David Kamholz University of California, Berkeley kamholz@berkeley.edu www.lautgesetz.com

More Moor (Cenderawasih Bay, Papua, Indonesia)¹

- Moor (ISO 639-3 mhz) is a West New Guinea (EMP) language spoken in seven villages in southeast Cenderawasih Bay (Papua, Indonesia) with about 1500 speakers
 - Three villages are in the Moor Islands: Kamurei-Matini (Kama) and Ayombai on Moor, Arui on Ratewo
 - Two villages are in the Haarlem Islands: one on Mambor, one on Hariti
 - Two are on the mainland not far from Napan: Masipawa and Mosan
- Geographically closest languages: Yaur, Roon, Wandamen, Waropen; Tarunggare (Papuan, Geelvink Bay phylum)
- Previous work is limited: the best published source is Laycock (1978), based on work conducted in Australia in 1965–6 with a single speaker from Kamurei-Matini²



Figure 1: Map of part of Kabupaten Nabire. Note that the location of Mambor village is incorrect: it should be on the northern tip of the smaller island immediately to the south. Moor Island contains the villages labeled Kama and Moor (the latter should be labeled Ayombai, and both are actually located on the southeast tip of the island).

• Settlement in historical times

- F. S. A. de Clercq visited Moor in 1887 and reported (Clercq (1888)) that Moor was the only island in the area with permanent settlements (agrees with present-day local accounts), and that all inhabitants were monolingual, except for a few that spoke a little Wandamen
- At some point shortly thereafter, some inhabitants of Moor resettled in Mambor Besar, later Mambor and Hariti (said to be because the water on Moor was too salty)
- Dutch missionaries (Protestant, Utrechtse Zendingsvereniging) arrived about 1912, at which point the Haarlem Islands were already settled; the whole Moor tribe converted about 1918
- Knowledge of Malay probably dates to contact with early 20th century traders, and was reinforced by the conversion to Christianity, since the Bible was never translated into Moor

¹The data for this talk come from two field trips to Mambor, one for six weeks from May–July 2008, one for three weeks from May–June 2009. Most examples given in this handout were elicited. I was assisted in this work by numerous people. I am particularly grateful to my language consultants: from Mambor, Derek and Selsius Aritahanu; Asariat, Alex, Petrus, Max, Melsina, Yunus, and Zakeus Manuaron; Efer and Salmon Samberi; and Welem Singgamui; from Kamurei-Matini, Silas Samber; and from Ayombai, Eva Sembor. I would like to extend special thanks to Zakeus Manuaron for many hours of patient elicitation and textual transcription.

²Laycock's work is accurate for the most part, and I have greatly benefitted from consulting it. Given the nature of his investigation, however, Laycock missed or misanalysed a number of things, and so the aspects of Moor covered in this talk should be taken to supersede it.

• Dialects

- The settlements outside of Moor (Mambor, Hariti, Masipawa, and Mosan) all speak the same dialect; their inhabitants are said to come from Hirom on the southwest tip of Moor
- The Kama dialect is extremely similar to the extra–Moor dialect (together I will refer to these dialects as the "main" dialects)
- Ayombai has a distinctive dialect: some sound changes not shared with other dialects, unique lexical items, differences in verbal morphology, intonational differences (still mutually intelligible with the other dialects)
- Some lexical items are specific to the Moor villages (possibly also Ratewo); others are specific to the Haarlem Islands villages
- The vast majority of the lexicon, morphosyntax, and phonology (including tones) is shared across dialects
- The Keu tribe, located inland in east Cenderawasih Bay along the North Poronai river (well beyond Totoberi), is reported to have left Ayombai in pre-Christian times due to a disagreement; they are said to still speak some form of the Ayombai dialect

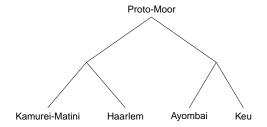


Figure 2: Proposed family tree of Moor dialects.

