | ko-m | ko-n |
| 5. | Bipi | ayo | awow | ai |
| 6. | Likum | se | toPow | tatiPiy |
| 7. | Levei | tesi | toPop | tesiPip |
| 8. | Nauna | aya | o | i |
| 9. | Lindrou | te-k | ta-m | ta-n |
| 10. | Pelipowai | ia | etoPow | iciPiy |
| 11. | Ahus | ta-k | ta-m | ta-n |
| 12. | Pak | er yew | er wey | er i |
| 13. | Leipon | teo | tewey | tati |
| 14. | Seimat | ana-k | ana-m | ana-n |
| 15. | Wuvulu | ana-w | ana-m | ana-na |
| 16. | Sori | ara | ara-m | ara-n |
| 17. | Papitalai | atwa | ata-m | ata-n |
| 18. | Lele | oto | ati-m | ati-n |

It is clear from this sample of eighteen systems of alienable possession that most languages of Manus use some type of nominal classifier suffixed with the same pronouns that are attached directly to a possessed noun in inalienable possession. This is true of Nali, Ere, Lou , Lindrou, Ahus, Seimat, Wuvulu, Sori, Papitalai, and Lele. In at least Lou, Seimat and Wuvulu, the classifier given here marks edible possession, but the structure of the possessive phrase is the same regardless of the type of possessive relationship indicated.

Other languages, such as Likum, Levei, Pelipowai, Pak, and Leipon, use markers for alienable possession that show no connection to either the personal pronouns or the pronouns marking inalienable possession. By contrast, both Bipi and Loniu prepose a possessive marker /a/ to the corresponding personal pronoun to form the marker of alienable possession. Note that Nauna, which clearly belongs to the Southeastern Admiralties subgroup, and is therefore quite distinct in many respects from either Bipi or Loniu, is superficially similar to these languages in its system of singular alienable possessive markers. However, Nauna simply uses the personal pronouns as possessive markers without a classifier to which they are suffixed. Given other types of evidence supporting a division of the languages of the eastern Admiralties into two coordinate groups, 1 . the languages of Manus and its immediate satellites, and 2. the languages of the southeastern islands, it is simplest to conclude that the similarity of the Nauna system of alienable possession marking to that of Loniu and Bipi is a product of convergence. To some extent this weakens the argument that the agreement between Loniu and Bipi is an exclusively shared innovation, but it does not weaken it enough to dismiss it as subgrouping evidence, particularly in view of the other innovations proposed above.
6.7.3. Summary. To summarize, Loniu and Bipi appear to show a closer relationship to one another than either does to any other language, but Bipi has clearly undergone extensive areal adaptations to its neighbors in western Manus. However, what is perhaps even more strongly supported than a Bipi-Loniu relationship is the position of Bipi within a larger East Manus group that includes at least Papitalai, Naringel, Leipon, Ahus, Nali, and possibly Lele, as shown in Table 6.16 (the inclusion of Pak in comparisons 18, 19 and 21 will be addressed in Sketch 7):

Table 6.16: Lexicon that appears to be shared exclusively by Bipi with Loniu and other languages of Eastern Manus

|  | PADM | PLB/PEM | Gloss | Languages |
| :---: | :---: | :---: | :---: | :---: |
| 1. | *ñamu | *ñamon | 'mosquito' | Loniu, Bipi |
| 2. | *layo | *yalapur | 'housefly' | Loniu, Bipi |
| 3. | *kasu | * yasu | 'smoke' | Loniu, Bipi |
| 4. | *mana (?) | *tamana | 'men's dance' | Loniu, Bipi |
| 5. | *mariri | *ñala | 'to feel cold' | Loniu, Bipi |
| 6. | ? | *piton | 'hard (as fruit) | Loniu, Bipi |
| 7. | ? | *ras-i | 'to scratch' | Loniu, Bipi (?) |
| 8. | *mapat | *tawan | 'heavy' | Loniu, Bipi (?) |
| 9. | ? | *hilow | 'to run' | Loniu, Bipi, Leipon |
| 10. | *Ruqa | *keñue- | 'neck' | Loniu, Bipi, Leipon |
| 11. | *qalo | * yal | 'sun' | Loniu, Bipi, Leipon |
| 12. | *qalu | * yal | 'barracuda' | Loniu, Bipi, Leipon, Nali |
| 13. | ? | *kolaya | 'back (anat.)' | Loniu, Bipi, Leipon, Ahus |
| 14. | *tupuq | *rek | 'to grow' | Loniu, Bipi, Papitalai, Leipon, Lele |
| 15. | ? | *puon | 'short' | Loniu, Bipi, Leipon, Ahus, Titan |
| 16. | *tian | *putua- | 'belly' | Loniu, Bipi, Leipon, Titan |
| 17. | ? | *huyan | 'good' | Loniu, Bipi, Leipon, Ahus, Kuruti |
| 18. | ? | *pway | 'to say, tell, speak' | Loniu, Bipi, Ahus, Pak |


| 19. | $?$ | *busasa | 'liver/lungs' | Loniu, Bipi, Papitalai, Ahus, Pak |
| :--- | :--- | :--- | :--- | :--- |
| 20. | $?$ | *taPi | 'to hit/kill' | Loniu, Bipi, Papitalai, Ahus, Nali, <br> 21. |
| ? | *wilaw | 'spider' | Lele |  |
| Loniu, Bipi, Leipon, Ahus, Pak, |  |  |  |  |


[^0]:    ${ }^{1}$ Dogs' teeth on a string were traditional currency (Ohnemus 1998).

[^1]:    ${ }^{2}$ Healey (1976:360), citing an unpublished document for which there appears to be no extant record, cites me as finding "in a preliminary lexicostatistical count that Loniu and Sisi/Bipi could be regarded as dialects of a single language." While I do not wish to question the integrity of Healey's statement, I have no recollection of ever having made such a claim, which even a superficial inspection of the evidence seems to contradict. On the variant of the Swadesh 200-word list used in Appendix 1 the two score 105/194, or about 54\%, not very different from the BipiLindrou score of $92 / 192$, or about $48 \%$.

[^2]:    ${ }^{3}$ More specifically, in Nauna direct possession is attested only in kin terms, and even there it occurs as one of two options.

