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Two parallel sets of sound correspondences are attested in the historical phonology of the Uab Meto (also known as Dawan[ese], Timorese, Atoni) language/dialect cluster. A top-down approach to the data reveals one set of regular sound correspondences in reflexes of Proto-Malayo-Polynesian lexemes, while a bottom-up approach to the data reveals another set of regular correspondences in lexemes for which no Malayo-Polynesian origin has yet been found. I examine each set of sound correspondences in detail and propose a framework for addressing the apparently contradictory data.

1. INTRODUCTION.[1] The application of the comparative method is not always straightforward. One frequent problem encountered in applying the comparative method is that of speech strata. When a language has borrowed heavily from a related language, it is often difficult to identify the regular sound correspondences and, as a result, which element(s) of the lexicon have been borrowed and which are native.

This problem was first noted for an Austronesian language by Dempwolff (1922), who identified two strata of vocabulary in Ngaju Dayak, each with different sound correspondences. Dyen (1956) showed that these two strata were not evenly distributed among different sections of the lexicon, as one stratum is mostly absent from basic vocabulary. On the basis of this distribution, he identified the stratum absent from basic vocabulary as being borrowings (mainly from Malay), while the stratum found throughout all the lexicon he identified as being inherited and reflecting the regular sound changes.

A similar, though more complex, problem was addressed by Blust (1992) for the Philippine language Tiruray. The amount of borrowing (up to 50 percent of the vocabulary) is much higher in Tiruray than in Ngaju Dayak and many borrowings are also found in basic vocabulary. Blust (1992) identified native words on the basis of unique sound changes (such as *k > *g* / V_V) that are not found in neighboring languages. Furthermore, the loans in Tiruray come from more than one source language. Other Austronesian lan-

1. I would like to thank Charles Grimes, Mark Donohue, and an anonymous reviewer for comments on earlier versions of this paper that have led to substantive improvements in both argumentation and content. Charles Grimes also provided unpublished Kusa-Manea and Baikeno data. Thanks also goes to James Fox who provided me with his copy of Middelkoop's unpublished Molo dictionary. Any errors remain my own.

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guages in which the problem of speech strata has also been discussed include Rotuman (Biggs 1965) and Thao (Blust 2009:154–55).

In this paper, I investigate the historical phonology of Uab Meto, which presents a different permutation of the speech strata phenomenon: one clearly Malayo-Polynesian (MP) stratum and one stratum with no clear Malayo-Polynesian source.

First, I compare Proto-Malayo-Polynesian (PMP) with Uab Meto and identify the regular sound changes Uab Meto has undergone. Compared to aberrant Austronesian languages, such as the Santa Cruz languages of the Solomon Islands (Ross and Næss 2007), Uab Meto is relatively "well behaved." This comparison with MP also allows me to identify a handful of loans in Uab Meto from other MP sources.

Second, I apply the comparative method to the Uab Meto language/dialect cluster itself and reconstruct a pre-Uab Meto phoneme inventory. I show that there are significant discrepancies between the phonemes we need to posit for pre-Uab Meto and those we expect to find by straightforward inheritance from PMP.

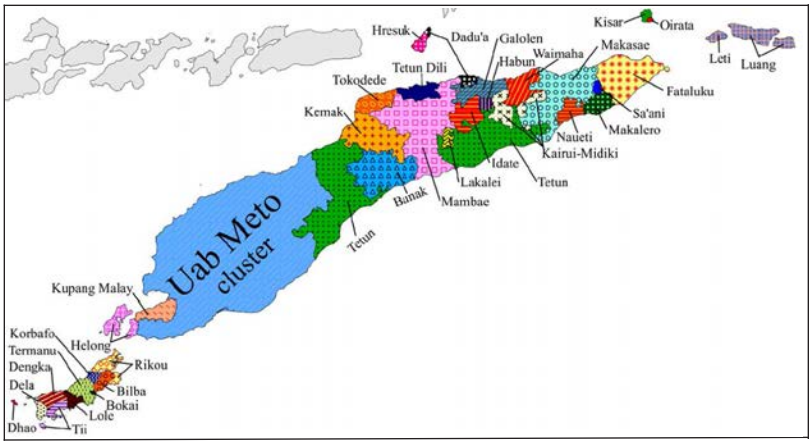
These results force us to confront the methodological question of how to account for linguistic data that are not apparently inherited, and I discuss some possible ways of resolving this. It is likely that a large amount of the Uab Meto lexicon is from a non-Austronesian source and, thus, could provide indirect evidence for the pre-Austronesian linguistic culture in this region.

2. UAB METO LANGUAGE BACKGROUND. Uab Meto, also known as Meto, Dawan(ese), Timorese, or Atoni, is the name given to a cluster of closely related Austronesian languages and dialects spoken on the western part of the island of Timor, both in the East Timorese enclave of Oecusse, as well as in the Indonesian province of Nusa Tenggara Timur.[2] The location of the Uab Meto cluster is shown in map 1 along with other languages of Timor. The identity and location of languages in Timor Leste in map 1 follows Williams-van Klinken and Williams (2015). Individuation of the cluster of speech varieties on Rote Island (southwest of the Timor mainland) follows the classification of Jonker (1908:ix).

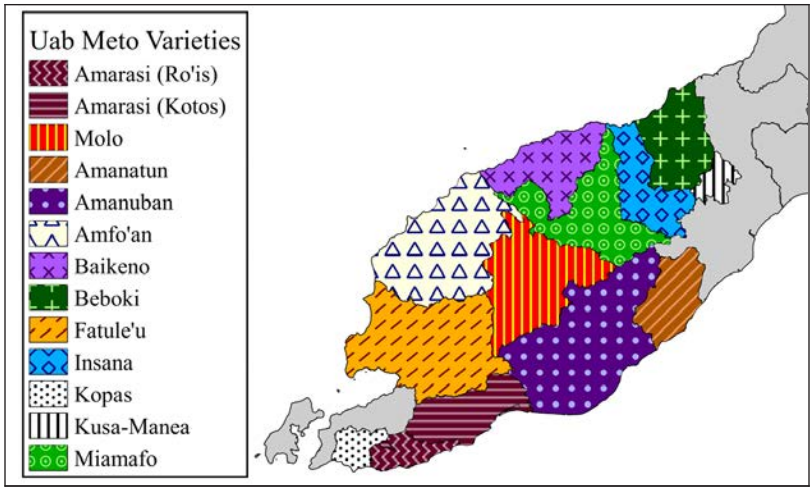
Uab Meto speakers self-identify their language as *(uab) meto?*, *(bahasa) Timor* or *(bahasa) Dawan*. Speakers recognize many named varieties of Uab Meto and these varieties themselves have named dialects. A preliminary map of these varieties (doubtless subject to later revisions) is given as map 2.[3]

2. "Since Uab Meto varieties have no /d/, 'Dawan' as a language name is widely thought to be from another language's term for 'enemy', and is offensive to many Uab Meto speakers. In some areas they have become either immune or resigned to its use, and no longer object every time someone uses 'Dawan'. In other areas they object consistently" (Grimes, Caet, and Bani 2013:1). Regarding the name *Timorese,* speakers of other languages spoken on the island of Timor object to the monopoly of the term *Timor* for only one language. Regarding the name *Atoni*, the term /atoni?/ means 'man' in most varieties of Uab Meto and can be used for the ethnic group, but never for their language.
3. The locations and names of varieties of Uab Meto on this map coincide almost exactly with the princedoms of precolonial West Timor. Note that the label Kotos on this map covers two self-identified dialects of Amarasi (Kotos and Tais Nonof), as well as the variety of Uab Meto known as Amabi and/or Ketun. My data indicate that Tais Nonof and Ketun/Amabi are almost identical to Kotos Amarasi. Ro'is speakers self-identify their speech as a variety/dialect of Amarasi.

MAP 1. LANGUAGE GROUPS OF TIMOR



MAP 2. PRELIMINARY UAB METO VARIETIES (SELF-IDENTIFIED)



The nature and extent of variation among these Uab Meto varieties has not yet been systematically studied. Phonological, lexical, semantic, and grammatical diversity is not insignificant and speakers frequently report difficulty communicating with those from other varieties. As a result, Kupang Malay or Indonesian is often used between speakers of different Uab Meto varieties in order to achieve effective communication.

In this paper, I consistently cite data from three varieties of Uab Meto; Ro'is Amarasi, Kotos Amarasi, and Molo. Amarasi data are drawn from four months of fieldwork carried out in two periods in 2013 and 2014. The bulk of my data is from the Kotos dialect of Amarasi as spoken in the village (*desa*) *Nekmese'* by inhabitants of the historic hamlet

(*kampung*) *Koro'oto*. These Kotos Amarasi data consist of a dictionary of more than 1,600 headwords as well as over two and a half hours of recorded, translated, and glossed texts.

Ro'is data represent the speech of the inhabitants of the village (*desa*) *Buraen* of the hamlet (*kampung*) *Suit*. Most Ro'is data were collected during a three-day stay in Suit in 2013.

Molo data are drawn from an unpublished 673-page draft dictionary compiled by the Dutch missionary Pieter Middelkoop. This dictionary dates to sometime in the 1970s. Molo data are supplemented by a recorded wordlist collected during the 2012 *"Preserving Knowledge through Recording and Writing Local Languages"* workshop held in Kupang in 2012 (http://austronesian.linguistics.anu.edu.au/timor/workshop/).

I occasionally cite data from other Uab Meto varieties. Amfo'an data represent the Naitbelak dialect and were collected by the author during a three-day stay in the hamlet (*kampung*) *Ta'en* in the village (*desa*) *Bioba Barutaen* in 2013. Kusa-Manea data come from two texts collected by Charles Grimes in 2010. Baikeno data were mainly collected by Charles Grimes (between 2005 and 2015) and are supplemented by data collected during the 2012 Kupang workshop. Amanuban data are drawn both from notes in Middelkoop's dictionary and data collected during the 2012 Kupang workshop. All data from a Rote speech variety are from Jonker (1908), unless otherwise indicated.

All known Uab Meto varieties have the ten consonants /p t k ʔ b f s h m n/[4] and either of the liquids /r/ or /l/.[5] In addition to these eleven consonants, the voiced obstruents /ʤ/ and /g/ have a much more limited distribution, occurring mainly in certain morphophonemic environments (see 3.4.1).[6] Known varieties of Uab Meto have the five vowels /i e a o u/.[7] Word stress falls on the penultimate vowel. Vowel-initial words begin with a predictable glottal stop; /asu/ 'dog' → ['ʔasʊ]. While all Uab Meto varieties appear to share the same phoneme inventory, the segments in each variety have different distributions and behaviors.

As this paper is an investigation of the internal and external relationships between the different varieties of Uab Meto, it focuses on what these varieties share. For this reason, most of the data I present do not include many differences. However, the level of diversity in the Uab Meto speech area should not be underestimated. To give a glimpse of the level of diversity that exists, eight functors ("grammatical morphemes") in five different varieties of Uab Meto are given in table 1.

Another example of diversity can be seen in the process of consonant insertion that operates at the boundary of vowel-initial enclitics in Uab Meto. Which consonant is inserted varies from one variety to another. Table 2 shows the differences observed in data from four different varieties of Uab Meto. There is even diversity among the Kotos dialect of Amarasi, with two different villages showing different behavior.

4. The voiceless coronal plosive /t/ is dental [t̪] in all varieties of Uab Meto.
5. Most varieties have /l/. The two varieties known to have /r/ are Amarasi in the southwest and Kusa-Manea in the extreme east. In Kusa-Manea, the lateral /l/ also frequently occurs in unassimilated Tetun loanwords.
6. All voiced obstruents (including /b/) are realized variously as plosives, fricatives, or approximants. In Baikeno, the postalveolar obstruent is almost universally a fricative [ʒ] or [z], and is transcribed /ʒ/ in Baikeno data in this paper.
7. The mid vowels /e/ and /o/ are usually raised to mid-high [e] and [o] before high vowels; in other contexts they are mid-low [ɛ] and [ɔ]. In some northern varieties of Uab Meto, this vowel height difference is becoming phonemic (see Steinhauer 1996b:478).

TABLE 1. DIFFERENT UAB METO FUNCTORS

	Ro'is	Kotos	Molo	Baikeno	Kusa-Manea
ABLATIVE	noʔko	naʔko, noʔka	naʔko	noba, naʔko	naʔkoa
here	et ai	et ia	es ii	es ii	
ALLATIVE	en	on	neu	on	
DATIVE	nuu	neu	neu	neu	
RELATIVIZER	heʔ	reʔ	leʔ	leʔ	saʔ
NEGATIVE	maeʔ	ka…fa	ka…fa	ka…fa	ka…fa
3SG	hin	in	in	in	in
IRREALIS	he	he	he	he	ha
1SG agreement	ku-	u-	u-	u-	
3PL.GEN suffix	-r	-k	-k	-k	

TABLE 2. UAB METO CONSONANT INSERTIONS

	{neno + es}	{ume + i}
Kotos (Fo'asa' hamlet)		uimgi
Kotos (Koro'oto hamlet)	neeŋgwes	uumʤi
Amfo'an	nenoges	umeli
Baikeno	neembes	uumʒi
	‘day+one’	‘house+this’

While individual isolated elements in different varieties of Uab Meto may look similar on the surface, how one strings things together in sentences can be quite different, and people from one region are often left guessing at what people from other regions mean.

Uab Meto also has a productive process of morphological final CV metathesis, with subtly different realization and functions in different varieties. Thus, the word for ‘rock’ is either *fa**tu*** or *fa**ut***. See Steinhauer (1996a) and (1996b) for a preliminary description of metathesis in Miamafo Uab Meto. Edwards (n.d.) describes the forms and functions of metathesis in Kotos Amarasi. In this paper, words are cited in the unmetathesized form.

Verbs usually occur with an obligatory person prefix and are cited with the third person prefix *na-* or *n-* according to their verb class (see appendix 2). Inalienably possessed nouns occur with an obligatory genitive suffix and are cited with a final hyphen.

3. TOP DOWN: PROTO-MALAYO-POLYNESIAN TO UAB METO. I begin my discussion of Uab Meto historical linguistics with the sound changes that have occurred from PMP. These sound changes are largely regular and Uab Meto is relatively well behaved in this respect. The principal sound changes between PMP and seven varieties of Uab Meto are given in table 3, where consonants are arranged by PMP manner of articulation. These sound changes are almost identical in each known variety, and as a result I consistently cite data from only three—Ro'is, Kotos, and Molo—as representative. Where data in these three varieties are identical, they are labeled Uab Meto (UM).