2 Phonology

• The phonemes of Moor are as follows:

	labial	dental	alveolar	prepalatal	velar	glottal
stop	(p) (b)	t (d)		_	k (g)	?
affricate				$\widehat{\mathrm{dz}}$		
fricative	(f) β	\mathbf{S}				
nasal	\mathbf{m}		n			
approximant			ſ		$g^w \sim w$	h

- Spelling conventions (following Laycock): $/\beta/=v$; $/\widehat{\mathrm{dz}}/=j$; $/\mathfrak{r}/=r$; /2/=i; $/g^{\mathrm{w}}\sim\mathrm{w}/=w$; in addition, the cluster $/\mathrm{nk}/[\mathfrak{g}\mathfrak{g}]=n\mathfrak{g}$
- Phonemes in parentheses occur only in (presumed) loanwords, e.g. pása 'rice', fóara 'flood', nádi 'pray'
- \bullet Voiced stops also occur as all ophones after nasals; these are the only permitted clusters except for a few stop + r clusters in (presumed) loanwords
 - -n + v = mb: inána 'betel pepper' + $v\acute{o}$ 'fruit' = $in\acute{a}mbo$ 'betel pepper fruit'
 - -n + r/t = nd: ron-'human classifier' + $tat\acute{a} = rondat\acute{a}$ 'one person'; $\acute{a}n\acute{i}$ 'eat' + $r\acute{o}a = and\acute{o}a$ 'eat (intr.)'
 - -n + k/' = ng: saríana 'heavy' + $-ku = sariánq\acute{u}$ 'quite heavy'; ijana 'fish' + ijana 'bone' = $ijanq\acute{o}ro$ 'fishbone'
- Except in rapid speech, no word is phonetically vowel-inital: if it is phonemically vowel-initial, a glottal stop is introduced (a possible criterion for distinguishing word boundaries from affix and clitic boundaries)
- Word-final toneless a may be freely apocopated following all consonants except j and w; in many cases it is historically epenthetic
- Sometimes non-final toneless a syncopates (emavà/embà 'large', tananáhar/tannáhar 'giant Maori wrasse')

2.1 Tone

- Some form of tone is clearly contrastive, but the system is not yet fully analyzed
 - Some syllables are toneless; content words always have at least one tone-bearing syllable
 - May be some form of hybrid stress-tone system (cf. Remijsen (2001) on Raja Ampat languages)
- Some examples of tonal patterns:
 - Nouns: iná 'mother', ina 'ear', áuna 'dog', rósú 'arrow', vavína 'woman', jorová 'snake', ijana 'fish', aramúta 'bag', atíata 'bandicoot', arumàka'a 'fly'
 - Verbs: hà 'carry', verá 'go', úní 'burn', oranì 'hear', 'oraní 'swallow'
 - Adjectives: mananà 'sweet', vuátí 'black', wata'ú 'correct'
- The following preliminary tonal transcription is used:
 - Vowels that bear tone are marked with an acute accent for falling tone and a grave accent for rising tone
 - Rising tone induces a mid or high tone on a following toneless vowel
- In fast speech or when two consecutive syllables bear tone, falling tone can be realized as high, rising as low
- Younger speakers in Mambor do not preserve the tonal system

3 Morphology and paradigms

3.1 Definite marker

- Nouns and some other constituents take a "definite" suffix of the form -6, -r6, or -j6
 - δ goes on nouns ending with toneless a that is historically epenthetic
 - $-j\delta$ frequently appears on loanwords (e.g. buku 'book') and also on a few other words which do not share an obvious phonological property (e.g. $vu'\delta$ 'sago')
 - $-r\acute{o}$ goes on other nouns
- The meaning of the "definite" marker is not yet clear; it is extremely common (sometimes speakers are uncomfortable accepting the non-definite form), but it does not meet the expected conditions for a definite or specific marker, although both notions appear to be in some way relevant to its meaning
- For now it is referred to as the definite marker simply to give it a name

3.2 Personal Pronouns

• Moor has the following free personal pronouns, which may be used as subjects, objects of verbs, and objects of prepositions:

	SG	DU	PL
1in	_	$ar\'u$	a ' \acute{o} , $\acute{\imath}$ ' a
1ex	$\it iwa$	$mar\'u$	ma ' $\acute{o},\ \acute{a}ma$
2	$\acute{a}wa$	$mur\'u$	mu ' $\acute{o},\ \acute{a}mu$
3	i, [áwa]	tir u/tur u	ti'ó, $[mu$ 'ó]

Table 1: Free personal pronoun paradigm.

• There was an extension of second person forms to third person at some point in the past; it currently exists in both the main and Ayombai dialects³

³This shift in fact applies to all second person forms in the language, which apparently may all receive a third person interpretation. I do not know how common or acceptable this usage really is. For convenience of exposition, second and third person forms will be discussed separately from now on, and the shift will not be taken into account.

