

Why the Cenderawasih Bay languages are Austronesian

1 Structure of the talk

- Background: time depth of Proto-Malayo-Polynesian and Proto-Oceanic, migration route, and retention of PMP features in POc
- Retention rates in Cenderawasih Bay: case study based on four languages
- Why is there such a big difference between Cenderawasih Bay and Oceanic?

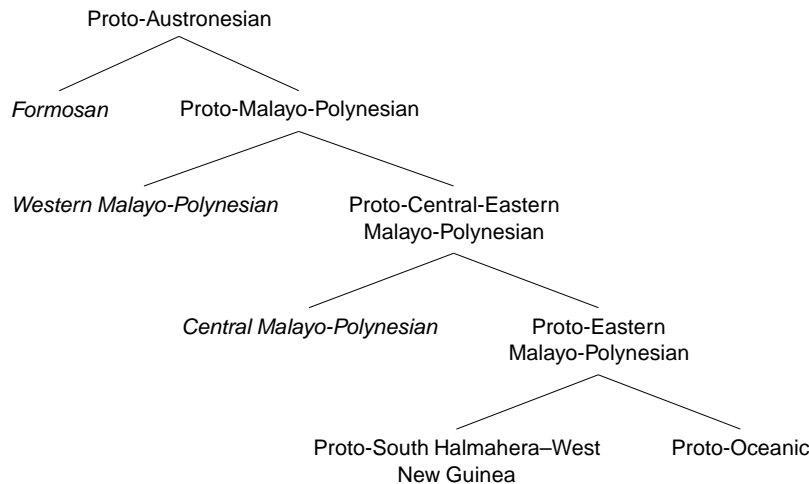


Figure 1: The higher nodes of the Austronesian family tree, after Blust (2009:724–30; 736–9). Nodes in italics are not proto-languages, but rather are cover terms for multiple primary branches.

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2 From Proto-Malayo-Polynesian to Proto-Oceanic

- PMP was spoken in or near Taiwan c.5000 years ago (\pm centuries)
- POc was spoken in the Bismarck Archipelago east of New Guinea c.3400 years ago (\pm <100 years)
- POc speakers reached the Bismarcks via the north coast of New Guinea, including Cenderawasih Bay
- POc lexical retentions:
 - 181 item PMP/PCEMP basic word list: 146 forms survive in POc (Blust 1993; Pawley 2009)
 - 81% retention rate
- POc grammatical retentions:
 - PMP reconstructed morphology and syntax includes derivational affixes, pronominal clitics, and a complex voice system marked by verbal affixes and phrase markers (Blust 2009; Ross 2002, 2006)
 - The PMP verbal system underwent significant changes prior to POc, but there are nonetheless many retained forms (Lynch et al. 2002)

3 SHWNG and Cenderawasih Bay

- SHWNG languages are classified as Austronesian, but their profile is rather different from POc
 - many fewer lexical retentions (typically 30-40% of a 191 item PMP/PCEMP basic word list; see below)
 - no grammatical retentions except the **ma-* stative prefix in fossilized form
- Case study of four SHWNG languages in Cenderawasih Bay: Moor (mhz), Yeresiam (ire), Yaur (jau), Umar (gop)
- Data from my ongoing field work