The remainder of this section is divided into seven parts. I begin in 3.1 by discussing the reflexes of PMP plosives; this is followed in 3.2 with a discussion of the reflexes of the other reconstructed PMP consonants. In 3.3 I discuss the development of word-final consonants, 3.4 looks at the reflexes of PMP vowels and diphthongs, and 3.5 at consonant insertion. I conclude in 3.6 with the ways in which PMP words of more than two syllables

TABLE 3. PMP > UAB METO

PMP		Ro'is	Kotos	Amanuban	Molo	Amfo'an	Baikeno	Kusa-Manea	env.	no.	sec.
*p	>	h	h	h	h	h	h		_i,ə	4	3.1
		Ø	Ø	Ø	Ø	Ø	Ø			8	3.1
*t	>	t	t	t	t	t	t	t		33	3.1
		Ø	Ø	Ø	Ø	Ø	Ø	Ø	V_V	5	3.1.2
*k	>	k	k	k	k	k	k		i_V	3	3.1.2
		h	h	h	h	h	h	h	#_	7	3.1.2
*q	>	Ø	Ø	Ø	Ø	Ø	Ø			20	3.1
*b	>	f	f	f	f	f	f	f		27	3.1.4
*d	>	n	n	n	n	n	n	n		13	3.1
*nd	>	r	k	k	k	k	k	k		4	3.1.1
*z	>	r	r	l	l	l	l	r		3	3.2
*j	>	n	n	n	n	n	n	n		4	3.2
(*nj)	>	r	r	l	l	l	l			1	3.2
(*g)	>	h	h	h	h	h	h			1	3.2.1
*m	>	m	m	m	m	m	m	m		24	3.2
*n	>	n	n	n	n	n	n	n		22	3.2
(*ñ)	>	n	n	n	n	n	n			1	3.2
*ŋ	>	n	n	n	n	n	n			4	3.2.1
*s	>	s	s	s	s	s	s	s		21	3.2
*h	>	Ø	Ø	Ø	Ø	Ø	Ø	Ø		16	3.2
*R	>	n	n	n	n	n	n			4	3.2
		Ø	Ø	Ø	Ø	Ø	Ø	Ø		9	3.2.2
*l	>	n	n	n	n	n	n			21	3.2
*y	>	Ø	Ø	Ø	Ø	Ø	Ø			2	3.2

have been reduced to disyllables in Uab Meto. A summary of these developments is given in 3.7. Reconstructions throughout this paper are taken from Blust and Trussel (ongoing), unless indicated otherwise. Reconstructions assigned to Proto-Central Malayo-Polynesian (PCMP) or Proto-Central-Eastern Malayo-Polynesian (PCEMP) are explicitly marked as belonging to these putative subgroups. I consistently transcribe the PMP vowel *e as *ə, due to the fact that the putative subgroups PCMP and PCEMP attest both *e and *ə.

3.1 PLOSIVES. The regular reflexes of PMP plosives and nasal-plosive clusters in Uab Meto varieties are given in table 4. Word-final plosives are usually lost, though there are a small number of instances in which a word-final plosive appears to be retained as /ʔ/. The bottom row records the number of instances of each sound change currently attested in my data.

TABLE 4. REGULAR REFLEXES OF PMP PLOSIVES

*C	*p		*t	*k			*q	*b	*d	*g	*nt/*nd	*mp
env.	/_i,ə	else		/#_	i_V	else						
Ro'is	h	Ø	t	h	k	Ø	Ø	f	n	h	r	p
Kotos	h	Ø	t	h	k	Ø	Ø	f	n	h	k	p
Molo	h	Ø	t	h	k	Ø	Ø	f	n	h	k	p
no.	4	8	33	7	3	5	20	27	13	1	4	1

An example of each of the sound changes that do not receive a more detailed discussion below is given in table 5. Further examples can be found in appendix 1, which lists all known PMP reconstructions with reflexes in Uab Meto.

3.1.1 *nt/*nd. The clusters *nt and *nd became *r* in Ro'is Amarasi and *k* in other varieties of Uab Meto. It is likely that this went through the pathway *nt > *nd > *d > *r* ~ *k*. See 4.2 for more details. Examples of *nt/*nd are given in table 6.

Some of the forms in table 6 require further explanation. First, the glottal stops on the word for 'lime' in Ro'is and Kotos are probably fossilized nominal markers. A nominalizing circumfix *ʔ-…-ʔ* occurs in Amarasi both productively and as an unproductive fossil. A productive use can be seen in the form *toko* 'sit' → *ʔtokoʔ* 'seat, chair'. Second, PMP *bituqən 'star' is reflected with "unexpected" medial /nt/ in many MP languages. One example is Malay *bintaŋ*. Many Uab Meto varieties agree with Kotos in displaying metathesis of the initial two consonants.

3.1.2 *k/*g. Word-final *k was usually lost. There is a single exception to this loss; *anak 'child' is reflected as a triplet: *anah* 'child', *riʔanaʔ/liʔanaʔ* 'child', and *anaʔ* 'small' in all varieties of Uab Meto for which I have data (with the exception of Ro'is, which has *anaʔ* 'child/small' and *riʔanaʔ* 'child'). One possible explanation for the irregular retention of final *k in these forms could be that they are often used as vocatives.

Word-initial *k became *h* in most forms. Two examples are *kahiw > *hau* 'wood, tree' and *kutu > *hutu* 'louse'. Exceptions to this change are found in the accusative pronouns in which *k has been retained as *k*. PMP and Uab Meto pronouns are given in table 7. (The 1SG accusative form *kau* with initial *k* is likely due to paradigmatic pressure.)

TABLE 5. REFLEXES OF PMP PLOSIVES

*C	*p		*t	*k			*b	*d	*mp
env.	/_i,e	else.		/#_	i_V	else.			
PMP	***p**itu	***p**usəj	***t**alih	***k**utu	*hi**k**an	*sa**k**ay	***b**atu	***d**uha	*u**mp**u
UM	**h**itu	usa-	**t**ani	**h**utu	i**k**aʔ	n-sae	**f**atu	**n**ua	u**p**u-
gloss	'seven'	'navel'	'rope'	'louse'	'fish'	'go up'	'stone'	'two'	'grandchild'

TABLE 6. *nt/*nd > *r, k*

	*pu**nt**i	*mu**nt**ay	*bi**t**uqən	*ma-di**ŋd**iŋ > *ma-di**nd**iŋ
Ro'is	u**r**i	ʔmu**r**iʔ	f**r**uun	maini**r**in
Kotos	u**k**i	ʔmu**k**iʔ	**k**fuu-n	maini**k**in
Molo	u**k**i	mu**k**e	f**k**uun	maini**k**in
gloss	'banana'	'lime (citrus)'	'stars'	'cold'

TABLE 7. PMP AND UAB METO FREE PRONOUNS

		1SG	2SG	3SG	1PL.EXCL	1PL.INCL	2PL	3PL
	PMP	*aku	***k**ahu	*ia	***k**ami	***k**ita	***k**amiu	*sida
UM	NOM	au	**h**o	in†	**h**ai	**h**it	**h**i	sin
UM	ACC	kau	**k**o	=e	**k**ai	**k**it	**k**i	sin/=ein

† The Ro'is 3SG pronoun is *hin*. The initial /h/ could be due to paradigmatic pressure.

In the western Rote language Dela, some of the undergoer free pronouns have forms beginning with /ŋg/. Thus, we find Dela 2SG actor *ho* and 2SG undergoer *ŋgo*, as well as 2PL actor *hei* and 2PL undergoer *ŋgi* (Tamelan 2007:2).[8] Dela /ŋg/ often corresponds to Uab Meto /k/. (See 6.2 for more details.) This provides evidence that the Uab Meto accusative pronouns could have arisen from earlier **ŋk, perhaps through accretion of an earlier nasal. One possible source of this nasal is the PMP "genitive case marker" *ni-.

Intervocalically, PMP *k was lost if the first vowel was not *i. Examples include PMP *aku > Uab Meto *au* '1SG.NOM' and *sakay > *n-sae* 'ascend'. After *i, PMP *k was retained as *k* in three instances and as ʔ in one. These examples are given in table 8.

There is only one Uab Meto word in my data that is a reflex of a PMP word containing *g. This is PMP *ma-gatəl > Kotos *mahataʔ*, other Uab Meto *mahata* 'itchy'.

3.1.3 *q. The consonant *q was normally lost word-initially (ten instances), word-finally (ten instances), and word-medially (ten instances). Examples are given in table 9.

There are three words in which *q appears to have been retained as *ʔ* word-finally: *daRaq > *naaʔ* 'blood', *ma-putiq > *mutiʔ* 'white', and *anaduq > *mnanuʔ* 'long'. Word-final *q > *ʔ* is discussed in more detail in 3.3.

3.1.4 *b. There are twenty-six instances of *b > *f* in my data, and this is the regular outcome in all positions. Examples are given in table 10.

In addition to the regular change of *b > *f*, there are four possible instances in which a reconstructed *b is apparently reflected as *b*. These four words are given in table 11.

The first of these is *belas 'machete', reconstructed by Blust and Trussel (ongoing) to PCMP, though their cognate set only includes languages from the Timor region. Unless

TABLE 8. *k > k ~ ʔ / i_V

PMP	*i**k**an	*i**k**uR	*ti**k**əd	*si**k**u
Ro'is	i**k**aʔ	i**k**u-	ti**k**a	siʔu-
Kotos	i**k**aʔ	i**k**u-	ti**k**a	siʔu-
Molo	i**k**aʔ	i**k**o-	ti**k**a	siʔu-
gloss	'fish'	'tail'	'heel'	'elbow'

TABLE 9. *q > Ø

PMP	*q**q**uzan	*q**q**atay	*taq**q**un	*daq**q**an	*Rumaq**q**	*bahuq**q**
Ro'is	uran	ate-	toon	mnaaʔ	umi	
Kotos	uran	ate-	toon	mnaaʔ	ume/umi	na-foo
Molo	ulan	ate-	toon	mnaaʔ	ume	na-foo
gloss	'rain'	'liver'	'year'	'old'	'house'	'smell (intr.)'

TABLE 10. *b > *f*

PMP	*b**b**atu	*b**b**abuy	*b**b**uaq	*b**b**ulan	*b**b**əqb**b**əq	*ma-b**b**uhək	*b**b**alik
UM	f**f**atu	f**f**afi	f**f**ua-	f**f**unan	f**f**efa-	maf**f**u	n-f**f**ani
gloss	'rock'	'pig'	'fruit'	'moon, month'	'mouth'	'drunk'	'go back'

8. The 1st person forms do not consistently show initial *h* for 'actor' and initial *ŋg* for 'undergoer' in Dela. The 1SG and 1PL.EXCL forms are universally *au* and *hai*, respectively. The 1PL.INCL actor pronoun is *hita,* while the undergoer form is either *hita* or *ŋgita* (Tamelan 2007:2).

TABLE 11. BORROWINGS ATTESTING *b > *b*

PMP	?***b**elas(PCMP)	?***b**alik	?***bab**a 'father'	?***b**aqi
Ro'is	**f**enes		**bab**a-	**b**eʔi-
Kotos	**b**enas	n-**b**ani	**bab**a-	**b**eʔi-
Molo	**b**enas		**bab**a-	**b**eʔi-
gloss	'machete'	'change, turn'	'parent's opposite-sex sibling'	'grandmother'

reflexes outside of this region are extant, it is unlikely that this reconstruction is valid at the putative PCMP node, though it might be possible to reconstruct it to a lower node. The correspondence whereby Ro'is has /f/ and the other Uab Meto varieties have /b/ is not attested elsewhere in the lexicon. This suggests that either Ro'is or the other varieties have borrowed this item.

Second, PMP *balik 'reverse, turn around' is attested regularly in all known UM varieties as *n-fani* 'go back, again'. However, in (at least) Kotos Amarasi, *balik has an additional plausible reflex in *n-bani* 'change, turn'.

Finally, we have the kin terms *baba* 'parent's opposite sex sibling', possibly from reconstructed *baba 'father', and *beʔi-* 'grandmother', possibly from *baqi. The etymologies linking PMP *baba to Uab Meto *baba-* and *baqi to *beʔi* are not strong.[9] In addition to the irregular change of *b > *b*, the etymology linking *baqi to *beʔi-* would also require *a > e / _i and word-medial *q > *ʔ*.

Given the problems associated with these two etymologies—and the fact they are in the same semantic sphere—it is likely that *baba-* and *beʔi-* have come from an intermediate source rather than being direct inheritances. Neighboring Tetun has both *baban* 'younger sister's husband; aunt' and *bei* 'grandmother', while the Rote languages have *bei* 'grandmother'.

Finally, there are two Uab Meto words in which *b is apparently reflected as *p*. These are *puah* 'betelnut' compared with PMP *buaq 'fruit' and *puneʔ* 'grain head' compared with PMP *buliR '(entire) stalk of bananas; ear of grain'. Two facts indicate that these words are loans. First, *puah* 'betelnut' stands alongside *fua-* 'fruit', a regular reflex of PMP *buaq. Second, the neighboring Rote languages also have "irregular" reflexes of these two words. Thus, we find Dela/Tii/Lole *mbua* 'betelnut' with unexpected initial /mb/ instead of expected /b/,[10] as well as Tii/Lole *mbulek* 'grain' and Dela *mbuleʔ* 'grain head'.

3.2 OTHER PMP CONSONANTS. The regular reflexes of PMP consonants other than the plosives (discussed above) are given in table 12, while examples of each are given in table 13.

3.2.1 *ŋ. There are four instances of PMP *ŋ > n in Uab Meto, given in table 14. In addition to these four words, PMP *ŋajan > Uab Meto *kana-* 'name, clan' shows an unexplained initial *k*.

9. Blust and Trussel (ongoing) include Uab Meto *baba-f* in their etymology of PMP *baba. They gloss it as 'MB, FZH' and appear to give Lebar (1972) as a source (though this may be slippage from the previous entry for Ende). I cannot find any reference to this term in Lebar (1972:103–5).

