

The tonal phonologies of three undocumented Raja Ampat languages

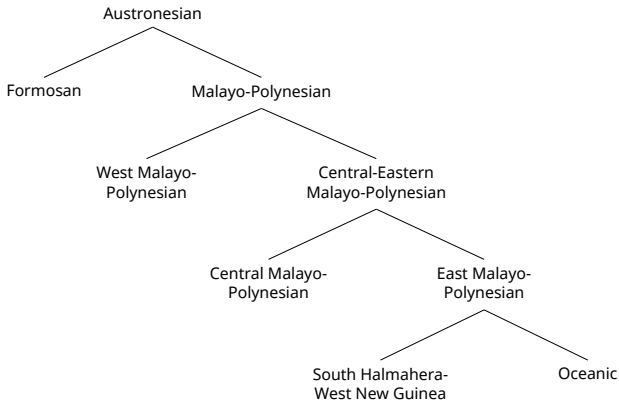
Laura Arnold

P-workshop, University of Edinburgh

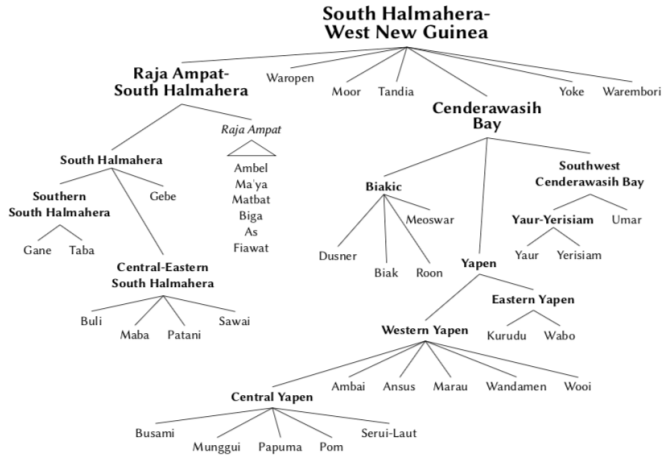
5 March 2021



Synchronic and diachronic investigations in RASH



Synchronic and diachronic investigations in RASH

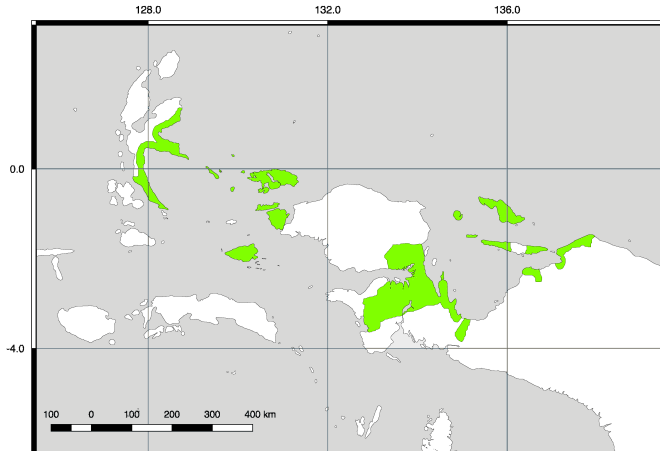


After Kamholz (2014)