3.3 Subject agreement

- Consonant-initial verbs take only two agreement markers: 1sg i- and 2sg a-
- Vowel-initial verbs take the following agreement markers (the main dialects have 2sg a-, Ayombai has aw-):

	SG	DU	PL
1 _{IN}	_	Ø-	Ø-
1ex	iw-	n-	n-
2	a-, aw -	n-	n-
3	j-	n-	n-

Table 2: Subject agreement on vowel-initial verbs.

- Some verbs have an initial glottal stop, which take the consonant-initial markers: *i-'arà* 'I strike' vs. *iw-arà* 'I believe' (in some cases it is possible to demonstrate that these derive from a historical oral stop)
- 2sg a- fuses with verb-initial a, e.g. ara'úma 'you see'; otherwise it is pronounced in hiatus, e.g. aoranì 'you hear', but in at least one case a glottal stop is introduced: a'óa 'you dance' (cf. iwóa 'I dance', jóa 'he dances')
- All t-initial verbs appear with initial s with 1sG and 3sG subjects; in addition, ra 'go' and $r\acute{a}ma$ 'come' appear with initial j in the same context (note that the verb $ver\acute{a}$ 'go' is invariant)
- Despite their sensitivity to the initial segment of verbs, the subject markers appear to be proclitics rather than prefixes, since they can attach to many classes of words: *i-re'e ma'a* (1sg-also die) 'I died as well'; *i-ve kardiana* (1sg-obl work) 'I work'; *i-vehut* (1sg-white) 'I am white'; *i-Marice ate-ijo* (1sg-M. father-3sg.Poss) 'I am Marice's father'; *i-va* (1sg-Neg) 'not me'

3.4 Object markers

• Free personal pronouns may be used to indicate objects, but in some cases the object is usually fused with the verb (probably enclitic, but this has not been established):

	SG	PL
1in	_	-í'a
1ex	-i, $-iwa$	- ma
2	-íja, -ía, ìjawa, -a, -áwa	- mu
3	Ø	-ti

Table 3: Fused object markers on verbs (dual objects are always marked with independent words).

- \bullet In Ayombai, the only available 1sg and 2sg forms are -iwa ad -awa
- Some transitive verbs ending in -ì change their final vowel to -a when a full NP object immediately follows
- The main dialect 2sg ending is -a on these alternating verbs, otherwise one of the ia/ija/ijawa forms (the first is not always possible, but the conditioning factors have not been determined)
- When combined with a pronoun, ve can take suffixes similar to the object markers: 1sg veréi(wa), 2sg veréija/verèijawa, 3sg veré, 3pl veti

3.5 Alienable possessive markers

	SG	DU	PL
1 _{IN}	_	arúo	a'óro, i 'ó
1ex	$iw\acute{o}$	$mar\'uo$	ma 'ó $ro,\ am$ ó
2	$awó,$ - $\acute{a}o$	$mur\'uo$	mu'óro, amúo
3	ìjo, -ío	$tir\'uo/tur\'uo$	ti'ó ro

Table 4: Alienable possessive pronoun paradigm.

• Forms appear to consist of the personal pronouns followed by the definite marker

3.6 Inalienable possessive markers

	$_{ m SG}$	DU	PL
1IN		-ta/tó arúoti, arú √-tóti	$-ta/-tó$, $-tó$ a'óroti, a'ó $\sqrt{-tóti}$
$\frac{1EX}{2}$	- 'a/-ó (iwó) -ma/-mó (awó)	-ma/-mó/-tó marúoti, marú √-múroti -mó murúoti, murú √-múroti	-ma/-mó ma'óroti, ma'ó √-móti -mu, -ma/-mó mu'óroti, (mu'ó) √-múroti
3	-ró (ìjo)	-ta/-tó tirúoti, tirú √-tíroti	-ta/-tó ti'óroti, (ti'ó) √-tíroti

Table 5: Inalienable possessive paradigm. $\sqrt{}$ represents the root of the inalienably possessed noun. (All pronominal forms listed above are permissible, but only one is given to make the table simpler.)