10. The regular reflex of PMP *b in Rote languages is *b*. Tii/Lole also attest *boa* as a reflex of *buaq (Jonker 1906:52).

TABLE 12. REGULAR REFLEXES OF PMP CONSONANTS

*C	*z	*j	*m	*n		*ñ	*ŋ	*R	*l	*s		*h	*y	*C
env.				_V	/_#					_V	/_#			/_#
Ro'is	r	n	m	n	n	n	n	Ø~n	n	s	s~Ø	Ø	Ø	Ø
Kotos	r	n	m	n	n	n	n	Ø~n	n	s	s~Ø	Ø	Ø	Ø
Molo	l	n	m	n	n	n	n	Ø~n	n	s	s~Ø	Ø	Ø	Ø
no.	3	4	24	15	7	1	4	9~4	21	22	3~2	16	2	44

TABLE 13. REFLEXES OF PMP CONSONANTS

*C	*z	*j	*m	*n	*ñ	*ŋ
PMP	***z**alan	*qaləjaw	*matay	*inum	*utañ**a**	*ŋisi
Ro'is	**r**anan	ne**n**o	n-**m**ate	i**n**u		**n**isi-
Kotos	**r**anan	ne**n**o	n-**m**ate	i**n**u	na-ta**n**a	**n**isi-
Molo	**l**alan	ne**n**o	n-**m**ate	i**n**u	na-ta**n**a	**n**isi-
gloss	'road'	'day, sky'	'die'	'drink'	'ask'	'teeth'
*C	*d	*l	*s	*h	*y	
PMP	*di**R**us	*lima	*siwa	*haŋin	*maya (PCEMP)	
Ro'is	na-**n**iu	**n**ima	**s**eo	anin	maa-	
Kotos	na-**n**iu	**n**ima	**s**eo	anin	maa-	
Molo	na-**n**iu	**n**ima	**s**io?	anin	maa-	
gloss	'bathe'	'five'	'nine'	'wind'	'tongue'	

TABLE 14. *ŋ > n

PMP	*haŋin	*dəŋəR	*ŋisi	*ma-diŋdiŋ
Ro'is	a**n**in	n-ne**n**a	**n**isi	mainiri**n**
Kotos	a**n**in	n-ne**n**a	**n**isi	mainiki**n**
Molo	a**n**in	n-ne**n**a	**n**isi	mainiki**n**
gloss	'give'	'blood'	'teeth'	'bone'

3.2.2 *R. There are seven instances of nonfinal *R > Ø in my data. Examples are given in table 15.

There are also four instances of nonfinal *R > *n*. Examples are given in table 16. The reflexes of *laRiw (apart from Baikeno) display frozen final CV metathesis and irregular loss of initial *l (perhaps through reinterpretation as a verbal prefix). When nominalized

TABLE 15. *R > Ø

PMP	*bə**R**ay	*da**R**aq	*di**R**us	*du**R**i	*ma**R**uqanay	***R**umaq
Ro'is	n-fee	naa?	na-niu	nui-	mone	umi
Kotos	n-fee	naa?	na-niu	nui-	mone	ume/umi
Molo	n-fee	naa?	na-niu	nui-	mone	ume
gloss	'give'	'blood'	'bathe'	'bone'	'male, husband'	'house'

TABLE 16. *R > n

PMP	***R**atus	***R**ibu	*ma-ba**R**əqat	*la**R**iw
Ro'is	**n**atun	**n**ifun	ma?fe**n**a?	n-ae**n**
Kotos	**n**atun	**n**ifun	ma?fe**n**a?	n-ae**n**
Molo	**n**atun	**n**ifun	ma?fe**n**a?	n-ae**n**
Baikeno	**n**atun	**n**ifun	ma?fe**n**a?	n-a**n**e
gloss	'hundred'	'thousand'	'heavy'	'flee'

with the circumfix *a-…-t*, the Kotos root has the form *am**nan**et* ‘one who flees’ with the expected root shape and initial consonant.

There are two instances in which *R apparently corresponds to /ʔ/ in my data: *baqeRu > *feʔu* ‘new’ and *ma-iRaq > *meʔe* ‘red’. This probably does not represent a change of *R > ʔ, but instead loss of *R with later glottal stop insertion. The insertion of a glottal stop could be connected to the reduction of these words from three to two syllables.

3.3 WORD-FINAL CONSONANTS. Historical word-final consonants have been lost in most MP languages of eastern Island South East Asia. Nonetheless, there are still traces in many languages of the region, and most word-final consonants have to be reconstructed to account for all the data (Grimes 1991).

Uab Meto follows this pattern, and word-final consonants are lost, with the exception of *n (usually retained as *n*) and *s (sometimes retained as *s*). The six instances of retention of final *n as *n* are given in table 17. There is also one instance each of final *m and *ŋ being retained as *n*. These are *ma-qitəm > *metan* ‘black’ and *ma-diŋdiŋ > Ro'is *mainirin* ‘cold’, other Uab Meto *mainikin* ‘cold’.

In my current data, I have five clear instances of words that had a final *s in PMP.: in two, it is retained as *s*; in the other three, it is lost. These examples are given in table 18.[11]

Other word-final consonants were usually lost (44 instances). There are also seven instances in which a word-final consonant is apparently reflected as a glottal stop. These seven words end in *q, *n, *k, or *t (see table 19).

TABLE 17. *n > *n* / #_

PMP	*zala**n**	*bula**n**	*quza**n**	*haŋi**n**	*taqu**n**	*bituqə**n**
Ro'is	rana**n**	funa**n**	ura**n**	ani**n**	too**n**	fruu**n**
Kotos	rana**n**	funa**n**	ura**n**	ani**n**	too**n**	kfuu-**n**†
Molo	lala**n**	funa**n**	ula**n**	ani**n**	too**n**	fkuu**n**
gloss	‘road’	‘moon, month’	‘rain’	‘wind’	‘year’	‘stars’

† Some speakers of Kotos Amarasi have reanalyzed the final *n* of the reflex of *bituqən ‘star’ in *kfuun* as a plural suffix. For such speakers *kfuu-n* is ‘stars’ and *kfuu* is ‘star’.

TABLE 18. *s > Ø ~ *s* / _#

PMP	*diRu**s**	*Ratu**s**	*bətiə**s**	*ma-nipi**s**	*ma-pana**s**
Uab Meto	na-niu	natun	fiti-	mainiha**s**	mana**s**
gloss	‘bathe’	‘hundred’	‘calf (leg)’	‘thin’	‘sun’

TABLE 19. *VC# > V?

PMP	*hika**n**	*daqa**n**	*gatə**l**	*ana**k**	*ma-puti**q**	*daRa**q**	*ma-beRəqat
Ro'is	ika**ʔ**	mnaa**ʔ**	mahata**ʔ**	ana**ʔ**	muti**ʔ**	naa**ʔ**	maʔfena**ʔ**
Kotos	ika**ʔ**	mnaa**ʔ**	mahata**ʔ**	ana**ʔ**	muti**ʔ**	naa**ʔ**	maʔfena**ʔ**
Molo	ika**ʔ**	mnaa**ʔ**		ana**ʔ**	muti**ʔ**	naa**ʔ**	maʔfena**ʔ**
gloss	‘fish’	‘old, former’	‘itchy’	‘small’	‘white’	‘blood’	‘heavy’

11. There are a further two potential retentions of word final *s that involve other irregularities and are likely not directly inherited. These are ?*halas > Uab Meto *nasi* ‘forest’ and PCMP ?*belas > Ro'is *fenes*, Kotos/Molo *benas* ‘machete’.

While a change of word-final plosives to glottal stop is likely, in the case of the sonorants *n and *l it is unlikely that these consonants changed directly into a glottal stop. It is possible that apparent retentions of *n/*l as *ʔ* show evidence of language contact with another Austronesian language of the region.

3.4 PMP VOWELS AND DIPHTHONGS. The vowel correspondences between PMP and Uab Meto are given in table 20. Discussion of the conditioned reflexes as well as the diphthongs follows.

PMP *ə > *e* in penultimate syllables, thus *təlu > *tenu* 'three'. In final syllables, *ə > *a*, thus *pusəj > *usa-* 'navel'. There is one instance of final *ə > *e*. This is in the word *ənəm > **nəəm > *nee* 'six', and probably represents assimilation to the immediately adjacent *ə. The other two examples of words containing two instances of *ə reflect the expected pattern of initial *ə > *e* and final *ə > *a*. These words are *dəŋəR > *n-nena* 'hear' and *bəqbəq > *fefa-* 'mouth'.

PMP *u was lowered before *R, which was subsequently lost. Examples include *qapuR > *ao* 'slaked lime', as well as *ikuR > *iko-* 'tail'.[12]

Before final *q, PMP *a became *e* in three instances (*ma-qataq > *n-mate* 'raw', *Rumaq > *ume* 'house',[13] and *ma-iRaq > *meʔe* 'red'), and it remained *a* in two instances (*salaq > *sana* 'mistake', and *daRaq > *naaʔ* 'blood').

Sequences of *ai and *au, created through loss of earlier intermediate *q or *h, underwent the same changes as the diphthongs *ay and *aw. Thus, we find *ma-qitəm > **maitəm > *metan* 'black', *bahi > **bai > *fee* 'wife', and *taqun > **taun > *toon* 'year'. In these last two instances, the diphthong has become a double vowel to fulfill the requirement in Uab Meto that words should be at least two syllables long.

Sequences of *wa and *aw became *o* in Uab Meto. Examples include *babaw > *fafo-* 'above', *sawa 'python' > Amarasi *ʔsao* 'green viper', and *wani 'bee' > *oni* 'sugar, bee'. I have encountered only one exception to this pattern: this is the numeral *walu > *fanu* 'eight', in which initial *w has exceptionally become *f*.

TABLE 20. REGULAR VOWEL REFLEXES

*V	*i	*ə		*a		*u		*ay/*ai	*aw/*au	*wa	*uy	*iw
env.		/σ_		/_q		/_R						
UM	i	e	a	a	e~a	u	o	e	o	o	i	e
no.	46	15	8	76	3~2	59	2	12	16	6	2	1

3.5 CONSONANT INSERTION. In some varieties of Uab Meto, a rule of word-final consonant insertion has operated on vowel-final words. This process differs among different varieties (see section 2 above).

In Naitbelak Amfo'an, /g/ is inserted after the back vowels /o/ and /u/. Phonetically, this /g/ is usually unreleased and slightly devoiced. Additionally, /l/ is inserted after /e/, and /ʤ/ after /i/. This /ʤ/ is also usually devoiced and often tends towards a fricative. Examples are given in table 21, in which Kotos Amarasi cognates are given for comparison.

12. The Amarasi reflex of *ikuR is *iku-*, due to a later rule of mid vowel raising after high vowels.
13. Amarasi has variants *ume ~ umi* for 'house'. The forms with final /i/ are due to the raising of mid vowels mentioned in the preceding footnote.

In Baikeno, /b/ is inserted after the back rounded vowels /o/ and /u/, /ʒ/ after /i/, and /l/ after /e/. Unlike Amfo'an, consonant insertion in Baikeno only takes place after words that end in a vowel sequence. Baikeno /ʒ/ corresponds to other Uab Meto /ʤ/. Examples are given in table 22. (In Baikeno, /ʒ/ is almost universally a fricative [ʒ] and, for some speakers, [z].)

These inserted consonants do not appear when a noun is followed by (nonenclitic) modifiers in the noun phrase. Two Baikeno examples are *haub* 'tree' + *toef* 'branch' → *hau toef* 'tree branch', and *oel* 'water' + *tasi* 'ocean, sea' → *oe tasi* 'sea water'.

Consonant insertion not too dissimilar from that observed in Baikeno has also been attested in some varieties of Molo. The full range and nature of word-final consonant insertion in Uab Meto is unknown, but the differences are quite salient to the speakers themselves when encountering other varieties.

TABLE 21. AMFO'AN (NAITBELAK) CONSONANT INSERTION

PMP	*asu	*batu	*qapuR	*qaləjaw	*taqi	*punti	*bahi	*Rumaq
Kotos	asu	fatu	ao	neno	tei	uki	fee	ume
Amfo'an	asug	fatug	aog	nenog	teiʤ	ukiʤ	feel	umel
gloss	'dog'	'rock'	'slaked lime'	'day, sky'	'feces'	'banana'	'wife'	'house'

TABLE 22. BAIKENO CONSONANT INSERTION

PMP	*kahiw	*qihu	*qapuR	*bahi	*waSiyəR†	*hapuy	*taqi
Kotos	hau	iik iu	ao	fee	oe	ai	tei
Baikeno	haub	iik iub	aob	feel	oel	aiʒ	teiʒ
gloss	'tree, wood'	'shark, whale'	'slaked lime'	'wife'	'water'	'fire'	'feces'

† PMP *waSiyəR is reconstructed by Wolff (2010:1027) for 'water'. Charles Grimes (pers. comm., June 2015) notes that the reconstruction *wahiR proposed by Blust and Trussel (ongoing) cannot account for reflexes in eastern Island South East Asia that have a final /e/ (even when final *R is retained).

3.6 DISYLLABIZATION. There is a strong tendency for PMP reconstructions of more than two syllables to be reduced to two syllables in Uab Meto.[14] This is achieved through deletion of one of the inherited vowels.

If the final vowel was *ə, this vowel was usually lost. Examples include *bitiəs > *fiti-* 'calf' and *ma-buhək > **mabuk > *mafu* 'drunk'. One exception to this rule of final *ə deletion appears to be *bituqən 'star', in which the final *ə assimilated to *u* and the initial *i was deleted, yielding Ro'is *fruun,* Kotos *kfuun,* and Molo *fkuun*.

Other examples of an inherited PMP word with more than two syllables have *a in the first syllable, and it is this vowel that was lost. Examples include *baqəRu > *feʔu* 'new' and *anaduq > *mnanuʔ* 'long, deep'. Other PMP trisyllables all involve the adjectival/stative prefix *ma-, in which case the vowel of this (historic) prefix was deleted. Examples include *ma-putiq > *mutiʔ* 'white' and *ma-panas 'hot' > *manas* 'sun'.