Synchronic and diachronic investigations in RASH



Synchronic and diachronic investigations in RASH



Synchronic and diachronic investigations in RASH

Raja Ampat

Ambel

As

Batta

Biga

Matbat

Ma'ya

Salawati varieties

South Halmahera

Buli

Gane

Gebe

Maba

Patani

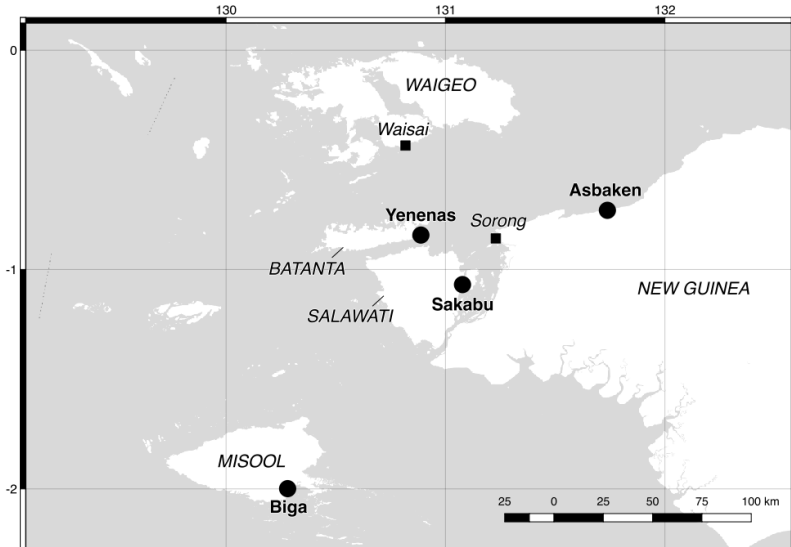
Sawai

Taba

Synchronic and diachronic investigations in RASH

- ▶ Aims of project:
 1. **Phonological analyses of the word-prosodic systems**
 2. Phonetic investigations into the fundamental frequency of vowels
 3. Subclassification of RASH and reconstruction of proto-RASH

- ▶ 2019-20 survey trip: lexical, morphological, syntactic data
 - ▶ List of ~200 words, 6 speakers – phonetic and phonological analysis
 - ▶ Morphological paradigms (possessive and verbal subject marking)
 - ▶ ‘Conversational questionnaires’ (François 2019)





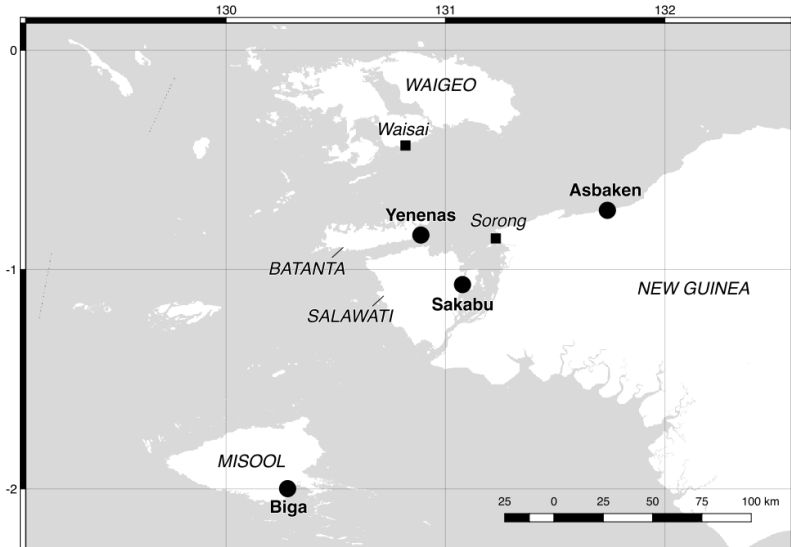
Tonal phonologies of three Raja Ampat languages

1. Butlih Salawati

2. Batta

3. Biga

4. Summary

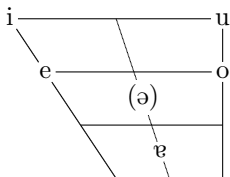






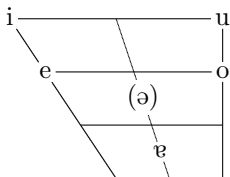


	labial		alveolar		palatal		velar		labial- velar	glottal
stops	p	b	t	d	[ç]	[j]	k	(g)		
fricatives	f		s							h
nasals		m		n				(ŋ)		
liquids			l	r						
glides						j			w	