- The paradigm makes use of some of the alienable possessive markers as well as suffixes specific to inalienables
- All inalienable nouns are body parts except hanéa 'going' (haneá-'ó ja réo 'I go by land')

4 Syntax

- Constituent order: SVO, NDem, NAdj, NNum, NRel; clause-final primary negation (-và)
- Alignment: verbal subjects are S/A, objects P; for ditransitives the theme is the object, recipient marked with ve
- Two prepositions: ve for various locative and oblique relations; avenà for comitative, instrumental, and coordination
- Locative enclitic/postposition na (apparently never obligatory, but can clarify meaning e.g. of ve phrases)
- Subject pronouns are rarely present for singular subjects, but are obligatory for dual and plural subjects
- The only words that can intervene between the subject pronoun and the verb are certain particles including *rì* (enclitic), *rárì*, and *várì*; these are all used to indicate focus and information structure
- Some subject pronouns can be cliticized to the verb or adjective: 1PL.EXCL ma-, 2PL mu-, 3PL ti-
 - *ti* is obligatory for inanimates (including plants)
 - -ti- can take either the j- or n- agreement marker on vowel-initial verbs; j- is obligatory for inanimates
 - Evidence that these are clitics, or at least that they different from the other forms of the subject pronouns, is that they cannot host ri (ti'ó-ri but *ti-ri)

4.1 Overview of NP structure

- Constituent order: N Adj Num Dem Pl
 - (1) i-maru'a ve ner-o oro nen-di 1SG-like OBL coconut-DEF three this-PL 'I like these three coconuts.'
- Plural is -ti (general) or ti'ó (animate); plural nouns are often, but not always, definite marked
- Demonstratives are proximal $n\acute{e}(na)$, medial $n\acute{o}(na)$, and distal $n\acute{a}(na)$
- Definite nouns can be used in the same position as adjectives with attributive meaning, e.g. kowi'a manu-o (pig forest-DEF) 'forest pig', na'u-ro navire-jo (person-DEF Nabire-DEF) 'the person who lives in Nabire'

4.2 Alienable possession

- Two possible orders: Gen N Poss, N Gen Poss
- The plural marker comes at the end in both orders
- Gen N Poss order:
 - Gen and N may be definite or non-definite (all possible combinations permitted)
 - This is the only permissible order for kinship relations
 - This is the only permissible order when Gen is itself possessed (it is possible to have several levels of embedding, e.g. iná kamukío mare'ío wó'o ijo 'mother's friend's younger sibling's canoe')
 - Possessive 3sg may shorten to -io and 2sg to -io in the right phonological context (main dialects only)⁴

⁴For - \acute{io} the noun must end in historically epenthetic -a. Some words like $at\acute{e}$ 'father' and $in\acute{a}$ 'mother' have special fused forms instead: $at\acute{e}ijo$ and $in\acute{e}ijo$, respectively. For - $\acute{a}o$ the condition is a bit harder to state; it seems partly to do with frequency. In the cases I have looked

- Shortening is not obligatory, but in some cases the full form would be used only in very careful speech
- N Gen Poss order: N must be definite; no shortening of possessive markers

4.3 Adjectives

- Look like nouns and unlike verbs in taking the definite suffix and in never taking the vowel-initial agreement markers
- Look like verbs and unlike nouns in their ability to modify nouns without the addition of a definite marker
- Distinct from both in their ability to take the -ku 'increased degree' suffix (only for some adjectives)
- Some adjectives look like reflexive verbs when their subject is animate:
 - (ti'o) emava ti'o (3PL big 3PL) 'they are big'; (ti'o) rorara ti'o (3PL angry 3PL) 'they are angry'
 - This usage differs from verbs since the "subject" is omissible
 - However, note that rorari 'angry' shows a final vowel alternation identical in form to what occurs in verbs
 - Some adjectives never participate in this construction: ti'o vehut 'they are white'
- Adjectives can head NPs:
 - (2) i-sona mara'u-ro ruro avena emava-ro ruro 1SG-find small-DEF two with large-DEF two 'I found two small ones and two large ones.'
- Adjectives can take complements: rorari ve Derek 'angry at Derek'; ainu avena mambekora-jo (full with k.o.clam-DEF) 'full of clams'; ma'a'e avena rarum-o (empty with water-DEF) 'empty of water' (ve may also be substituted for avena in the last two examples)

4.4 Relative clauses

- Follow the verb and use either a gapping or resumptive pronoun strategy
- \bullet Generally not introduced by a relativizer, but can be introduced by ve
- Subject-headed:
 - (3) iw-anani manita ti'o n-orara toito'-o
 1SG-know friend 3PL AGR-look.for child-DEF
 'I know the friends that are looking for the child.'
 - If the head is plural, the plural marker attaches to the head noun
 - The relative clause may be an adjectival predicate: compare *aun-o-ti vehut* (dog-DEF-PL white) 'dogs that are white' and *aun-o vehut-o-ti* (dog-DEF white-DEF-PL) 'white dogs'

• Object-headed:

- (4) iw-anani toito'-o ate son-u-ti
 1SG-know child-DEF father find-(u)-PL
 'I know the children that father found.'
- (5) iw-anani toito'-o ate soni jon-u 1SG-know child-DEF father find already-(u)
 - 'I know the child that father already found.'
- If the head is plural, the plural marker goes after the relative clause, as in (4)
- If the relative clause ends in a verb of the transitive -i alternating type, it appears with final -u instead, and the preceding syllable receives a rising tone⁵
- joni 'already' in (5) is a serialized verb (historically at least), which may explain its participation in this alternation

at, it is permissible on nouns ending in -a (historically epenthetic or not), -i, -é, -ú, but usually not -á. A few words, ending in -á for the most part (but also including r'uma and am'o) add a linking -j- between the noun and -áo, which is also permitted in the same cases before the full aw'o form.

 $^{^5}$ In one case, anumì 'drink', the relativized form is with -o, i.e., anùmo.

- Oblique-headed:
 - (6) iw-anani manita-jo ate ha buku-jo vere 1SG-know friend-DEF father take book-DEF to.3SG 'I know the friend that father gave the book to.'
 - (7) iw-anani manita-jo ate j-andoa avena 1SG-know friend-DEF father 3SG-eat with 'I know the friend father ate with.'
 - (8) iw-anani mo-ro ate rama ve name 1SG-know place-DEF father come from there 'I know the place father came from.'
 - (9) ate j-anani vuran-o i-maraha rasuna ijo father 3SG-know man-DEF 1SG-steal clothes 3SG.POSS 'Father knows the man whose clothes I stole.'
 - A resumptive pro-form is obligatory (note that avenà does not change for a 3sg object)
 - The resumptive locative pro-form is namó

4.5 Serialization

- Verbs may be serialized to express certain relationships between events (not yet fully investigated, but frequently involves the result of motion or general causation)
- 1sG subject agreement on vowel-initial serialized verbs is w- instead of iw-
- Usually only the first verb in a chain is transitive; the main exception is $h\grave{a}$ 'take, carry' fused with another verb, which takes the form a-V and means 'carry V-ing' (this is quite productive)
 - (10) ha tiru j-a-vavu carry 3DU 3SG-carry-go.perm 'He carried the two of them home.'
- Usually if a verb is transitive its object must come next before any serialized verbs, but cf. the following:
 - (11) *i-ha* 'a manu-ro sota 1SG-carry go.up bird-DEF hang 'I hung the bird (skin) up.'
 - (12) i-ha manu-ro 'a sota
 - (13) *i-ha 'a sota manu-ro
- The subject of serialized verbs may be coreferential with either a preceding subject or object:
 - (14) *i-vavo ate j-arama.su* 1sg-hit father 3sg-fall 'I hit father and he fell.'
 - (15) *i-vavo ate w-arama.su*1SG-hit father 1SG-fall
 'I hit father and fell.'

4.6 Word order

- (16) ate ha buku-jo ja ve manita father carry book-DEF (ja) to friend 'Father gave the book to a friend.'
- (17) buku-jo ate ha ja ve manita
- (18) ate buku-jo ha ja ve manita
- (19) (ve) manita, ate ha buku-jo ja vere
- (20) *ha buku-jo ja ve manita, ate
- (21) *ja ve manita, ate ha buku-jo

Adverbial placement of ròrama 'yesterday' ($\sqrt{\ }$ grammatical, * = ungrammatical):

(22) $\sqrt{\text{ate }\sqrt{\text{ha * buku-jo }\sqrt{\text{ja * ve * manita }\sqrt{\text{seconds}}}}$