14. I have currently collected three inheritances from PMP that have not been shortened to a disyllable in Uab Meto. All begin with the prefix *ma-. These three words are *ma-nipis > *mainihas* 'thin', *ma-diŋdiŋ > *mainirin* (Ro'is), *mainikin* 'cold', and *ma-bəRəqat > *maʔfenaʔ* 'heavy'.

3.7 SUMMARY. The changes consonants have undergone from PMP to Uab Meto are summarized in table 23. This table is organized by the outcome in Uab Meto.

Among these changes, there are two tendencies that deserve comment. First, plosives mostly undergo lenition: both *p and *k have become *h* in some environments and are lost in others, and similarly, *b has lenited to the fricative *f*. Second, there is a large merger of coronal consonants and noncoronal nasals as *n*.

4. BOTTOM UP: FROM UAB METO TO PRE-UAB METO. In this section, I apply the comparative method to Uab Meto. I assemble cognate sets, identify regular sound correspondences, and reconstruct a phoneme for each set. Note that I assign the phonemes I reconstruct to pre-Uab Meto rather than Proto-Uab Meto. I do this for two reasons. First, I do not have data from every Uab Meto variety, and second, I occasionally appeal to external witnesses from Rote (drawn from Jonker [1908]) in assigning a value to a reconstructed consonant. Pre-Uab Meto forms are indicated throughout with a double asterisk (**). The consonants I reconstruct for pre-Uab Meto are given in table 24.

This reconstruction proceeds in two parts. First, in 4.1, I discuss the correspondence sets for which each phoneme is identical in the Uab Meto varieties for which I have data. Second, I discuss in 4.2 the correspondence sets that are nonidentical. As well as the pre-Uab Meto reconstructions found in these sections, examples of additional reconstructions are given in appendix 2.

4.1 IDENTICAL CORRESPONDENCE SETS. There are ten correspondence sets in which the reflexes are identical in all known varieties of Uab Meto. These are the correspondence sets for **t, **ʔ, **b, **mb, **ŋg, **f, **s, **h, **m, and **n.

TABLE 23. PMP > UAB METO

PMP		Ro'is	Kotos	Molo	no.
*p, *k, (*g)	>	h	h	h	13
*k	>	k	k	k	3
*t	>	t	t	t	30
*b	>	f	f	f	26
*m	>	m	m	m	20
*d, *n, *l, *R, *j, *ŋ, (*ñ)	>	n	n	n	71
*nd	>	r	k	k	4
*z, (*nj)	>	r	r	l	4
*s	>	s	s	s	26
*p, *k, *q, *h, *R, (*y)	>	Ø	Ø	Ø	61

TABLE 24. PRE-UAB METO CONSONANTS

	Labial	Coronal	Velar	Glottal
Voiceless plosives		**t	**k	**ʔ
Voiced obstruent	**b			
Prenasalized plosives	**mb	**nd	**ŋg	
Fricatives	**f	**s		**h
Nasals	**m	**n	**ŋ	
Liquid		**r		

The reflexes are identical to the reconstructed values, with the exception of the prenasalized plosives, which are reflected as voiceless plosives. Examples attesting each of these correspondences are given separately for word-initial (in table 25) and word-medial (in table 26) positions,

I reconstruct **mb for the *p : p : p* set. Where instances of Uab Meto /p/ have cognates in the Rote languages, the western Rote languages have /mb/. Examples include Dela/Tii/Lole *mbau* 'stab, pound' compared with Uab Meto *na-pau* 'pound, stab', as well as Tii/Lole *ambe* 'saliva' compared with Uab Meto *hape-*.[15] Additionally, the single (known) instance of /p/ in a word inherited from PMP is a reflex of *mp. This is PMP *umpu 'grandparent/child' > **umbu > *upu-*. (The basis for reconstructing **ŋg for the *k : k : k* set is discussed in 4.2.2 below.)

The vowels of Uab Meto mostly show identical correspondence sets. The only deviation is the occasional raising of mid vowels, as seen, for instance, after high vowels in Amarasi (as in Kotos *tune/tuni* 'gewang palm'). Examples of each of the vowel correspondences are given in table 27.

TABLE 25. IDENTICAL UAB METO CONSONANT CORRESPONDENCES WORD-INITIALLY

	**t	**ʔ	**b	**mb	**ŋg
pre-UM	**tuaf	**ʔmbanuʔ	**basi	**mbana	**ŋgae
Ro'is	tuaf	ʔpanuʔ	basi	pana-	n-kae
Kotos	tuaf	ʔpanuʔ	basi	pana-	n-kae
Molo	tuaf	ʔpanuʔ	basin	pana-	n-kae
gloss	'person'	'coconut shell'	'mosquito'	'nose'	'cry'
	**f	**s	**h	**m	**n
pre-UM	**foro	**sanu	**huma	**maŋgaʔ	**nefo
Ro'is	foro	n-sanu	huma-	makaʔ	nefo
Kotos	foro	n-sanu	huma-	makaʔ	nefo
Molo	folo	n-sanu	huma-	makaʔ	nefo
gloss	'blind'	'descend'	'face'	'rice'	'lake'

TABLE 26. IDENTICAL UAB METO CONSONANT CORRESPONDENCES WORD-MEDIALLY

	**t	**ʔ	**b	**mb	**ŋg
pre-UM	**metoʔ	**roʔa	**ŋgibaʔ	**nombe	**ʔnaŋga
Ro'is	metoʔ	n-roʔa		nope	ʔnaka-
Kotos	metoʔ	n-roʔa	kiba?	nope	ʔnaka-
Molo	metoʔ	n-loʔa	kiba?	nope	ʔnaka-
gloss	'dry'	'kill'	'ant'	'cloud'	'head'
	**f	**s	**h	**m	**n
pre-UM	**nefo	**mbusu	**boho	**ruman	**hanu
Ro'is	nefo	pusu-	n-boho	rumun	hanu-
Kotos	nefo	pusu-	n-boho	ruman	hanu-
Molo	nefo	pusu-	n-boho	luman	hanu-
gloss	'lake'	'thigh'	'cough'	'empty'	'shoulder'

15. Rikou, in eastern Rote, has /p/ for western Rote /mb/; thus Rikou has *pau* 'stab, pierce', and *ape* 'saliva'.

TABLE 27. IDENTICAL UAB METO VOWEL CORRESPONDENCES

	**i	**e	**a	**o	**u
pre-UM	**s**ii**	**teme	**mbara?	**moro?	**n**uru-**
Ro'is	n-s**ii**	te**me**	p**ara?**	m**oro?**	n**uru-**
Kotos	n-s**ii**	te**me**	p**ara?**	m**oro?**	r**uru-**
Molo	n-s**ii**	te**me**	p**ala?**	m**olo?**	l**ulu-**
gloss	'sing'	'hawk'	'short'	'yellow'	'lips'

4.2 NONIDENTICAL CORRESPONDENCE SETS

4.2.1 **nd. The *r : k : k* correspondence set has already been briefly discussed in 3.1.1. So far, I have collected at least twenty morphemes in which this correspondence set occurs. Examples of this set are given in table 28.

When this correspondence set occurs in PMP inheritances, it reflects *nt or *nd. Similarly, for words that have a cognate in the Rote languages, we frequently find /nd/. This is seen in Dela *nduu?* and Tii/Lole *nduuk* 'star', as well as Dela *-endi* 'bring'. Thus, I reconstruct **nd for this set.

In Ro'is, **nd has become *r*. This is a straightforward case of lenition, probably **nd > **d > *r*. In the other varieties of Uab Meto, **nd has become *k*. This is a highly unusual sound change. Given that the reflex of **nd in Ro'is is *r*, and the fact that the change *r > *k* is attested cross-linguistically,[16] it is likely that **nd became *k* through an intermediate **r stage; **nd > **d > **r . . . > *k*.[17]

4.2.2 **k. The next correspondence set I discuss is one in which Ro'is has *k* and all other (known) Uab Meto varieties have a glottal stop *?*. So far, I have collected at least fourteen instances of this correspondence set. Examples are given in table 29. (Where this glottal stop occurs word-initially it has, in some sense, been lost, as phonemically vowel-initial words begin with a phonetic glottal stop in Uab Meto. Where a vowel-initial word corresponds to a *k*-initial word in Ro'is, I transcribe the initial phonetic glottal [ʔ]; Ro'is *ketu?* 'bedbug' = other Uab Meto *[?]etu?*.)

TABLE 28. *nd > r : k : k*

pre-UM	**u**ndi**	**f**nd**uun	****nd**uan	****end**i**	**ne**nd**a	**maske**ndi?**
Ro'is	u**ri**	f**ruun**	**ruan**†	n-e**ri**	ne**ra-**	maske**ri?**
Kotos	u**ki**	**kfuun**	**kuan**	n-e**ki**	ne**ka-**	mas?e**ki?**
Molo	u**ki**	f**kuun**	**kuan**	n-e**ki**	ne**ka-**	ma?e**ki?**
gloss	'banana'	'stars'	'village'	'bring'	'liver'	'slippery'

† Blust and Trussel (ongoing) reconstruct Proto-Austronesian *kuan 'hamlet; kin-based residential unit' on the basis of Amis *kuan* and Uab Meto *kuan*. The similarity between these two forms is sheer coincidence, as confirmed by the Ro'is form *ruan*, which shows that the pre-Uab Meto form must have been **nduan.

16. Examples of *r > *k* include Mekeo of the Central Papuan subgroup of Oceanic in Papua New Guinea (Ross 1988:206) and South Marquesan in French Polynesia (Charpentier and François 2015:93).

17. The complete pathway could be **nd > **d > **r > **ɣ > **g > *k*. Whatever the exact history, the change **nd > *k* in Uab Meto varieties other than Ro'is is a strong diagnostic for subgrouping these varieties separately from Ro'is.

TABLE 29. **k > *k : ʔ : ʔ*

pre-UM	**mas**k**endiʔ	****k**ambuʔ	****k**enda	****k**ote	****k**a-...-t	****k**u-	****k**etuʔ
Ro'is	mas**k**eriʔ	na-**k**apuʔ	na-**k**era	n-**k**ote	**k**a-...-t	**k**u-	**k**etuʔ
Kotos	mas**ʔ**ekiʔ	na-**ʔ**apuʔ	na-**ʔ**eka	n-**ʔ**ote	[**ʔ**]a-...-t	[**ʔ**]u-	[**ʔ**]etuʔ
Molo	ma**ʔ**ekiʔ	na-**ʔ**apuʔ	n-**ʔ**eka	n-**ʔ**ote	[**ʔ**]a-...-t	[**ʔ**]u-	[**ʔ**]etuʔ
gloss	'slippery'	'pregnant'	'close'	'cut'	'NMLZ'†	'1SG'	'bedbug'

† This circumfix is an agentive nominalizer; for example, Kotos Amarasi *mepu* 'work' → *a-mepu-t* 'worker'.

I have reconstructed **k for this set. Before this reconstruction can be properly justified, I must discuss the set attesting **ŋg. Examples are given in table 30, which shows that all known Uab Meto varieties have *k* for this set.

These two sets present a potential dilemma for our reconstruction. On language-internal evidence alone, we could reasonably reconstruct **k for either set. One option would be to reconstruct **k for both sets and posit a split in the Uab Meto varieties other than Ro'is. However, an examination of the data reveals no regular conditioning environment. While the *k : ʔ : ʔ* set in table 29 only occurs morpheme-initially or after a consonant, the *k : k : k* set in table 30 also occurs in this environment. If we were to reconstruct *k for both sets, we would have to posit an unconditioned split.

An examination of external evidence helps to settle the question. For the *k : k : k* set in table 30, we often find cognates in Rote languages with /ŋg/. Thus we find Tii/Lole *ŋgeu* 'shave' compared with UM *-keu* 'shave', Dela *ŋgae* 'to weep' compared with UM *-kae*, as well as Dela/Tii/Lole *laŋga* 'head' compared with UM *(ʔ)naka-* 'head'.[18] On this basis, I reconstruct pre-Uab Meto **ŋg for the *k : k : k* illustrated in table 30.

The *k : ʔ : ʔ* correspondence set, on the other hand, has cognates in Rote languages that attest either /k/ or Ø. Examples include Tii/Lole *kena* and Dela/Rikou *ena* 'close' compared with Ro'is *-kera,* other Uab Meto *-ʔeka* 'close', as well as Tii/Lole/Rikou *abas* 'cotton' compared with Ro'is *kabas*, other Uab Meto *[ʔ]abas* 'cotton', though this latter word is probably a loan, at some level (cf. Malay *kapas* from Sanskrit *kārpāsa*).

There is also at least one morpheme in the *k : ʔ : ʔ* correspondence set in table 29 that is inherited from PMP. This is the 1SG verbal agreement prefix *ku-* in Ro'is and *[ʔ]u-* in other Uab Meto varieties. This prefix is a reflex of either the PMP 1SG free pronoun *aku or the 1SG genitive marker *-ku. For these two reasons, I reconstruct pre-Uab Meto **k for the *k : ʔ : ʔ* correspondence set in table 29.

There is a final correspondence set involving /k/ that is in complementary distribution with the sets discussed above. This set is illustrated in table 31, which shows *k* in

TABLE 30. **ŋg > *k : k : k*

pre-UM	**s**ŋg**e**ŋg**e	****ŋg**ibaʔ	****ŋg**eu	****ŋg**ae	**re**ŋg**o	**ʔna**ŋg**a	**bi**ŋg**i
Ro'is	na-s**k**e**k**e		n-**k**eu	n-**k**ae	re**k**o	ʔna**k**a-	
Kotos	na-s**k**e**k**e	**k**ibaʔ	n-**k**eu	n-**k**ae	re**k**o	ʔna**k**a-	bi**k**i
Molo	na-s**k**e**k**e	**k**ibaʔ	**k**eu	n-**k**ae	le**k**o	ʔna**k**a-	bi**k**i
gloss	'surprised'	'ant'	'shave, scrape'	'cry, weep'	'good'	'head'	'scar'

18. Rikou (eastern Rote) appears to have /k/ in these cognates, for example, *laka* 'head'.

TABLE 31. **k > *-k : -k : -ʔ/-Ø*

pre-UM	**masi**k**	**esu**k**	**hanu**k**	**bona**k**	****k**bubuʔ	****k**naba(t)	****k**mii
Ro'is	maisi**k**	eusu**k**	haunu**k**	bona**k**	**k**bubuʔ	**k**naba	**k**mii
Kotos	masi**k**	esu**k**	hanu**k**	bona**k**	**k**bubuʔ	**k**naba	**k**mii
Molo	masi**ʔ**	esu**ʔ**		bona**k**	**ʔ**bubuʔ	**ʔ**nab-naba	mii
Amfo'an	masi**ʔ**	esu**ʔ**	hanu**g**	bona**ʔ**	**ʔ**bubuʔ	a-**ʔ**nabat	miidʒ
Baikeno			hanu		**ʔ**bubuʔ		miiʒ
gloss	'salt'	'mortar'	'pestle'	'fragrant pandanus'	'round'	'spider'	'urine'

both Ro'is and Kotos Amarasi, while other varieties have *ʔ* or Ø, as well as a single instance of *k*.