- ▶ /f/ → [f] ~ [ɸ]
- ▶ /w/ → [β] / V ___ V
- ▶ /k/ → [ʔ] / ___ #

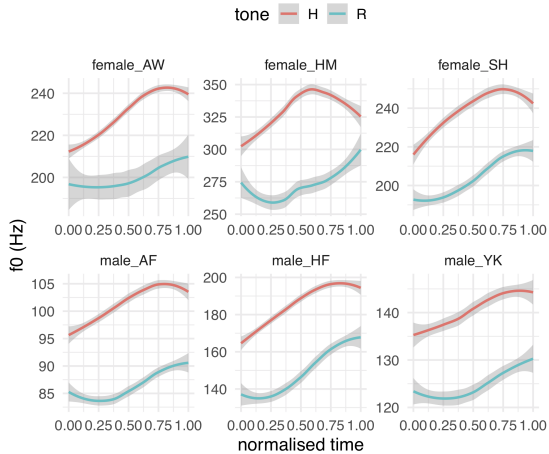
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glides						j			w	



- ▶ CjVC / CIVC
- ▶ Plus: /mnjét/ 'cloud',
/mnját/ 'die.1sg'

(1) Tonal (near-)minimal pairs

High	Rise	Toneless
jám 🗣️ 'eagle'	jǎm 🗣️ 'needle'	
kít 🗣️ 'octopus'	nǎ 🗣️ 'sky'	ket 🗣️ 'short'
		na 🗣️ 'belly.3sg'



Thanks, Jiayin!!

Butlih Salawati

► Polysyllables (dominant pattern):

Final syllables

- Tone specification
- Longer duration
- Greater intensity
- 5 contrasting vowels

Non-final syllables

- No tone specification
- Shorter duration
- Lower intensity
- Collapse of vowel contrast

Butlih Salawati

► Polysyllables (dominant pattern):

/wVnóm/	[wənóm] ~ [wonóm]	‘six’
/wVlút/	[wəlút] ~ [wulút]	‘sea’
/wVlí/	[wəlí] ~ [wilí]	‘tooth’
/Vtém/	[ətém] ~ [etém]	‘one’
/tVkú/	[təkú] ~ [tukú]	‘chicken’
/Vwa/	[əwa] ~ [awa]	‘root’
/wVsõn/	[məsõn] ~ [mosõn]	‘heavy’

Butlih Salawati

- ▶ Polysyllables (dominant pattern):

- ▶ Underlying V: [mɲjét] ‘cloud’ vs. [mənjét] ~ [mɛnjét] ‘empty’
- ▶ Specified vowel:

[wildów] (*[wəldów]) ‘rattan’
[binhláj] (*[bɛnhláj]) ‘sandfly’
[binsár] (*[bɛnsár]) ‘wife’

[lahán] (*[lɛhán]) ‘day’
[pompón] (*[pɛmpón]) ‘food’
[kofənjí] (*[kɛfənjí]) ‘bat’

- ▶ (NB A separate process of morphophonological vowel harmony occurs in the verbal morphology)





Butlih Salawati

- ▶ Exceptional polysyllables:

- ▶ Tone on non-final syllable

/nǎ-lo/ 'sky'
/ǎj-lo/ 'forest'
/wěj-lo/ 'river'

- ▶ Stress on non-final syllable?

[ˈawé]  'child' vs. [əˈlé]  'cave'
[ˈmaněn]  'mother' vs. [məˈnjăt]  'empty'

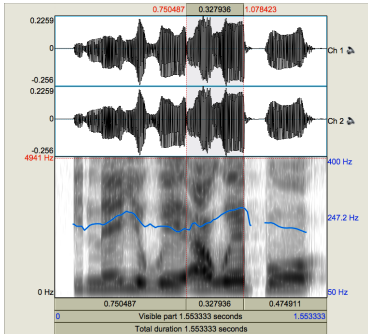


Figure 1: [ʼawé] 'child'