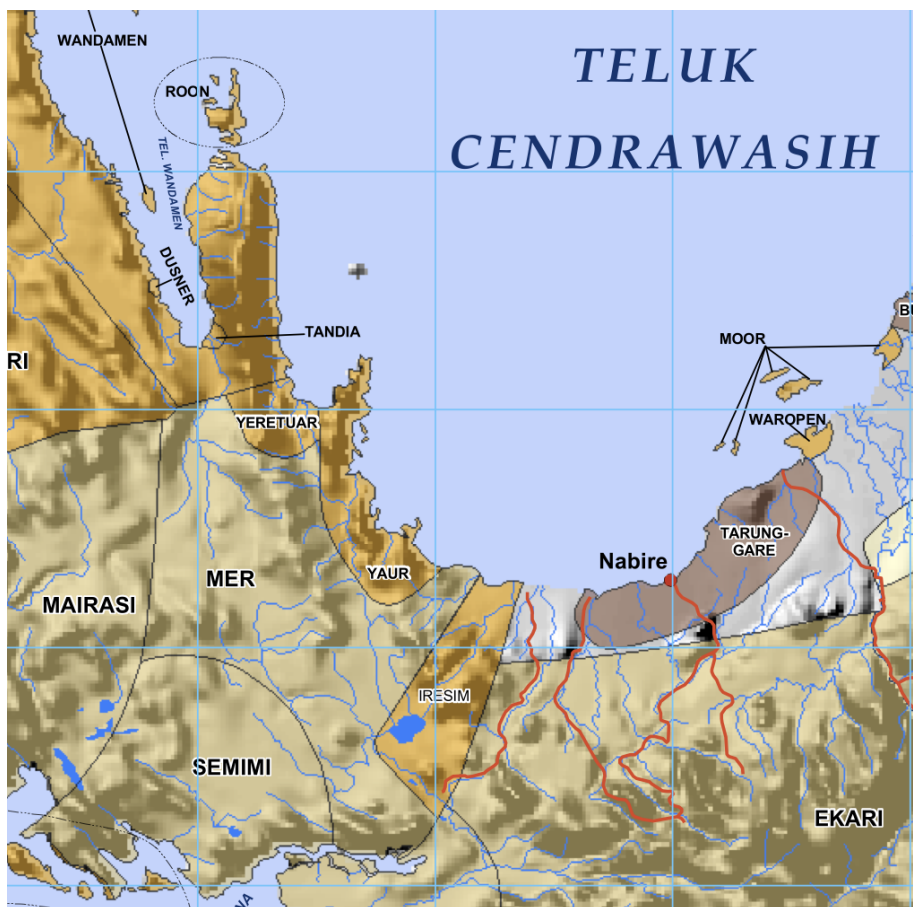


Figure 2: Map of southern Cenderawasih Bay, showing the location of Moor, Yeresiam (Iresim), Yaur, and Umar (Yeretuar). (Map courtesy SIL Papua.)

- Orthography: j = postalveolar affricate $[d^j \sim d_3]$, v = $[\beta]$, gw = $[g^w]$, $'$ = $[\gamma]$, ng = $[\ŋ]$, r = $[r]$
- NB: $[x]$ = reflex of proto-form, (x) = may be reflex of proto-form

	PMP	Moor	Yeresiam	Yaur	Umar
1SG	*(i)aku	[i]gwa	né	ju'e	[e]ne
2SG	*(i)kahu	[ágw]a	[à]né	[a]'e	[a]te
3SG	*iya	[i]	[i]ní	narave	[i]je
1PL.IN	*kita	a'ó, [í]'a	née[k]e	o['i]'e	e[t]e
1PL.EX	*kami	ma'ó, [ám]a	née[m]e	o[mi]'e	e[mi]
2PL	*kamu	[mu]'ó, [âmu]	ánee[m]e	[amu]'e	[amu]
3PL	*sida	[ti]'ó	íni[hi]	o[he]	i[hi]

Table 1: Pronouns.

	PMP	Moor	Yeresiam	Yaur	Umar
'one'	*esa	ta[tá]	kéete	reebe	kotem
'two'	*duha	[rú]ró	[rúu]hi	re[du]	e[dih]
'three'	*telu	[ó]ró	[kóori]he	ra(u)	e[tro]
'four'	*epat	[á]'ó	[áak]à	ri(a)	e[at]
'five'	*lima	[rím]ó	[rîm]a	vrajarie	(ma)tehi
'ten'	*sa-puluq	[tàur]a	bàkí rúuhi	e'ra'e're	mavtedih

Table 2: Numerals.

PMP	Moor	Yeresiam	Yaur	Umar
*s	t	h	h	h
*t	ʔ, s/_i	k	ʔ	t
*k	k, \emptyset	\emptyset	ʔ	\emptyset
*b	β	\emptyset	β	\emptyset
*d, *r, *R	r	r	r	r

Table 3: Noteworthy sound changes.

- So far, so good: these clearly look like Austronesian languages, and they show regular sound correspondences
- However, even a favorably-constructed 191 item basic word list (excluding pronouns and numerals) shows very low levels of retention from PMP and PCEMP (data in appendix 1)
 - Moor: 81 retentions (42%)
 - Yeresiam: 64 retentions (34%)
 - Yaur: 33 retentions (17%)
 - Umar: 58 retentions (30%)
 - words retained in at least one language: 91 (48%)

num. reflexes	num. items
0	100
1	19
2	31
3	18
4	23

Table 4: Number of words from the 191 item list that are reflected in the given number of languages.