This set can be accounted for by positing a conditioned split of **k. Word initially before a vowel, **k > ʔ in all varieties of Uab Meto except Ro'is, while word-initially before a consonant or word-finally, it went to ʔ, thence to Ø in some circumstances in varieties other than Ro'is and Kotos. This change is given in (1) below.

(1) **k > ʔ /#_V (not in Ro'is)
> ʔ (Ø) /#_C, /_# (not in Ro'is or Kotos)

4.2.3 **ŋ. The next correspondence set I discuss involves the phonemes *n* and *k*. All six words in which **ŋ is attested are given in table 32. We find *n* in Ro'is and Amanuban, *k* in Molo and Baikeno, and either *n* or *k* in Kotos, though gaps in my data make it difficult to discern exactly how regular these patterns are.

For this correspondence set, I reconstruct the velar nasal **ŋ. I posit pre-Uab Meto **ŋ > *n* in Ro'is and Amanuban, and pre-Uab Meto **ŋ > *k* in Kotos, Molo, and Baikeno. The instances of *n* in Kotos attest either interdialect loans or a split of pre-Uab Meto **ŋ in this variety. This set shows that, despite the initial similarity, the words for 'egg' in Uab Meto are probably not inheritances from PMP *qatəluR, as PMP *l becomes *n* Uab Meto (21 instances), never *k*. The comparison of PMP *qatəluR with Uab Meto *teno?/teko?* would also require otherwise unattested word-final *R > *ʔ*.

4.2.4 **r. The final correspondence set I discuss involves the liquids. In this set, we find the rhotic /r/ in Amarasi (both Ro'is and Kotos) in the southwest extreme of the Uab Meto range, as well as in Kusa-Manea in the eastern extreme of the Uab Meto speaking area. Other known Uab Meto varieties have the lateral /l/. Examples are given in table 33.

It would be reasonable to reconstruct either **l or **r for this correspondence set, as both the changes *r > *l* and *l > *r* are common cross-linguistically. I have chosen to reconstruct **r on the basis of external witnesses from the Rote languages, which have

TABLE 32. **ŋ > *n : k : k*

pre-UM	**te**ŋ**oʔ	****ʔ**so**ŋ**oʔ	****ŋ**iu	****ŋ**inu	**mai**ŋ**aʔ	****ŋ**ano
Ro'is	te**n**oʔ		**n**iu	na-**n**inu		
Kotos	te**k**oʔ, te**n**oʔ	ʔso**n**oʔ	**k**iu	na-**k**inu	na-mai**k**aʔ	na-**k**ano
Amanuban	te**n**oʔ				na-mai**n**aʔ	na-**n**ano
Molo	te**k**oʔ	ʔso**k**oʔ	**k**iu	na-**k**inu	na-mai**k**aʔ	na-**k**ano
Baikeno	te**k**oʔ			na-**k**inu		
gloss	'egg'	'spoon'	'tamarind'	'spit'	'stay'	'plait'

TABLE 33. **r > *r : r : l : l : l : r*

pre-UM	**ranan	**uran	**ʔroo ʔ	**roro	**ŋgoro	**moro ʔ
Ro'is	ranan	uran	na-ʔroo	n-roro	koro	moro ʔ
Kotos	ranan	uran	na-ʔroo	n-roro	koro	moro ʔ
Amanuban	lanan	ulan	ʔloo ʔ	lolo	kolo	molo ʔ
Molo	lalan	ulan	na-ʔloo	lolo	kolo	molo ʔ
Baikeno	lalan	ulan	aʔloʔo	n-lolo	kolo	molo ʔ
Kusa-Manea	ranan	uran	aʔroo		koro	
gloss	‘road’	‘rain’	‘far’	‘kill’	‘bird’	‘yellow’

/d/ in cognate forms. Examples are given in table 34 below, which compares data from four of the Rote languages—Lole, Rikou, Dela, and Tii—with their Ro'is, Kotos, and Molo cognates.

The change *d > *r* is extremely common cross-linguistically, while that of *d > *l* is less common, usually passing through an intermediate **r stage. Thus, I posit pre-Uab Meto **r, with the change **r > *l* occurring in varieties of Uab Meto, apart from those on the geographic periphery—Amarasi and Kusa-Manea.

Finally, Molo, Amfo'an, and Baikeno all attest assimilation of **n to /l/ when preceded by another /l/. Examples are given in table 35.

TABLE 34. ROTE *d* : UAB METO *r/l*

PMP	*zalan	*quzan	*zauq	*huanji				
Lole	dalak	uda	dook	fadik		dodo	denu	
Rikou	dalaʔ	uda	dooʔ	fadiʔ			denu	
Dela	dalaʔ	udan	dooʔ	odiʔ	nudu ʔ		denu	
Tii	dalak	udan	dook	fadik		dodo	denu	dasi
Ro'is	ranan	uran	na-ʔroo	ori-	nuru-	n-roro		rasi
Kotos	ranan	uran	na-ʔroo	ori-	ruru-	n-roro	n-renu	rasi
Molo	lalan	ulan	na-ʔloo	oli-	lulu-	n-lolo	n-lelu	lasi
gloss	‘path’	‘rain’	‘far’	‘ySi’	‘lips’	‘kill’	‘command’	‘matter’

TABLE 35. **n > *l* / *l* V_

pre-UM	**ranan	**rene	**rone-	**lenu
Ro'is	ranan	rene	rone-	
Kotos	ranan	rene	rone-	n-renu
Amanuban	lanan	lene	lone-	n-lenu
Molo	lalan	lele	lole-	n-lelu
Amfo'an	lalan	lele	lole-	
Baikeno	lalan	lele	lole-	
gloss	‘road’	‘field’	‘brains’	‘command’

4.3 SUMMARY. The pre-Uab Meto consonant inventory I reconstruct is given again in table 36. Among these consonants, the values of the prenasalized series are reconstructed primarily on the basis of external evidence.

The sound changes from pre-Uab Meto to each of the modern day varieties for which I have data are given in table 37. The relative order in which they occurred is indicated in the left-hand column. The change **k > *ʔ* in varieties other than Ro'is must have

TABLE 36. PRE-UAB METO CONSONANTS

Voiceless plosives		**t	**k	**ʔ
Voiced obstruent	**b			
Prenasalized plosives	**mb	**nd	**ŋg	
Fricatives	**f	**s		**h
Nasals	**m	**n	**ŋ	
Liquid		**r		

TABLE 37. PRE-UAB METO > UAB METO

	**C		Ro'is	Kotos	Amanuban	Molo	Amfo'an	Baikeno	Kusa-Manea	
1.	**k	>	k	ʔ	ʔ	ʔ	ʔ	ʔ		/#_V
		>	k	k	ʔ/Ø	ʔ/Ø	ʔ/Ø	ʔ/Ø		/#_C, ?_#
2.	**ŋg	>	k	k	k	k	k	k	k	
2.	**nd	>	r	k	k	k	k	k	k	
2.	**ŋ	>	n	k/n	n	k	k	k		
	**r	>	r	r	l	l	l	l	r	
	**mb	>	p	p	p	p	p	p		

occurred before **ŋg > *k*, **nd > *k*, and **ŋ > *k*, though these three changes can be unordered with respect to one another.

5. PROBLEMS AND PROSPECTS. In this paper, I have examined the historical phonology of the Uab Meto cluster of languages and dialects.[19] My main proposal is that all the data I have presented must be accounted for if we want to understand the nuanced history of this language cluster. According to the data in section 3, the history of Uab Meto is one of straightforward and regular descent from PMP. According to the data in section 4, the history of Uab Meto has little to do with the MP language family but does present a regular phonological history. That these two histories do not align does not mean that we have inadequately analyzed the data, but rather that we have an interesting language history.

In this final section, I provide an initial synthesis of these two histories of Uab Meto and identify avenues that require further investigation. Table 38 shows the sound changes from PMP to pre-Uab Meto and the sound changes from pre-Uab Meto to the seven Uab Meto varieties for which I have data. (This table is a combination of tables 23 and 37.)

The data attest four Uab Meto correspondence sets that are entirely unaccounted for by the PMP history: **ŋg, **b, **ŋ, and **ʔ. They also show another two correspondence sets that have only one attestation in the MP history of the languages: **mb and **k_{UM}.

If we were to examine only the data relevant for the Malayo-Polynesian history of Uab Meto (the data yielded by a top-down perspective), we would expect a pre-Uab Meto consonant inventory like that given in table 39, in which four of the consonants we must in fact posit would be missing. In this table, parentheses show consonants that

19. Another line of investigation not pursued in this paper is the evidence provided by Uab Meto morphology and syntax. Thus, morphological metathesis is attested in many languages of the region including Uab Meto, Helong, Kemak, Mambae, and Leti/Luang. Given that processes of morphological metathesis are vanishingly rare cross-linguistically, such a high concentration of metathesis in one area cannot be due to chance. However, the nature of its significance for comparative purposes is currently unclear.

TABLE 38. PMP > PRE-UAB METO > UAB METO

PMP	env.		Pre-UM		Ro'is	Kotos	Amanuban	Molo	Amfo'an	Baikeno	Kusa-Manea	no. in PMP
*C	/_#	>	Ø									43
*p	/_i,ə	>	**h	>	h	h	h	h	h	h		4
		>	Ø									8
	/V_V	>	Ø									5
*k_{MP}	/i_V	>	**k_{MP}	>	k	k	k	k	k	k		3
	/#_	>	**h	>	h	h	h	h	h	h	h	8
*t		>	**t	>	t	t	t	t	t	t	t	33
*q, *h, *R, *y		>	Ø									47
*b		>	**f	>	f	f	f	f	f	f	f	27
*d, *n, *ñ, *ŋ, *l, *j, *R		>	**n	>	n	n	n	n	n	n	n	69
*m		>	**m	>	m	m	m	m	m	m	m	24
*s		>	**s	>	s	s	s	s	s	s	s	21
*z, (*nj)		>	**r	>	r	r	l	l	l	l	r	4
*nd		>	**nd	>	r	k	k	k	k	k	k	4
(*mp)		>	**mb	>	p	p	p	p	p	p	p	1
(*k_{UM})		>	**k_{UM}	>	k	ʔ	ʔ	ʔ	ʔ	ʔ		1
–			**ŋg	>	k	k	k	k	k	k	k	
–			**b	>	b	b	b	b	b	b	b	
–			**ŋ	>	n	k/n	n	k	k	k		
–			**ʔ	>	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	

TABLE 39. EXPECTED PRE-UAB METO CONSONANTS

	Labial	Coronal	Velar	Glottal
Voiceless Plosives		**t	**k	(**ʔ)
Voiced Obstruent				
Prenasalized Plosives		**nd		
Fricatives	**f	**s		**h
Nasals	**m	**n		
Liquid		(**r)		

would be rare, and boxes show consonants that we must posit, but that are unaccounted for by the MP history.

This pre-Uab Meto consonant inventory would yield, in turn, a consonant inventory like that of table 40 for modern Uab Meto, in which two of the attested consonants are entirely unexplained by the MP history of the language.

TABLE 40. EXPECTED UAB METO CONSONANTS

	Labial	Coronal	Velar	Glottal
Voiceless Plosives		t	k	(ʔ)
Voiced Obstruents				
Fricatives	f	s		h
Nasals	m	n		
Liquid		(r/l)		

How do we account for the discrepancy between what we expect of Uab Meto from the top down, and what we find from the bottom up? Put another way: where do the *p*s and *b*s come from? This is a difficult question to answer. Two solutions are possible: (i) neologism, and (ii) contact.

The first possibility is that the apparent non-MP elements are the result of neologism—words made up by speakers. Neologism has been suggested as a source for Hawaiian vocabulary of an unknown source (Blust 2011:273). However, in the current instance, neologism is highly unlikely, as we expect speakers to coin words that already fit into the system of the language; /ʧæb/ is a possible English word, while /xæb/ is probably not possible outside of Scotland and /mbæb/ or /ʔæb/ are definitely impossible.

A much more likely scenario is that the putative non-MP elements of Uab Meto are the result of contact with other MP languages or non-MP languages. Indeed, I argued in 3.1.4 that the Uab Meto words *puah* 'betel nut' and *pune?* 'ear of corn' must not be direct inheritances from PMP, as they reflect PMP *b as /p/, rather than expected /f/.

The most obvious kind of language contact that could introduce new phonemes into the system of a language is that of borrowing. There are indeed a number of identifiable loans in Uab Meto containing the "problematic" consonants. In Kotos Amarasi, for instance, we have examples such as *pake* 'use' < Malay *pakai,* and *bruuk* 'pants' < Dutch *broek*. Such instances constitute less than 7.5 percent (33/443) of all instances of /p/ and /b/ in my current Amarasi dictionary.[20]

A small amount of the non-MP data is straightforwardly accounted for by superficial borrowing. However, this still leaves a large amount of data unaccounted for: what about the remaining 92.5 percent (410/443) of *p*s and *b*s? What about the entire grade of prenasalized plosives in pre-Uab Meto? The sheer size of the putative non-MP components of pre-Uab Meto, and the fact that it has restructured the phonological system of the language, points to a prolonged period of intense and intimate language contact between the incoming Austronesian languages and the pre-Austronesian languages of the region.[21]

This raises a thorny methodological issue for the historical linguist: is one permitted to posit language contact without an extant source language for the contact? If so, under what circumstances?[22]

Similar questions probably arise to a different extent in every language of the world. In English, for example, the phonemic contrast between the voiceless fricatives /f, θ, s/ and voiced fricatives /v, ð, z/, is not accounted for by simple inheritance from Proto-Germanic. In this case, some scholars have argued it is due to Celtic influence (Laker 2009).