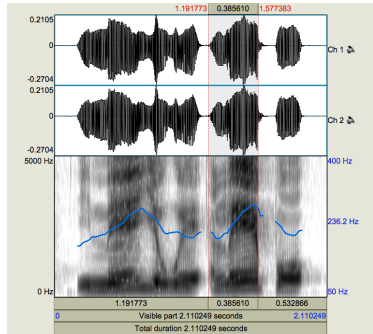


Figure 2: [əlé] 'cave'

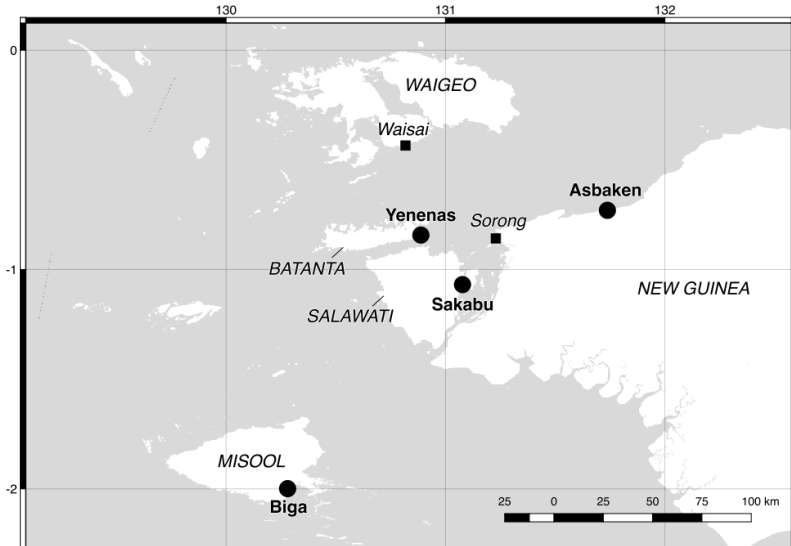
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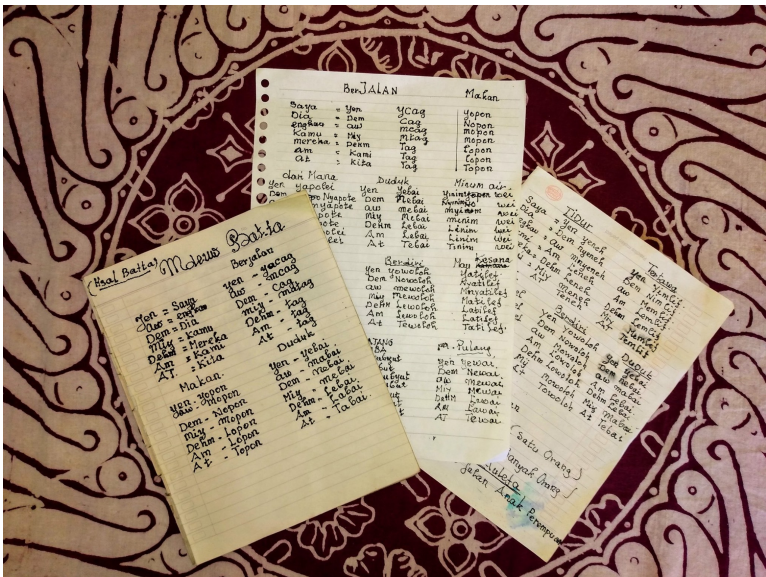