- There are very few Austronesian retentions to be found elsewhere in the lexicon: this is it!
- The ‘four’ list:
 - arm/hand; banana; belly; bird; bone; breast; burn; die; eat; go; green; hear; house; island; knot; man; name; rope; salt; spider; sugarcane; water (fresh); wood

4 Why is Cenderawasih Bay different from Oceanic?

4.1 Language contact and multilingualism

- The northern coast of New Guinea must have been inhabited by speakers of non-Austronesian (“Papuan”) languages prior to the arrival of Austronesian speakers c.4000 years ago
- A plausible scenario: Austronesian speakers were less numerous than non-Austronesian speakers, but technologically and thus socially superior, leading to language shift from non-Austronesian to Austronesian
- This would explain some structural changes, such as the development of subject prefixes, an alienability contrast in possession, clause-final negation, and lexical tone—all typical for New Guinea, but not Austronesian
- These factors apply equally to SHWNG and POc, so do not explain the difference

4.2 New Guinea as a lexical destruction zone

- What about the massive loss of lexicon in Cenderawasih Bay?
- Fieldwork anecdotes:
 - Moor speakers often say that *rùma* ‘house’ is not the true word for house, as it resembles Malay *rumah* (in fact, both are inherited from PMP); some offer *gwéa* or *kàmba* as the ‘real’ word for house, but few other speakers know or use these words
 - In Yeresiam, *íniaahanà* means both ‘his name’ and ‘sago porridge’; one man claimed to know the ‘original’ word for sago porridge, but other speakers did not recognize the word at all
 - An Umar speaker told me to call breadfruit *kabriae* instead of the more common word *mur*, because *mur* was homophonous with Indonesian *mur* ‘nut, bolt’ (< Dutch *moer*)
- Perhaps these anecdotes point to a larger phenomenon of lexicon-as-identity in New Guinea: speakers develop new names for words that sound too similar to their neighbors’ languages
- Supporting evidence: the lost inherited lexical items were usually not replaced with the same words across languages, ruling out borrowing, at least from a common source (see appendix 2 for a short list of shared, non-inherited words)
- Cenderawasih Bay vs. Oceanic: POc developed in proximity to non-Austronesian languages, but many speakers soon spread to Remote Oceania, which had no prior human settlements
- Thus, the latter Oceanic languages were far from the “lexical destruction zone” throughout their history, but the Cenderawasih Bay languages never left it

4.3 Remaining questions

- How do we account for which lexical items are retained and which were lost?
 - Most retained items are (fairly) basic, but there is no obvious (to me) pattern
- Why are more words retained in three or four languages than in two, in the case study? Are some words just not worth replacing to differentiate a language from its neighbors?
- Why is PMP morphology almost entirely lost?
- How much can we really know about the history of Cenderawasih Bay languages? I hope that looking in more detail at tonogenesis and morphology will provide some insight, but some questions may be unanswerable

5 References

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6 Appendix 1: 191 item comparative word list