20. In my current dictionary of 1,560 unique Kotos Amarasi morphemes, there are 254 instances of /b/ and 189 instances of /p/. Of these, 17 instances of /p/ and 16 instances of /b/ are loans with an identified source.

21. The extant non-Austronesian languages of the region are the Timor-Alor-Pantar languages. In addition, there is the poorly documented and now extinct non-Austronesian Tambora language of Sumbawa (Donohue 2007).

22. Reid (1994) proposes that the Negrito languages of the Philippines arose through pidginization and subsequent creolization of an early Austronesian trade language. This proposal is based on cognate vocabulary found only in the Negrito languages, but not found in other Austronesian languages of the Philippines. While I do not find the pidginization hypothesis particularly compelling, I am highly sympathetic to the idea of language shift that Reid (1994:57) also proffers.

In order to even arrive at an initial solution to the source(s) of the putative non-MP components of Uab Meto, we need to examine more data from surrounding languages.[23] It may end up being the case that we answer "we don't know the source," or equally unsatisfactorily "from an unknown source." However, it is not unlikely a thorough investigation of these languages would reveal solid answers to some of these questions.

We cannot account for the historical phonologies of Uab Meto without reference to a significant non-Austronesian element that is as regular as is the Austronesian material. If we are to learn anything from this exposition of Uab Meto historical phonology, it is that future historical work in the region, on both Austronesian and non-Austronesian languages, must avoid the unmotivated assumptions that all the data should point to a single consistent result, and that only data from languages thought to be related (in the comparative method sense) have a role to play in uncovering those results.

APPENDIX 1. PMP INHERITANCES IN UAB METO.

In this appendix, I present those Uab Meto words that can be shown to be inheritances from PMP. This appendix is divided into three parts. In part 1, I present those words that are clearly, regularly, and unproblematically inherited from PMP; in part 2, I present those words that have irregularities that can probably be explained; and in part 3, I present those words that represent only extremely tenuous connections with a PMP reconstruction. In most cases, the words in part 3 are probably loans from another Austronesian language, or chance similarities.

1. UNPROBLEMATIC INHERITANCES

PMP	gloss	Ro'is	Kotos	Molo	gloss
*aku	1SG	au	au	au	1SG
*ama	father	ama-	ama-	ama-	father
*anaduq	long	mnanuʔ	mnanuʔ	mnanuʔ	long, deep; length, depth
*asu	dog	asu	asu	asu	dog
*babaw	upon, over, above	fafo-	fafo-	fafo-	above
*babuy	pig	fafi	fafi	fafi	pig
*bahi	female, woman, wife	fee bifee	fee bifee	fee bifee	wife woman
		[initial /bi/ same as Uab Meto feminine honorific]			
*bahuq	odor, stench		na-foo	na-foo	stink
*balik	reverse, turn around	n-fani	n-fani	n-fani	return, again
*bəqbəq	mouth	fefa-	fefa-	fefa-	mouth
*baqəRu	new, fresh	feʔu	feʔu	feʔu	new (things)
*batu	stone	fatu	fatu	fatu	stone
*bəRay	give	n-fee	n-fee	n-fee	give
*bətaw	man's sister	feto	feto	feto	male's sister
*binəhiq	seed set aside for next planting		fini	fini	seed for replanting
*bitiəs	calf of the leg		fiti-	fiti-	calf (of the leg)

23. The immediate neighbors of Uab Meto are the Rote languages, Helong, and Tetun (all Austronesian languages). In this paper, I have made some initial comparisons between Uab Meto and some of the Rote languages, and it is probable that the Rote languages subgroup with Uab Meto. Superficially, Helong does not appear to fit closely with any of the languages of Timor.

PMP	gloss	Ro'is	Kotos	Molo	gloss
*bituqən	star	fruun	kfuun	fkuun, kfuun	stars
*buaq	fruit	fua-	fua	fua-	fruit
*bubun	fontanel, crown of the head	fufu-	fufu-	fufu-	fontanel, crown of the head
*bukij	mountain; forested inland mountain areas	fui	fui	fui	wild
*bulan	moon, month	funan	funan	funan	moon, month
*bulu	body hair; fur; feather		funu-	funu-	hair (any), feather
*daləm	in, area within	nana-	nana-	nana-	inside
*daqan	old, ancient	mnaaʔ	mnaaʔ	mnaaʔ	old, former
*daRaq	blood	naaʔ	naaʔ	naaʔ	blood
*dəŋəR	hear, listen	n-nena	n-nena	n-nena	hear
*diRus	bathe	na-niu	na-niu	na-niu	bathe
*duha	two	nua	nua	nua	two
*duRi	thorn	nui-	nui-	nui-	bone
*ənəm > **nəəm	six	nee	nee	neeʔ	six
*əpat > **pəat	four	haa	haa	haaʔ	four
*əsa	one	es	es	es	one, a(n)
*gatəl	itch, feel itchy	mahataʔ	mahataʔ	n-mahata	itchy
*haŋin	wind	anin	anin	anin	wind
*hapuy	fire	ai	ai	ai	fire
*hau(n)ji	same sex younger sibling	ori-	ori-	oli-	same sex younger sibling
*hawak	waist, back of the waist	ao-	ao-	ao-	body
*hikan	fish	ikaʔ	ikaʔ	ikaʔ	fish
*ikuR	tail	iku-	iku-	iko-	tail
*inum	drink	n-inu	n-inu	n-inu	drink
*kahiw	wood, tree	hau	hau	hau	tree, wood
*kahu	you (SG)	ho	ho	ho	2SG.NOM
*kakay†	foot/leg	hae-	hae-	hae-	leg, foot
*kali	dig up, excavate		n-hani	n-hani	dig
*kita	we (incl.)	hit	hit	hit	1PL.INCL.NOM
*kutu	head louse	hutu	hutu	hutu	head louse
*lakaw	go, walk	n-nao	n-nao	n-nao	go
*lətay	bridge		nete	neten	mountain, bridge
*lima	five	nima nima-	nima ʔnima-	nima nima-	five hand, arm
*ma-buhək	drunk		mafu	mafu	drunk
*ma-diŋdiŋ	cold	mainirin	mainikin	mainikin	cold
*ma-iRaq	red	meʔe	meʔe	meʔe	red
*maliᵽ (PCEMP)	laugh, smile	n-mani	n-mani	n-mani	laugh
*manuk	chicken	manu	manu	manu	chicken
*ma-panas	warm, hot	manas	manas	manas	sun
*ma-putiq	white	mutiʔ	mutiʔ	mutiʔ	white
*ma-qitəm	black, deep blue	metan	metan	metan	black
*ma-Ruqanay	male	mone	mone	mone	male, husband
*mata	eye, face	mata-	mata-	mata-	eye, (in) front of

PMP	gloss	Ro'is	Kotos	Molo	gloss
*ma-qataq	raw, unripe		n-mate	mate	green, unripe, uncooked
		naumate	mamate	mate	green (color)
*matay	die, dead	n-mate	n-mate	n-mate	die
*muntay	k.o. citrus tree and its fruit	ʔmuriʔ	ʔmukiʔ	muke	lime (citrus)
*maya (PCEMP)	tongue	maa-	maa-	maa-	tongue
*-na	that, there; then		naa	naa	there
*ŋisi	grin, show the teeth	nisi-	nisi-	nisi-	teeth
*pənuq	full, of container	na-henu	na-henu	na-henu	to fill, be full
*pitu	seven	hitu	hitu	hitu	seven
*punti	banana	uri	uki	uki	banana
*puqun	base of tree		uʔu-	uu-	base, source; tree classifier
*pusəj	navel, umbilicus		usa-	usa-	belly button, navel
*qabu	ash, [...] dust	afu	afu	afu	soil, ash, ground
*qaləjaw	day	neno	neno	neno	day, sky
*qanitu	ghost, ancestral spirit		nitu	nitu	spirit (of dead person)
*qapuR	lime, calcium	ao	ao	ao	slaked lime
*qasawa	spouse		n-sao	n-sao	marry
*qatay	liver, seat of emotions	ate-	ate-	ate-	liver (as organ)
*qauR	k.o. large bamboo	oo	oo	oo	bamboo
*qutin	penis	uti-	uti-	uti-	penis
*quzan	rain	uran	uran	ulan	rain
*Ratus	hundred	natun	natun	natun	hundred
*Ribu	thousand	nifun	nifun	nifun	thousand
*Rumaq	house	umi	umi, ume	ume	house
*sakay	rise, climb up	n-sae	n-sae	n-sae	go up, ascend
*salaq	wrong, in error		sana	sana	wrong, mistake
*sawa	python	sao	ʔsao		k.o. green viper
*si-ida	they	sin	sin	sin	3PL
*siku	elbow	siʔu-	siʔu-	siʔu-	elbow
*siwa	nine	seo	seo	sioʔ	nine
*sula	horn	suna-	ʔsuna-	suna-	horn
*susu	female breast	susu-	susu-	susu-	breast
*takut	fear		na-mtau	na-mtau	afraid, scared
*talih	rope, cord, twine	tani	tani	tani	rope
*taqi	feces, excrement	tai- tei	tai- tei	tai- tei	belly, stomach feces
*taqun	year, season	toon	toon	toon	year
*tasik	sea, salt water	tasi	tasi	tasi	sea, ocean
*tau	person, human being		too	too	populace
*təlu	three	tenu	tenu	tenu	three
*tikəd	heel		tika-	tika-	heel
*tila	vulva, vagina	tina-	tina-	tina-	vagina

PMP	gloss	Ro'is	Kotos	Molo	gloss
*tuhud	knee	tuu-	tuu-	tuu-	knee
*tu(g)tug	knock, pound		n-tutu	n-tutu	pound, smith
*tunu	roast food over a fire		n-tunu	n-tunu	burn, roast
*umpu	grandparent/ child	upu-	upu-	upu-	grandchild
*uRat	artery, vein	ua-	ua-	ua-	palm lines
*utaña	ask, inquire		na-tana	na-tana	ask, interrogate
*waSiyəR‡	fresh water	oe	oe	oe	water
*wani	honeybee	oni	oni	oni	bee, sugar
*zalan	path	ranan	ranan	lalan	path, road, way

† Wolff (2010:862).
‡ Wolff (2010:1027).

2. Inheritances with Problems

PMP	gloss	Ro'is	Kotos	Molo	gloss
*anak	child	anaʔ	anah	anah	child
		riʔanaʔ	riʔanaʔ	liʔanaʔ	child
		anaʔ	anaʔ	anaʔ	small
		*[unexpected final *k > /h/]*			
*balabaw	rat, mouse	knafo	knafo	ifo	mouse, rat
		[unexpected initial consonant in Ro'is and Kotos, unexpected initial syllable in Molo. The Molo form is probably not inherited from PMP.]			
*dahun	leaf	noʔo	noʔo	noo-n	leaf, classifier
		[unexpected medial /ʔ/]			
*əsuŋ	rice mortar	eusuk	esuk	esuʔ	mortar
		[irr. final /k/]			
*həsi	flesh, meat	sisi	sisi	sisi	flesh, meat
		[irr. initial /s/, but regionally common]			
*ina	mother	ina-	aina-	aina-	mother
			[irr. initial /a/]		
*kahu	you (SG)	ko	ko	ko	2SG.ACC
		*[irr. *k > /k/ ?*ni-kahu > **ŋkahu]*			
*kami	we (EXCL)	hai	hai	hai	1PL.EXCL.NOM
		[irr. loss of medial /m/]			
		kai	kai	kai	1PL.EXCL.ACC
		*[irr. *k > /k/ ?*ni-kami > **ŋkami, irr. loss of medial /m/]*			
*kita	we (INCL)	kit	kit	kit	1PL.INCL.ACC
		*[irr. *k > /k/ ?*ni-kita > **ŋkita]*			
*kita	see	n-ita	n-ita	n-ita	to see
		*[irr. *k > Ø]*			
*kunij	turmeric	huinit	hunit		turmeric
		[irr. final /t/, cf. Malay kunyit]			
*laRiw	run, run away	n-aen	n-aen	n-aen	run, flee
		*[initial /n/ from *l re-interpreted as verbal agreement prefix. irr. frozen metathesis. When nominalized with /a-…-t/ Kotos has /am**nane**t/ Baikeno has the root /-ane/.]*			
*ma-bəRəqat	heavy	maʔfenaʔ	maʔfenaʔ	maʔfenaʔ	heavy
		[unexpected glottal stops]			
*malip (PCEMP)	laugh	n-manis	n-manis		laugh at s.o.
		[irr. final /s/]			
*ma-nipis	thin (materials)		mainihas		thin
		*[irregular *i > /a/]*			

PMP	gloss	Ro'is	Kotos	Molo	gloss
*ma-qasin	salty	maisik *[irr. *n > /k/]*	masik	masiʔ	salt
*masu (?PCMP)	smoke	masuʔ *[unexpected final /ʔ/]*	masuʔ	masuʔ	smoke
*ŋajan	name	kana- *[irr. *ŋ > /k/]*	kana-	kana-	name, clan
*pajay	field rice		ani *[irr. *ay > /i/]*	ane	field rice
*qapəju	gall	enu- *[irr. *p > Ø / _ə]*	enu-	enu-	gall bladder
*quluh	head; […] first	na-hunu *[unexpected*	na-hunu *initial /h/]* unuʔ *[unexpected final /ʔ/]*	na-hunu unuʔ	be first, go ahead, overtake earlier, long ago
*udəhi	last; come after or behind; late, later	muinif *[unexpected (frozen?) final /f/]*	munif	munif	young (people)
*walu	eight	fana *[irr. *w > /f/, irr. *u > a in Ro'is]*	fanu	fanu	eight
*zauq	far	na-ʔroo *[unexpected initial /ʔ/]*	na-ʔroo	ʔloo	far