5 Historical Phonology

- The main outlines have been covered by Laycock (1978) and Blust (1978)
- Brief summary of reflexes of the PMP consonants (or lower proto-languages if specified)⁶
 - $-*p>\emptyset:*qapuR>\acute{a}r$ -a 'lime', *qatep> r-à 'a 'thatch'
 - *t > 7: *tanem-i > 'anam-ì 'to plant', *tunu > 'úní 'burn', *mataq > ma'-i 'raw', *ma-tuqa > ma'ù 'old'
 - *t>s / i: *tinaqi 'intestines' > $sin\acute{e}$ 'stomach, liver', *qutin > $\acute{u}si$ 'penis'
 - *k > $\emptyset,$ k: *k-ami > áma '1pl.excl', *kaen-i > ání 'eat', *kahu > áw-a '2sg', *kutu > main dialects kú'a, Ayombai ú'a 'louse', *kasuaRi > atúar 'cassowary'
 - *j > t: *ngajan > nàtan-a 'name', *qulej 'maggot, caterpillar' > orata 'snake'
 - *b > v: *batu > vá'a 'stone', *ba-b<in>ahi > *babinay > vavín-a 'woman', *buaq > vo 'fruit', *bulan > vùrin-a 'moon'
 - * d>r: * duha>rúró 'two', Cenderawasih Bay dian 'fish' > Ayombai $ri\acute{a}n\text{-}a$
 - *s > t: *nusa > núta 'island', *sa-puluq > táura 'ten', *susu > tút-a 'breast', *tasik > àti 'saltwater', *esa > ta-tá 'one', *kasuaRi > atúar 'cassowary'
 - $\ *l > r: \ *lima > r\'im\'o \ `five', \ *telu > \'or\'o \ `three', PCEMP \ *malip > mar\'i-a \ `laugh', \ *telen > \ 'oran-\'i \ `swallow' \ 'five', \ 'three', PCEMP \ 'malip > mar\'i-a \ `laugh', \ 'three', \ '$
 - -*m > m: *manuk > mànu 'bird', *inum > anum-ì 'drink'
 - -*n > n: *qaninu > aníno 'shadow', *ina > iná 'mother', *nusa > núta 'island'
 - -*ng > n: POc * $qaung > \acute{a}un$ -a 'dog', * $talinga > \grave{n}na$ 'ear'
- Some words have variant pronunciations, which fall into a number of patterns:
 - k/∅: arariá'i/karariá'i 'dry', uvavá'i/kuvavá'i 'short', óha/kóha 'sugarcane'⁷
 - a/e: ijana/ìjena 'fish', ravu'éna/revu'éna 'middle', tahurà/tehurà 'kick', ve'aréra/ve'eréra 'stupid', ve'ajó/ve'ejó 'deaf', warà/werà 'again', ate'à/ete'à 'split (wood)', eháuro/ehéuro 'young', emavà/emevà 'large', varéha/veréha 'clear'
 - a/ea: javaré'a/javareá'a 'much, many', veré'a/vereá'a 'bad', verí'a/vearí'a 'old'
 - a/o (often adjacent to a labial): $mam\acute{a}t\'i/mom\acute{a}t\'i$ 'wash', w'a'a/w'o'a 'canoe', $ator\`a/atar\`a/otor\`a$ 'step on', mam-bar'uva/mambor'uva 'name of sea spirit', $s\`iwa'a/s\`iwo'a$ 'knife', taw'a/tow'a 'not exist', vav'ana/vov'ana 'sneeze', vav'o/vov'o 'hit'
 - a/u: varaháma/vuraháma 'bamboo arrow', u'aná/u'uná 'ask', ángo/úngo 'no'
 - i/u (adjacent to r): tirú/turú '2du pronoun', iruà/uruà 'leave (object)', arimàka'a/arumàka'a 'fly (n.)'
 - e/o: tenó/tonó 'like that', toitó'a/teitó'a 'child', verosé/vorosé 'why'
 - r/i: wartá/waitá 'fishing line'
 - r/n: mariamána/maniamána 'evening', rangaré/nangaré 'path'

References

Blust, Robert A. 1978. Eastern Malayo-Polynesian: A subgrouping argument. In Wurm and Carrington (1978), 1: 181-234.

Clercq, F. S. A. de. 1888. Iets over het eiland Mor. De Indische Gids 10: 526–529.

Laycock, Donald C. 1978. A little Mor. In Wurm and Carrington (1978), 1: 285–316.

Remijsen, Bert. 2001. Word-prosodic systems of Raja Ampat languages. No. 49 in LOT Dissertation Series. Leiden University.

Wurm, S. A. and Lois Carrington. 1978. Second International Conference on Austronesian Linguistics: Proceedings. Pacific Linguistics Series C. Canberra: Australian National University.

⁶Thanks to Robert Blust for suggesting many of these etymologies and sound changes. I am currently working on an updated analysis of Moor historical phonology.

⁷These forms apparently exhibit variation in all dialects. In other cases there is variation across dialects: Ayombai reflects ' in place of main dialect k in a number of words, such as ovu 'bamboo' (main $k\grave{o}vu'a$), $mu'\acute{a}'a$ 'afraid' (main $muk\acute{a}'a$), as well as the already mentioned $k\acute{u}'a/\acute{u}'a$ 'louse'.