Butlih Salawati
Batta
Biga
Summary









(Bata/Batta) Mandi Berjalan

Man = Saya
Dua = Dia
Dem = Kamu
Miy = Mereka
Am = Kami
At = Kita

Makan
Yen = Yapon
Dua = Mopon
Dem = Mopon
Miy = Lapon
Am = Lapon
At = Topon

Yen = jalan
Dua = jalan
Dem = jalan
Miy = jalan
Am = jalan
At = jalan

Duduk
Yen = Yebai
Dua = mebai
Dem = mebai
Miy = mebai
Am = mebai
At = Tabai

Berjalan

Saya = Yen
Dia = Dem
engkau = dua
Kamu = Miy
mereka = Dem
am = kami
At = Kita

clari Maria
Yen Yapotei
Dem Nyaotei
Miy Nyaotei
Am Nyaotei
At Nyaotei

Duduk
Yen Yebai
Dem mebai
Miy mebai
Am mebai
At mebai

Berjalan
Yen Yawoloh
Dem Yawoloh
Miy Yawoloh
Am Yawoloh
At Yawoloh

Makan
Yen Yebai
Dem mebai
Miy mebai
Am mebai
At mebai

Makan

Yapon
Nopon
Mopon
Lapon
Topon

Minum air
Yen Yebai
Dem mebai
Miy mebai
Am mebai
At mebai

Makan
Yen Yebai
Dem mebai
Miy mebai
Am mebai
At mebai

Makan
Yen Yebai
Dem mebai
Miy mebai
Am mebai
At mebai

TIDUR

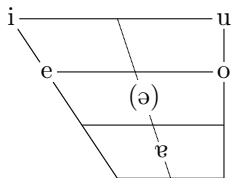
Saya = Yen
Dia = Dem
engkau = dua
Kamu = Miy
mereka = Dem
am = kami
At = Kita

Makan
Yen Yebai
Dem mebai
Miy mebai
Am mebai
At mebai

Makan
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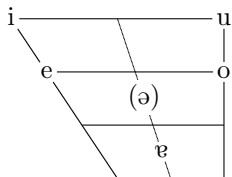
(satu orang)
Jeken Anak Perempuan

	labial		alveolar		palatal		velar		labial- velar	glottal
stops	p	b	t	d	[ç]	[j]	k	g		
fricatives	f		s							h
nasals	m̥	m	n̥	n				(ŋ)		
liquids			l	r						
glides						j			w	



/k/ → [q] ~ [ʔ] / \$ ___ V [+stress] 🗣️🗣️
 → [ʔ] ~ Ø / \$ ___ V [-stress] 🗣️🗣️
 → [ʔ] ~ Ø / V ___ \$

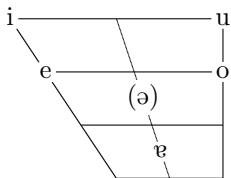
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liquids			l	r						
glides						j			w	



► CjVC

► Plus: /mnjèt/ ‘cloud’, /mambri/ ‘hero’

	labial		alveolar		palatal		velar		labial- velar	glottal
stops	p	b	t	d	[c]	[ɟ]	k	g		
fricatives	f		s							h
nasals	m̥	m	n̥	n				(ŋ)		
liquids			l	r						
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▶ /dem/ '3SG' 🔊

/dem̥/ '3PL' 🔊

▶ /máw/ 'cat' 🔊

/m-maw/ '2SG-want' 🔊

(2) Tonal near-minimal sets


High	Rise	Low	Toneless
líf 'lime' 		èf 'island' 	lif 'tooth.3sc' 
jín 'fish' 	lǐm 'five' 		
tál 'banana' 		tùl 'three' 	tol 'egg' 




▶ Sesquisyllabicity:

▶ /mnjèt/ ‘cloud’ vs. /mVnját/ ‘empty’



▶ Phonetic consequences:

▶ Onset clusters:

[tqũ] ~ [təqũ] ~ [tuqũ] ‘chicken’ 

[hqów] ~ [həqów] ~ [hoqów] ‘heron’   

▶ Syllabic consonants:

[gɭgál] ~ [gɪlgál] ‘mountain’  

[gɭwáw] ~ [gəllwáw] ‘new’ 