- PMP and PCEMP reconstructions are based on Blust 1993

	PMP	Moor	Yeresiam	Yaur	Umar
‘above’	*i-babaw, *i-taqas	ravúana	áihá	jehooje	gan
‘afraid’	*ma-takut	[muká]a	[ngkák]e	ge’re	[mtat]
‘all’	*amin	anu’ío	mónihá	duu’re	tam
‘and’	*ka, *ma	avenà	í	enehe	
‘arm, hand’	*lima, *baRa	[ver]éa	[bà]kí	[vra]’ugwaaaje	(ma)
‘ash’	*qabu	áha	(áo)guaarupà	movahre	[au]
‘at’	*di, *i	ve			te
‘back’	*likud, PCEMP *mudi	tama’oro	hítaaraà	ja’re	uten
‘bad’	*zaqat	javà, veré’a	kájake	gwojeeje, haure	kia
‘banana’	*punti	[hút]a	[píiti]	[id]ie	[idi]
‘belly’	*tian; *tinaqi ‘in- testines’	[siné]	[hìná]	[hna]re	[hna]
‘below’	*i-babaq	hànuna	èhúa, káana	eegwaje	vahi
‘big’	*ma-Raya	emevà	òpó	nebatue	knai
‘bird’	*manuk, *qayam	[màn]u	[máan]aà	[ma]’re	[mn]a
‘bite’	*kaRat	a’ì	áaka	ju’ne	wat
‘black’	*ma-qitem	vuatí	áhiiri	vri’re	rirbo
‘blood’	*daRaQ	[ràra]	[rárà]	jiitre	hamiar, nuh(ra)
‘blow (v.)’	*hiup, PCEMP *upi	umí	hóvà	ju’e’ene	vruah
‘bone’	*tuqela _(n,ŋ) , PCEMP *zuRi	[òr]o	[kóo]varà	[’oor]e	[tor]
‘branch’	*daqan	ùvu	àná, áranà	hagware, ragre	gehia
‘breast’	*susu	[tút]a	[húuhu]güa	[huuh]ie	[húhu]
‘breathe’	*ma-ñawa				urojae
‘burn’	*tunu	[’un]í	[kúun]a	[’un]de	[tnu]
‘buy’	*beli	agwení	áahe	’uhne	tuat
‘canoe’	PCEMP *waŋka	[gwá]a	[gwáà]	vigre	naven
‘chase’	*qanup ‘hunt (v.)’	’a’urì	púrà	dru’ne	neudam
‘chew’	*mamaq	timà	námà	ju’memne	mnam
‘child’	*anak, PCEMP *natu	[nà’u]na, toitó’a	háahu	nemeduugre	ariatun
‘choose’	*piliq	irà	vávane		nin ariri
‘climb’	*dakah, *pa-nahik, *sakay	’à	rî ká	uje	rturtu
‘cloud’	*Rabun, PCEMP *taqe ni lajit	hahoá’a	púkuà, sán- saàma	riire	kmuae
‘coconut’	*niuR	[nér]a	[núi]	aherie	mahrae
‘cold’	*ma-diŋdiŋ	venína	mámboorake	vaando’re	(drin)
‘come’	*maRi	rá[ma]		reere	r[ma]
‘cook’	*tanek, *zakan	’uní	áodia	’undae	tnu
‘correct, true’	*ma-bener	gwata’ú	mìtikú	migooje	mduv
‘count’	*bilaj, *ihap	’ivunà	vóoi		tor
‘cry’	*tajis	[’àn]it]a	[káh]e	’ehre	(ta)t

	PMP	Moor	Yeresiam	Yaur	Umar
‘cuscus’	PCEMP *kandoRa, *mansər	gwàvuma	[átoòra]	ubie	[mae]
‘cut (wood)’	*taRaḡ, *tektek	oha`ì	róokate	juruhne	[tar]to
‘die’	*matay	[má`]a	[máak]e	[mee`]re	[mat]
‘dig’	*kali	tiarí	éera	`ehne	hrae
‘dirty’	*cemeD(?)	hananirí	óraríjarà	haure	jatrír, kober (n.)
‘dog’	*asu	áuna	náà	gwendie	vaen
‘dream’	*hipi, *h-in-ipi, *h-um-ipi	ena[mí]`a	[mí]		nemde
‘drink’	*inum	[anum]í	(íiman)e	rumne	(umen)
‘dry’	*ma-Raḡaw	araria`í, maru- atí	ópuème	vorogre	mare
‘dugong’	*duyuy	[rún]a	hídìèi	[ri`]re	nambrar
‘dull’	*dumpul, *pundul	kakú`a	kámpute	tituaje, tiuhre	tvu
‘ear’	*taliḡa	[ina]	[tána]bùume	ariaje	gowae, gvoru
‘earth, soil’	*tanaḡ, *taneḡ	sàra	bábraù	heeje	vuot
‘earthworm’	*kalati, *qali-wati	(korová`)a	ákaàka	maambre	kman
‘eat’	*kaen	[`an]í	[àn]á	j[en]ae	[an]na
‘egg’	*qateluR, *qiteluR	và`u	á[koor]e	oo`re	[tor]
‘eye’	*mata	[ma]sina`ú	húrà	gamoogre	[mta]
‘fall (v.)’	*nabuḡ	aramátù	rákaà `ì	`iine, jì`e	trier
‘far’	*ma-zauḡ	mana`í	kàbá	opa`re	mbrar
‘fat, oil’	*himaR, *meñak, *miñak	ajúra, màni	dígwà	iire, manepiire	mani
‘father’	*t-ama	até	dáì	dai, na	jejev, tatai
‘feather’	*bulu	[vùru]	[úuru]gùa	hniooje	[uru]
‘fire’	*hapuy	mò`ana	jáai	hooje	narur
‘fish’	*hikan	(i)jan)a, r(i)an)a	d(i)jan)à	mneere	dedren, nakari
‘flow (v.)’	*qaliR, *qaluR, *saliR	èrina, uà	ngkàakare		
‘flower’	*buḡa		mànsía		
‘fly (v.)’	*layap, *Rebek	ùtuma	hîre	ruure	ehir
‘forest’	*alas, *kahiw-kahiw-an	isá, manù, ma`úna	áraì	deje	vrie
‘fruit’	*buaḡ	[vó]	[ú]	ajuure	traì
‘go, walk’	*lakaw, *panaw	[rá]	[rá]	[re]vuure	[ra]
‘good’	*ma-pia	káuma, kamúsa	ràréi	ojeere	ruet
‘grass’	*baliḡi, *udu	muni`a	hérenggeèra	naame`re	hamuen
‘green’	*mataḡ	ma`a[ma`]í	mák[maak]a	[ma`]rurie	(mka)
‘grow’	*tu(m)buḡ		táraríita		buavar
‘head’	*qulu	vàru	náarà	doje	du
‘head hair’	*buhek, PCEMP *daun ni qulu	urànu	úurugùa	dogware	duae
‘head louse’	*kutu	[kú`]a	[úuku]	ooje	[utu]
‘hear’	*deḡeR	[oran]í	(nó)	[ruu]ne	(nuar)
‘heavy’	*ma-beReḡat	saríana	[máak]t	maaneduru`re	[mat]
‘hide’	*buni	amuà	mùkúa		rmu
‘hit, beat’	*palu	vavò	áau	juugwne, uvruhre	uv
‘hold (in fist)’	*gemgem	aruà	nsóore	`ivutne	dor
‘house’	*Rumaḡ	[rúma]	ájaà; [rúmà] ‘ceremonial house’	jaare; [ruug]re ‘ceremonial house’	[ron]
‘husband’	*bana, *qasawa	vurána	híomaane	mago	mambo