3. Highly Problematic Connections with PMP

PMP	gloss	Ro'is	Kotos	Molo	gloss
?*baba	father	baba- *[irr. *b> /b/]*	baba-		father's sister, mother's brother
?*balik	reverse, turn around		n-bani *[irr. *b > /b/]*		change, turn (into)
?*baqi	grandmother	beʔi- *[irr. *b > /b/, irr. *q > /ʔ/, unusual /a/ > e]*	beʔi-	beʔi-	grandmother
?*bəlas (?PCMP)	machete	fenes	benas *[irr. *b > /b/ in all except Ro'is]*	benas	machete
?*bəriq	split, tear open		n-fei *[only instance of *r]*	n-fai	open (as door)
?*bəRŋi	night	fai *[irr. *ŋ > Ø, irr. *ə > /a/]*	fai	fai	night
?*buaq	fruit; areca palm and nut	puah *[irr. *b > /p/; early loan]*	puah	puah	betel nut
?*buliR	ear of grain		puneʔ *[irr. *b > /p/; early loan]*	puneʔ	ear of corn
?*halas	forest, wilderness, woods, jungle	nasi *[irr. *a > Ø, irr. final /i/]*	nasi	nasi	bush, jungle, forest; untamed areas not managed by humans
?*kakak	elder sibling	tata- *[irr. *k > /t/]*	tata-	tata-	same sex elder sibling

PMP	gloss	Ro'is	Kotos	Molo	gloss
?*kəRa(nŋ)	hawksbill turtle	kee	kee, kea	kee, keʔa	tortoise, turtle
		*[irr. *k > /k/]*			
?*kətun	cut, sever		n-ketu	n-ketu	cut, sever, break off
			*[irr. *k > /k/]*		
?*paŋdan	pandanus	eram	ekam	ekam	wild pandanus
		*[irr. *a > /e/, irr. *n > m]*			
?*ka-ulaR	snake	kaunaʔ	kaunaʔ	kaunaʔ	snake, critter
		*[irr. *k > k, irr. *au > au, irr. *R > /ʔ/]*			
?*qahəlu	pestle	haunuk	hanuk		pestle
		*[irr. *q > h, irr. final k]*			
?*qaRta	outsiders, alien people		ate	ate	slave, servant
			*[irr. *a > /e/]*		

APPENDIX 2. UAB METO WORDLISTS

In this appendix, I present wordlists of five Uab Meto varieties: Ro'is Amarasi, Kotos Amarasi, Molo (extracted from Middelkoop 1972), Naitbelak Amfo'an, and Baikeno. Initial Kusa-Manea data provided by Charles Grimes are also included where available. Kusa-Manea data are given in the right hand column preceded by 'KM'. Inheritances from PMP, as listed in parts 1 and 2 of appendix 1, are italicized. Where a noninherited form is cognate in Ro'is Amarasi and at least two other varieties, or in all varieties except for Ro'is, a preliminary pre-Uab Meto reconstruction is given in the right-hand column.

Nouns that are inalienably possessed are followed by an obligatory genitive suffix in the citation form. Such suffixes are not usually indicated in the word lists, though a hyphen follows such nouns to indicate their status. The Uab Meto genitive suffixes used on body parts are given in table 41. (0 person forms are used when the possessor is unknown or irrelevant to the discourse.) Kin terms appear to take a different set of suffixes, though these are less well understood.

Verbs in Uab Meto fall into three verb classes: (i) those that take consonantal prefixes; (ii) those that take vocalic prefixes; and (iii) those that take consonantal prefixes for an intransitive meaning and vocalic prefixes for a transitive meaning. Verbs are given in the wordlist with either of the third person prefixes *na-* or *n-* to indicate their class. Other verbal prefixes are given in table 42. (The Ro'is consonantal 1SG prefix *ʔ-* is used before consonant initial stems, and *k-* is used before vowel initial stems.)

Words are given in the citation form. Readers should be aware that in the case of verbs and numerals, this is often the metathesized form. Word-final consonants in Amfo'an and Baikeno that are a result of consonant insertion (see 3.4.1) are separated from the stem by a pipe '|'.

TABLE 41. UAB METO GENITIVE SUFFIXES

	Ro'is		Other UM	
	SG	PL	SG	PL
1EXCL	-k	-m	-k	-m
1INCL		-r		-k
2	-m	-m	-m	-m
3	-n	-r	-n	-k
0	-f		-f	

TABLE 42. UAB METO VERBAL AGREEMENT PREFIXES

	Ro'is				Other UM			
	SG	PL	SG	PL	SG	PL	SG	PL
1EXCL	ku-	mi-	k-/ʔ-	m-	m-	mi-	ʔ-	m-
1INCL		ta-		t-		ta-		t-
2	mu-	mi-	u-	m-	mu-	mi-	u-	m-
3	na-	na-	n-	n-	na-	na-	n-	n-

item	Ro'is	Kotos	Molo	Amfo'an	Baikeno	pre-UM
A – Body Parts						
head	ʔnaka-	ʔnaka-	ʔnaka-	a-ʔnaka-	ʔnaka-	**ʔnaŋga
head hair	ʔnaak buʔu	*funu-*	nafuʔ	*funu-*	nafuʔ	
face	huma-	huma-	huma-	huma-	huma-	**huma
eye	*mata-*	*mata-*	*mata-*	*mata-*	*mata-*	
nose	pana-	pana-	pana-	pana-	pana-	**mbana
mouth	*fefa-*	*fefa-*	*fefa-*	*fefa-*	*fefa-*	
lips	nuru-	ruru-	lulu-	lulu-	lulu-	**nuru
tongue	*maa-*	*maa-*	*maa-*	*maa-*	*maa-*	
tooth	*nisi-*	*nisi-*	*nisi-*	*nisi-*	*nisi-*	
ear	ruki-	ruki-	luke-	luke-	luke	**ruŋge
neck	neo-	neo-	neo-	neo-	neo-	**neo
arm/hand	*nima-*	*ʔnima-*	ʔnuku-, *nima-*	*nima-*	*ʔnima-*	
elbow	*siʔu-*	*siʔu-*	*siʔu-*, niʔu-	*siʔu-*	*siʔu-*	
shoulder	hanu-	hanu-		hanu-	hanu-	**hanu
fingernail	tnusu-	knusa-	ʔtusa-	a-ʔtusu-	ʔtusu-	
breast	*susu-*	*susu-*	*susu-*	*susu-*	*susu-*	
belly	*tai-*	*tai-*	*tai-*	*tai-*	*tai-*	
foot/leg	*hae-*	*hae-*	*hae-*	*hae-*	*hae-*	
knee	*tuu-*	*tuu-*	*tuu-*	*tuu-*	*tuu-*	
thigh	pusu-	pusu-	pusu-	pusu-	pusu-	**mbusu
skin	pasu-	pasu-	pasu-	pasu-	pasu-	**mbasu
flesh	*sisi*	*sisi*	*sisi*	*sisi*|*ʤ*	*sisi*	
bone	*nui-*	*nui-*	*nui-*	*nui-*	*nui-*	
blood	*naaʔ*	*naaʔ*	*naaʔ*	*naa-*	*naaʔ*	
liver[24]	*ate-*	*ate-*	*ate-*	*ate-*	*ate-*	
	nera-	neka-	neka-		neka-	**nenda
heart	bua-	bua-	teka-	teka-	fua-	**tenda[25]
	kansao-	ansao-				
saliva	hape	hape	hape	hape	hape	**hambe
urine	kmii	kmii	mii	mii|ʤ	mii|ʒ	**kmii
feces	*tei*	*tei*	*tei*	*tei*|*ʤ*	*tei*|*ʒ*	
B – Human and Kin Terms						
person	tuaf	tuaf	tuaf	tuaf	atoni	**tuaf
man	atoniʔ	atoniʔ	atoni	atoni|ʤ	mone	**atoni
woman	bi*fee*	bi*fee*	bi*fee*	bi*fee*|*l*	bi*fee*|*l*	KM: *fanai*
wife	*fee*	*fee*	*fee*	*fee*|*l*	*fee*|*l*	
husband	*mone*	*mone*	*mone*	*mone*|*l*	*mone*	
father	*ama-ʔ*	*ama-f*	*ama-f*	*ama-f*	*ama-ʔ*	KM: *ama-*
mother	*ina-ʔ*	*aina-f*	*aina-f*	*ina-f*	*ena-f, aina-f*	KM: *ene-*
child	*anaʔ*	*anah*	*anah*	*anah*	*anah*	

24. Note: *ate-* = 'liver, the organ', *nera-/neka-* = 'liver as seat of emotions'.
25. Ro'is has *tera-* and Kotos has *teka-* with the meaning 'lungs'.

item	Ro'is	Kotos	Molo	Amfo'an	Baikeno	pre-UM
grandchild	*upu-f*	*upu-f*	*upu-f*	suʔa kaʔu-f	*upu-f*	
grandfather	naiʔi-k	baʔi	naʔi-f	aam baba-f		KM: nai-ʔ
grandmother	beʔi	beʔi	beʔi-f	iin baba-f		KM: bee-ʔ
MoBr	baab *mone*	baba-f, baab *mone*		naʔi-f[26]	tua	
FaSi	baab *feto*	baba-f, baab *feto*		bai-f, beʔi-f	bei-f, baba-f	
eSi (same sex)	tata-ʔ	tata-f	tata-f	tata-f	tata-f	**tata
ySi (same sex)	*ori-ʔ*	*ori-f*	*oli-f*	*oli-f*	*oli-f*	
sister of ♂		*feto-f*	*feto*	*feto-f*		
brother of ♀		nao-f		nao-f		
friend	nonot	aok bian		aam nonok	aok bian	
C – Pronouns						
1SG	*au*	*au*	*au*	*au*	*au*	KM: *au*
2SG	*ho*	*ho*	*ho*	*ho*	*ho*	
3SG	hin	in	in	in	in	**in, KM: in
1PL.EXCL	*hai*	*hai*	*hai*	*hai*	*hai*	
1PL.INCL	*hit*	*hit*	*hit*	*hit*	*hit*	KM: *hit*
2PL	*hi*	*hi*	*hi*	*hi*	*hi*	KM: *he*
3PL	*sin*	*sin*	*sin*	*sin*	*sin*	KM: *sin*
D – Animals						
horn	*suna-*	*ʔsuna-*	*suna-*	*suna-*	*ʔsuna-*	
tail	*iku-*	*iku-*	*iko-*	*iko-*	*eko-*	
bird	koro	koro	kolo	kolo|g	kolo	**ŋgoro
egg	tenoʔ	tenoʔ, tekoʔ	tekoʔ	tekoʔ	tekoʔ	**teŋoʔ
feather	ponu-	*funu-*		nafu-, *funu-*	nafu-n	
louse	*hutu*	*hutu*	*hutu*	*hutu|g*	*hutu*	
flea	kaisif	asik	asi			**kasi(k/f)
bedbug	ketuʔ	etuʔ, etuk	etuʔ	etu|g		**ketuk
bat	bkaʔu	bkaʔu	ʔbaʔu	a-ʔbaʔu|g	ʔbaʔu	**kbaʔu
mosquito	muut	basi	basi	basin	basin	**basin
spider	knaba	knaba	ʔnab-naba	a-ʔnabat	atpani	**knaba(t)
scorpion	kbiti	kbiti	kabiti	kaliti|ʤ	kabiti	**ŋgabiti
snake	kaunaʔ	kaunaʔ	kaunaʔ	kaunaʔ	kaunaʔ	**ŋgaunaʔ
fish	*ikaʔ*	*ikaʔ*	*ikaʔ*	*ikaʔ*	*ikaʔ*	
mouse	*knafo*	*knafo*	ifo	ifo|g	bifo	
cuscus	urum	ukum	mauku	ukum		**undum
dog	*asu*	*asu*	*asu*	*asu|g*	*asu*	
cow	bʤae	bidʒae	bia	bidʒae|l	biʒae|l	**biae
horse	bʤakaseʔ	bikaseʔ	bikaseʔ	biskase|l	bikaseʔ	
E – Plants						
tree, wood	*hau*	*hau*	*hau*	*hau|g*	*hau|b*	
leaf	*noʔo*	*noʔo*	*nooʔ*	*noo-n*	*noʔo*	
roots	hau ʔbaʔak	ʔbaʔa-f	ʔbaʔat	a-ʔbaʔat	ʔbaka-f	**ʔbakat
bark		ʔpohonʔ	poʔat	a-ʔpoʔan		
fruit	*fua-*	*fua-fua*		*fua-*	*fua-*	
flower	fubonaʔ	fua bonaʔ	fulaʔ	sufa-n	fulaʔ	

26. The Amfo'an forms for 'grandfather/MoBr' and 'grandmother/FaSi' have been checked with multiple speakers and are not elicitation errors. They are genuinely opposite compared with other Uab Meto varieties shown.