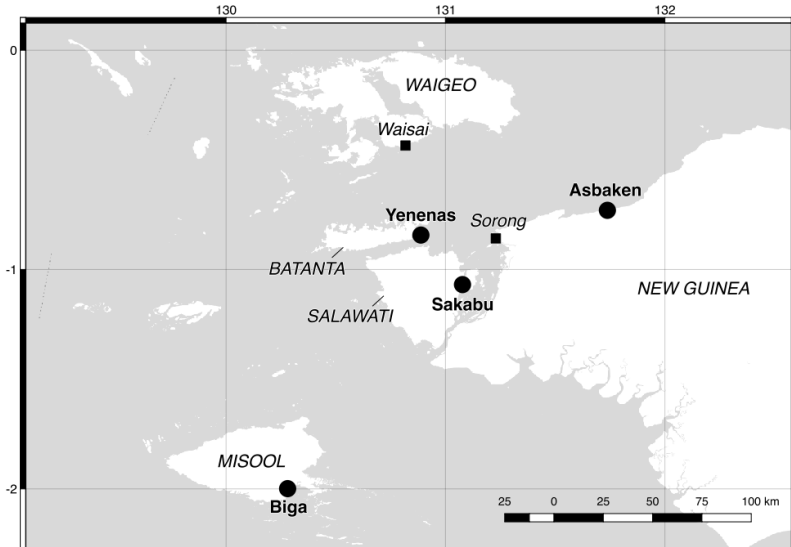
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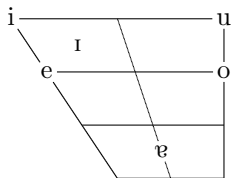








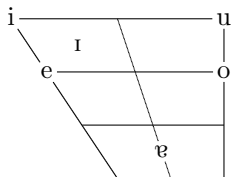
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stops	p	b	t	d		k	g	
fricatives	f		s					
nasals		m		n				
liquids			l	r				
glides					j		w	



/k/ → [k] ~ [q]

/w/ → [β] / ___ V [+high]

	labial		alveolar		palatal	velar		labial- velar	glottal
stops	p	b	t	d		k	g		
fricatives	f		s						
nasals		m		n					
liquids			l	r					
glides					j			w	



► CjVC

► /ɪf/ 'island' vs. /ɪf/ 'crocodile'

(3) Tonal near-minimal sets

High		Extra-High		Toneless
lú ‘sea’	▶▶	lǔ ‘two’	▶▶	
íf ‘island’	▶▶	ís ‘dog’	▶▶	
pít ‘moon’	▶▶	út ‘louse’	▶▶	put ‘thorn’ ▶▶

(3) Tonal near-minimal sets

High		Extra-High		Toneless
lú ‘sea’	▶▶	lǔ ‘two’	▶▶	
íf ‘island’	▶▶	ís ‘dog’	▶▶	
pít ‘moon’	▶▶	út ‘louse’	▶▶	put ‘thorn’ ▶▶

▶ Why toneless?

- ▶ High and Extra-High restricted to word-final syllables
- ▶ Realisation of tonelessness same in word-medial and -final contexts: [HL] ~ [L]

e.g. [pût-ò] ▶▶/put/ ‘thorn’, [kâfâní] ▶▶/kafaní/ ‘bat’

(3) Tonal near-minimal sets

High		Extra-High		Toneless
lú ‘sea’	🔊	lú ‘two’	🔊	
íf ‘island’	🔊	ís ‘dog’	🔊	
pít ‘moon’	🔊	út ‘louse’	🔊	put ‘thorn’ 🔊

- ▶ $\emptyset < T_1 < T_2$ systems very rare worldwide:
 - ▶ Maddieson (1978)’s third tone universal: “Phonetically central tones are unmarked, extreme tones are highly marked”
 - ▶ Zenzontepec Chatino (Otomanguean, Mexico; Campbell 2016), Leggbo (Delta Cross, Nigeria; Paster 2003): H M \emptyset

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- ▶ +3 Austronesian languages with tone
- ▶ Relationship between syllabicity and development of tone (cf. Matbat, Remijsen 2001)
- ▶ Typological rarities:
 - ▶ Stress + tone in Salawati (cf. Ma'ya, Remijsen 2001)
 - ▶ Unmarked low pitch in Biga
- ▶ Where next?
 - ▶ Analyse IF0 (with Jiayin Gao and James Kirby)
 - ▶ Subclassify RASH, reconstruct proto-RASH