	PMP	Moor	Yeresiam	Yaur	Umar
‘in, inside’	*i-dalem	sinéná	námoone	odogre	mor
‘island’	*nusa	[nút]a	[núùh]a	[nuh]re	[nuh]man
‘kill’	*bunuq	[munâ]	áau	juugwne	ai
‘knot’	*buku	[vú]’a	[bu]güa	ga[vuu]je	[vu]
‘know’	*taqu	ananî	rári	rundu’moje	nune
‘lake’	*danaw	[rán]a	ágweëtia	tvuugre	kbun
‘laugh’	*tawa, PCEMP *malip	[marí]’a	[ndí]	miimije	[mari]
‘leaf’	*dahun	[rànu]	[ráàn]ia	na[rog]re	nae
‘left side’	*ka-wiRi	sa[gwìri]	bá(gir)u	vraa[gwiri]e	mahdiae
‘leg, foot’	*qaqay	néa	míkí	e’uugwaje	ga
‘lie down’	*qinep, PCEMP *qenəp	[enâ]	[éen]e	vino’ooje	(ne)
‘lightning’	*kilat, *qusilaq	hararira’a	kéejanà	hohevre	tpe
‘live, alive’	*ma-qu dip	héana	kámeete	inggavre’re	tomun
‘liver’	*qatay	[à]’a	[ák]eèna	’egre	var
‘long (objects)’	*anaduq	mana’i	gwéi	braa’re	mbrar
‘male/man’	*laki, *ma-Ruqanay	vu[rán]a	[máàn]a	jo[mag]re	no[man]
‘meat, flesh’	*hesi, *isi	tú	krádìa	hendie	traí
‘mist’	*kabut	masàsu	ríabroobi		
‘moon’	*bulan	[vùrin]a	[ùùr]a	jeegre	hdia
‘mosquito’	*lamuk, *ñamuk	tanina	háneèra	naradugre	kror
‘mother’	*t-ina	[iná]	áiì	iijo, (na)de	ajev, mai
‘mouth’	*baqbaq	turé	ópaahe	oomogre	o
‘name’	*ŋajan	[nàtan]a	[áahan]à	[ah]gre	[han]
‘narrow’	*kepit	iri’i	dúdiokare		ddor
‘near’	*ma-azani, PCEMP *raji	jiréré	nádooni	gwone’re	dua
‘neck’	*liqeR	tòro	káare	’ragwarie	kbae
‘needle’	*zaRum	anígwa, reti		ma’oore, ret paivre	ret
‘new’	*ma-baqeRu	ahùjo	óore	joore	enau
‘night’	*beRŋi(n)	(vâr)a’a	róoi	orooje	rojo
‘no, not’	*diaq, *qazi	tòa, vâ	mábè, ve	mahegre, ’ae	hini
‘nose’	*ijuj, *ujuj	hòro	túaage	oreemogre	gno
‘octopus’	*kuRita	[arí]’a	rákuài	(ree’)re	[kt]e
‘open (v.)’	*buka	è, varì	bóhe, ràré		vih
‘person’	*tau	na’ú	hàngkú	jomnooge, ove	nomtu
‘plant (v.)’	*mula, *tanem	[’anam]i	[káaman]e		[tnam]
‘pound (v.)’	*bayu, *tuktuk, *tutu	’arà	káabi, káre	’eere	tar, tava
‘rain’	*quzan	ùnuma	ráàka	nateehre	itari
‘rat’	*balabaw, PCEMP *kantzupay	[arùha]	ábuukumà	nahi’ugre	bgao, wanggar
‘red’	*ma-iRaq	[mar]arí	kárarare	vraa’re	[miar]
‘rice plant’	*pajey	pása (loan)	páhreevè (loan)	paahre (loan)	pah (loan)
‘right side’	*ka-wanan, *ma-taqu	já	bákiku	vraago’re	mamdu
‘road’	*zalan	[ràrin]a, nang- garé	[jáâr]a	ragaje	[jar]
‘root’	*uRat, *wakaR	ùmo	híruaatumà	re’re	kre
‘rope’	*talih, PCEMP *waRəj	[gwâr]i’a	[gwáar]i	[gwar]ie	[war]i
‘rotten’	*ma-buRuk, *ma-busuk	va[varù]	ógwaure	(mar)ie	urbuar