item	Ro'is	Kotos	Molo	Amfo'an	Baikeno	pre-UM
thorn	aikaʔ	aikaʔ	katilaʔ	kalilaʔ	kalilaʔ	
bamboo	*oo*	*oo*	*oo*, petun	kakaʔ	petun	
rattan	ʔkauboe	kpaʔum	*ue*	agoel	kauboe|l	
sword-grass	huu musuʔ	huu musuʔ	huu musuʔ	huun	huun	**huun
pandanus	eram	ekam	ekam			**endam
fragrant p.	bonak	bonak	bonak	bonaʔ		**bonak
banana	*uri*	*uki*	*uki*	*uki|ʤ*	*uki*	
coconut	noah	noah	noah	noah	noah	**noah
coconut shell	ʔpanuʔ	ʔpanuʔ	ʔpanuʔ	a-ʔpanuʔ	ʔbukiʔ	**ʔmbanuʔ
sugarcane	*tefu*	*tefu*	*tefu*	*tefu|g*	*tefu*	
sweet potato	raku	raku	laku	laku|g		**raŋgu
betel nut	puah	puah	puah	puah	puah	**mbuah
betel pepper	maunus	manus	manus	manus		**manus
slaked lime	*ao*	*ao*	*ao*	*ao|g*		
betel quid	mamat	mamat	mamat	mamat		**mamat
maize	penaʔ	penaʔ	penaʔ	penaʔ		**mbenaʔ
field rice	makaʔ	makaʔ	*ane*	*ane|l*	*ane*	
hulled rice	mneas	mneas, mnees	mnees	a-mnees	mnees	**mneas
cooked rice	makaʔ	makaʔ	makaʔ	maak ane|l	makaʔ	**maŋgaʔ
F – Natural World						
night	fai	fai	fai	fai|ʤ	fai|ʒ	**fai,KM: fai
day, sky	*neno*	*neno*	*neno*	*neno|g*	*neno*	KM: *neno*
sun	*manas*	*manas*	*manas*	*manas*	*manas*	
moon	*funan*	*funan*	*funan*	*funan*	*funan*	
star(s)	*fruun*	*kfuun*	*fkuun, kfuun*	*a-kfuun*	*fkuun*	
cloud	nope	nope	nope	nope|l	habu	**nombe
rain	*uran*	*uran*	*ulan*	*ulan*	*ulan*	
wind	*anin*	*anin*	*anin*	*anin*	*anin*	
sea	*tasi*	*tasi*	*tasi*	*tasi|ʤ*	*tasi*	
sand	snaen	snaen	snaen	a-snaen	snaen	**snaen
earth	*afu*	*afu*	*afu*	naiʤan	naiʒaan	
salt	*maisik*	*masik*	*masiʔ*	*masiʔ*		
sugar	*oni*	*oni*	*oni*	*oni|ʤ*		
water	*oe*	*oe*	*oe*	*oe|l*	*oe|l*	
mountain	ʔtoʔef	ʔtoʔef	ʔnuʔaf	a-ʔnuʔaf	ʔnuʔaf	
forest	nasi	nasi	nasi	nasi|ʤ	nasi	**nasi
river	noe	noe	noe	noe|l	noe|l	**noe
lake	nefo	nefo	nefo	nefo|g	nefo	**nefo
fire	*ai*	*ai*	*ai*	*ai|ʤ*	*ai|ʒ*	
smoke	ai *masuʔ*	*masuʔ*	*masuʔ*	*masuʔ*	*masuʔ*	
ash	*auf* nao	*afu*	*afu*	*afu|g*	*afu*	
stone	*fatu*	*fatu*	*fatu*	*fatu|g*	*fatu*	KM: *fatu*
G – Human Artifacts						
canoe	kofaʔ	kofaʔ	belоʔ	abelo|g	beloʔ, beroʔ	
mortar	eusuk	esuk	esuʔ	esuʔ		**esuk
pestle	haunuk	hanuk		hanu|g	hanu	**hanuk
knife	opi	besi	besi	besi|ʤ	besi	
machete	fenes	benas	benas	benas	benas	
rope	*tani*	*tani*	*tani*	*tani|ʤ*	*tani*	
road, path	*ranan*	*ranan*	*lalan*	*lalan*	*lalan*	KM: *ranan*

item	Ro'is	Kotos	Molo	Amfo'an	Baikeno	pre-UM
house	*umi*	*umi, ume*	*ume*	*ume|l*	*ume*	
field	rene	rene	lele	lele|l	lele	**rene
roof thatch	tefik	tefis	tefin	tefin		**tefi
needle	aenet	anet	anet	anet		**anet
name	*kana-*	*kana-*	*kana-*	*kana-*	*kana-*	KM: *kana-*
bride price	noniʔ	noniʔ		upef	upaf	
H – Properties						
big	koʔu	koʔu	ʔnaek	a-ʔnaek	ʔnaek	
small	*anaʔ*	*anaʔ*	*anaʔ*	abaut	*anaʔ*	
good	reko	reko	leko	leko|g	leko	**reŋgo KM: mria
dry	metoʔ	metoʔ	metoʔ	metoʔ	metoʔ	**metoʔ
far	na-ʔ*roo*	na-ʔ*roo*	ʔ*loo*	na-k*loo|g*, na-ʔ*loo|g*, n-*loo|g*	na-k*loʔo*, na-ʔ*loʔo*	
near	haumakaʔ	paumakaʔ, haumakaʔ	haumakaʔ	n-paumakaʔ	n-paumaak	**paumaŋgaʔ
new	*feʔu*	*feʔu*	*feʔu*	*feʔu|g*	*feʔu*	
old (things)	*mnaaʔ*	*mnaaʔ*	*mnaaʔ*	molof	*mnaaʔ*	
young	*muinif*	*munif*		*munif*	*munif*	
old (people)	mnasiʔ	mnasiʔ	mnasiʔ	mnasiʔ	mnasiʔ	**mnasiʔ
fat	n-pook	n-pook		n-pook	n-pook	**mboŋgo
hot	maputuʔ	maputuʔ	maputuʔ	malalaʔ	maputuʔ	**mambutuʔ
cold	*mainirin*	*mainikin*	*mainikin*	oetene?	*mainikin*	
short	paraʔ	paraʔ	palaʔ	na-paal	tukaʔ, kule	**mbaraʔ
long	*mnanuʔ*	*mnanuʔ*	*mnanuʔ*	*mnanuʔ*	*mnanuʔ*	
straight	na-mnoon	na-mneo	maneof	meneo|g	maneof	**maneo
blind	foor	a-foro-t	folo	n-fool	n-fool	**foro
deaf	koos	a-koso-t	tonoʔ	n-tonoʔ, n-koos	n-tonoʔ	**ŋgoso
thirsty	neon	n-mea	meon	n-meen	n-meet	
hungry	na-mnaah	na-mnaah	na-mnaah	na-mnaah	na-mnaah	**mnaha
all	ok-okeʔ	okeʔ	ok-okeʔ	ok-okeʔ	ok-okeʔ	**oŋgeʔ
many	mfaun, na-mfau	na-mfaun	na-mfau	na-mfauʔ	na-fauʔ	**mfau
round	kbubuʔ	kbubuʔ	ʔbubuʔ	ʔbubuʔ	ʔbubuʔ	**kbubuʔ
full	*na-heun*	*na-heun*	*na-heun*	*na-heun*	*na-heen*	
empty	rumun	ruman	luman	luman	luman	**ruman
rotten	n-puun	n-puun	n-puun	n-puun	n-puun	**mbunu
white	*mutiʔ*	*mutiʔ*	*mutiʔ*	*mutiʔ*	*mutiʔ*	
black	*metan*	*metan*	*metan*	*metan*	*metan*	
yellow	moroʔ	moroʔ	moloʔ	moloʔ	moloʔ	**moroʔ
red	*meʔe*	*meʔe*	mtasaʔ	a-mtasaʔ	mtasaʔ	
green	nau*mate*	*mamate*	*mate*	*mate|l*	*matel*	
blue	biru	biru	bilu	mate|l		
I – Location						
here	es ai	et ia	es ii	es ii	es ii	near speaker
there	es *naan*	et *naan*		es naaʔ	es nane	near addressee
there	es nae	et nee	es naa	es nae	es nae	near neither
west	*neon* tee-s	*neon* tee-s	*neno* tee-s	*neno* tee-s		lit. 'day lean'
east	*neon sae-t*	*neon sae-t*	*neno sae-n*	*neno sae-t*	*neon sae-t*	lit. 'day rise'

item	Ro'is	Kotos	Molo	Amfo'an	Baikeno	pre-UM
below	nupu-n	nupu-n, pina-n	pina-n, muni-n	nopu-n, moni-n	es nupu-n, es obuʔ	**nombu
above	*fafo-n*	*fafo-n*, tuna-n,	*fafo-n*	*fafo-n*	es tuna-n	
behind	koti-n	koti-n	koti-n	koti-n	es koti-n	**ŋgoti
in front of	*mata-n*	*mata-n*	es *mata-n*	*mata-n*	es *mata-n*	
outside of	mone?	mone?	es mone?	es mone?	mbi mone?	**mone?
inside	*nana-n*	*nana-n*	es *naan*	es *nana-n*	mbi *nana-n*	
edge	nini?	nine?	es nine?	es nine?	es nina?	**nine?
J – Numerals						
one	mese?	mese?	mese?	mese?	mese?	KM: mese?
two	*nua*	*nua*	*nua*	*nuug, nuga*	*nuban, nua, nuba*	KM: *nua*
three	*teun*	*teun*	*teun*	*teen*	*teen, teun*	
four	*haa*	*haa*	*haa?*	*haa?*	*haa?*	
five	*niim*	*niim*	*niim*	*niim*	*niim*	
six	*nee*	*nee*	*nee?*	*nee?*	*nee?*	
seven	*hiut*	*hiut*	*hiut*	*hiit*	*hiit*	
eight	*faan*	*faun*	*faon*	*faan*	*faan*	
nine	*seo*	*seo*	*sio?*	*seo?*	*seo?*	
ten	bo? *es*	bo? *es*	bo? *es*	bo? *es*	bo? *es*	**boa?
twenty	boa? *nua*	bo? *nua*	bo? *nua*	bo? *nua*	bo? *nua*	
hundred	*nautn es*	*nautn es*	*nautn es*	*natun es*	*nautn es*	
thousand	*niufn es*	*niufn es*	*niufn es*	*nifun es*	*niufn es*	
K – Verbs						
know	na-hiin	na-hiin	na- hiin	na-hiin	na-hiin	**hini
speak	na-ʔuabaʔ	n-peo, na-ʔuab	na-molok	na-molo|g, na-guab	na-molok	KM: na-ʔaaʔ **uaba
sing	n-sii	n-sii	n-sii	n-sii	n-sii	**sii
weep	n-kae	n-kae	n-kae	n-kae	n-kae	**ŋgae
laugh	*n-main*	*n-main*	*n-maen*	*n-maan*	*n-maan*	
laugh at s.o.	*n-mainis*	*n-manis*		*n-manis*	*n-manis*	
hear	*n-neen*	*n-neen*	*n-neen*	*n-neen*	*n-neen*	
see	n-kius, *n-iit*	n-kius, *n-iit*	kiso, *n-iit*	*n-iit*	*n-iit*	**ŋgiso
eat	na-ah	na-ah n-euk	na-ah n-euk	na-ah n-eek	na-ah	**aha **eŋgu
drink	*n-iun*	*n-iun*	*n-iun*	*n-iin*	*n-iun*	
bite	n-rau	n-sau, n-rau	n-sau	n-sau	n-sau	**sau
fall	n-mouf	n-mouf	n-mouf	n-mouf	n-mouf	**mofu
drop s.t.	na-mofuʔ	na-mofuʔ		na-nofut	na-nofuʔ[27]	
burn	n-out	n-out	n-out	n-otu|g	na-ʔtunu	**otu
pound	na-pau	na-pau	na-pau	na-pau|g		**mbau
die	*n-maet*	*n-maet*	*n-maet*	*n-maat*	*n-maat*	
dry in sun	n-hoe	n-hoe	n-hoe	na-hoeʔ	na-hoeʔ	**hoe
bathe	*na-niu*	*na-niu*	*na-niu*	*na-niu*	*na-niu*	
bathe s.o.	*na-niu*	*na-niu*	*na-niu*	*na-niu|g*	*na-niu*	
swim	na-bhaeʔ	na-bhaeʔ		na-looʔ	na-looʔ	

27. The forms in Amfo'an and Baikeno are *not* errors or mishearings. Unlike the verb for 'fall', which begins with /m/, the verb 'drop s.t.' begins with /n/.

item	Ro'is	Kotos	Molo	Amfo'an	Baikeno	pre-UM
fly	na-tpene	na-tpeen, na-kpeen	na-pleel	na-pleel	na-pleel	**ptene
kill	n-roor	n-roor, na-ʔmaet	lolo	lolo|g	n-lolo?	**roro
give	*n-fee*	*n-fee*	*n-fee*	*n-fee|l*	*n-fee*	KM: *n-fee*
cough	n-booh	n-booh	n-booh	n-booh	n-booh	**boho
spit	na-niun	nAkiun, na-roon	na-kiun	na-kiin	na-kinu	**ŋinu
vomit	n-roʔa	n-roo?	n-loo?	n-loo?	n-loo?	**roʔa
itchy	*mahata*	*mahata?*	*n-mahaat*	*na-haat*	*mahaat*	
go	*n-nao*	*n-nao*	*n-nao*	*n-nao*	*n-nao*	KM: *n-nao*
walk	nao hae	n-nenuk		na-naam		
run	*n-aen*	*n-aen*	*n-aen*	*n-aen*	*n-aen*	
stand	n-haek	n-haek	n-haek	n-haak	n-haak	**haŋge
sit	na-mteer	n-took	n-took	n-took	n-took	**toŋgo
lie down; sleep	n-tuup	n-tuup	n-tuup	n-tuup	n-tuup	**tumba
be sleepy	n-reruʔ	n-reruʔ	n-sesaʔ	n-peʔu|g	n-peʔu	
dream	na-mnee	na-mnei	n-ʔunmaeʔ	na-smaan	na-mnei	
rise	n-feen	n-feen	n-feen	n-feen	n-feen	**fena
raise	na-fena-ʔ	na-fena-ʔ	na-fena-ʔ	na-fena-b	na-fene?	
wake s.o. up		n-poo?	n-poo?	n-poo?		**mboʔo
come[28]	neem	neem	neem	neem	neem	KM: neam **nema
pregnant	na-kapuʔ	na-ʔapuʔ	na-ʔaup	maʔaap	na-ʔaap	**kambuʔ
L – Miscellaneous						
not[29]	maeʔ	ka…fa	ka…fa	ka	ka…fa	KM: ka…fa
what?	saaʔ	saaʔ	saaʔ	saʔan	saʔan	**saʔa
who?	sekau	sekau	sekau	seko|g, sekon	sikau	**seŋgau
where?	et mee	et mee	es mee	es mee	es mee	**mee
how many?	fauk	fauk	fauk	fauk	faukan	
how?	en mee	on mee	on mee	on mee	on mee	KM:on mee
why?	na-nsaaʔ	na-nsaaʔ	na-nsaaʔ	na-nsaaʔ	na-nsaaʔ	**nsaaʔ
when?	rekaʔ	rekaʔ	lekaʔ	lekaʔ	lekaʔ	**reŋgaʔ

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28. The verb 'to come' has irregular forms. In Kotos: 1SG: *uum*, 2SG: *uum,* 3SG: *neem,* 1PL.EXCL: *teem,* 1PL.INCL: *iim,* 2PL: *iim,* 3PL: *neman.* Ro'is is the same as Kotos except for 1SG *kuum.* In Baikeno: 1SG: *oum*, 2SG: *oum,* 3SG: *neem,* 1PL.EXCL: *teem,* 1PL.INCL: *eem/aim,* 2PL: *eem/aim,* 3PL: *neman.*

29. The negative is often bipartite: *ka* appears before negated verbs and *fa* after negated verbs. Ro'is *mae?* appears after the negated verb. Amfo'an has entirely lost the second part of the negative.

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