	PMP	Moor	Yeresiam	Yaur	Umar
‘salt’	*tasik ‘sea, saltwater’	[àti]	[káh]ia	[aah]re	[tah]
‘sand’	*qenay	[áen]a, nàha’a	ímpapeèta	reetre	mten
‘say’	*kaRi, *tutur	a’avé, a’anó	ké àma	emo	ewe
‘scratch (itch)’	*kaRaw	tiarî	(áraa)ri	’ubne	(kra)r
‘see’	*kita	ara’umà	áreeki	’evene	mbre
‘sew’	*tahiQ, *zaqit	airî	tàtí	jetnae	wawar
‘sharp’	*ma-tazem, *ma-tazim	maraminî	[kàn]trái	gagre	[mtan]
‘shoot (arrow)’	*panaq	(hinà)	káara	vedre	vit
‘short (height)’	*ma-babaq	ku[vava]’i	kúurate	vuu’re	avu
‘shy; ashamed’	*ma-hiaq	anìno tòa	[mái]		
‘sick, painful’	*ma-sakit	ariá’a	háeere	huhe’re, jendu’re	ida
‘sit’	*tudan, PCEMP *todan	[’ò]	[kó]	vi’iije	[to]t
‘skin’	*kulit	hì’i	àpukúa	obi’re	jat
‘sky’	*laqit	a[rá]’á	[ráak]ate	ruuje	mdiaweh
‘small’	*dikiq, *kedi	marà’u, ùti	ákuuna, kàraró	dugo	kba
‘smell (v.)’	*hajek	anità	nóhà	nuhne	noh
‘smoke’	*qasu, *qebel	tavéra	ógw(aahu)gùa	hodugre	odu
‘snake’	*hulaR, *nipay; *qulej ‘caterpillar’	jorová, (óra)	gwóoru	mundie	kro
‘spider’	*lawaq	[ra]gwa’i ‘spiderweb’	[rá]raàruma	[raa]je	b[ra]vun
‘spit’	*luzaq	inùku’a	nùhúa	nuhve’re	tarvuh
‘split’	*belaq, *silaq	ate’ì, [vorà]	íiri	’ejevne	t(var)
‘squeeze’	*pereq, *peRes, *Rames	[amat]à	báta kóomugùa		[rma]n
‘stab’	*suksuk	utumì	húnia	huunde	hun
‘stand’	*diRi, *tuqud	etâ	óohe	ihre	he
‘star’	*bituqen	úma	túuma	hiveerere paivre	namdiawe
‘steal’	*takaw	marahá	bàmará	jemenae	an mare
‘stone’	*batu	[vá]’a	[áak]u	hnu’re	[atu]
‘suck’	*sepsep	tuamà	húume		dum
‘sugarcane’	*tebu	[kóh]a (loan?)	[kóou]	[oo]je	[to]
‘sun’	*sinaR; *qalejaw ‘day’	[oro]’á	[óòr]a	h(or)uaaje	nahir
‘swallow (v.)’	*telen	[’oran]i	[kóor]i		[dor]
‘swell’	*baReq	va[varà]	rákruuku	ne(vior)e	bi
‘swim’	*laquy, *naquy	áta, aramána	hípatu	ju’re	ejah
‘tail’	*ikuR	há	hùrukúa	hevuugre	hvatun
‘that’	*i-na	nóna	to	mu’e	vte
‘thatch’	*qatep	r[â]’a	[áka]raanià	horovre	honno
‘thick’	*ma-kapal, PCEMP *telu	vo’orini	átatoori		kamo
‘thin (material)’	*ma-nipis	vera’uvà	[mánii]jahe		[mni]eh
‘think’	*demdem	taramà	níaaane	nuruherne	
‘this’	*i-ni	[né]na	te	ja’e, -e’e	v[ne]
‘throw (v.)’	*tudaq	toà	káara	vedre	matin
‘thunder’	*deRuq, *gurgur, *kudug	hahajá, (kuru)rú’a	páriaai	rerviaje	pandar
‘tie (v.)’	*hiket	aragwi	óokume	’ebehne, ’ututne	kvut, uvut

	PMP	Moor	Yeresiam	Yaur	Umar
‘tongue’	*dilaq, *hema, PCEMP *maya	nèma	níameene	taparembre	mbren
‘tooth’	*(n)ipen	gwòto	(níi)je	(nee)gwaje	onae
‘vomit’	*utaq, PCEMP *mutaq	ma[muá’]a	má[muugwak]e	duu’re	[mut]
‘warm, hot’	*ma-panas	na[nat]î	áati	viadre	javin
‘water (fresh)’	*danum, *wahiR	[ràrum]a; [gwà- jar]a ‘river’	búbubù, [ráaram]à	(nag)re	i[ran]
‘wet’	*ma-baseq	hararu’i	táteerame	maroje	brom
‘what?’	*apa, *-anu	rosé	mòkeraá	nahme	nandie
‘where?’	*i-nu	vemosé	mòkomoó	meha	[nu]evua
‘white’	*burak, *ma-putiq	vehúta	búugwahà	huaboogre	huvi, hugbo
‘who?’	*i-sai	na’u[sé]	jòkéé	omeha	evua
‘why?’	*kua, *kuja ‘how?’	verosé, vétè	múàkoó, úmamike	ama, eremoha	tohue
‘wide’	*ma-labeR	(marar)enî, na- maréta	éehi, páreere	ronavre	[mbrer]
‘wife’	*qasawa	vavína	húine	ego	imbo
‘wind’	*haqin	tívura	tárità	baagre	drin
‘wing’	*kapak, *panid	àju	níaaare	aaje	ae
‘woman’	*bahi, *b-in-ahi, *ba-b-in-ahi	[vavín]a	[fína]	jemegre	[ing]go
‘wood’	*kahiw	[ka]’úata	[ái]	[a]je	[ae]
‘work (in garden)’	*quma		ám[ùma]mó		
‘yawn’	*ma-huab, PCEMP *mawap	[máh]a	ó[miaagw]a		
‘year’	*taqun		jámà	jaagre	
‘yellow’	*ma-kunij	veranggunâ	ràúi	muurugre	rui

7 Appendix 2: Shared innovative lexical items in Cenderawasih Bay

	Moor	Yeresiam	Yaur	Umar
‘acquaintance’	[kamúk]a	káruàra	[amuu’]re	[kamuk]
‘anchor’	[kamitú]a	[kámutu]vè	[amutu]vre	[kamutu]
‘armband’	[sarák]a	[háraak]vè	[haraa’]re	[hiarak]
‘arrow’	róusú	[óovanè]	[ovan]de	[hovane]
‘baked sago’		[móòk]a	[moo’]re	[mot]
‘ball-shaped sago’		[àkà]	mo[aka]ne	mot [aka]
‘bamboo’	kòvuta	[káàr]a	oje	[kar]
‘barbed spear’	[ragwende]	búrimaakè	[ragweja]pire	[rawo]jan
‘bean’	(urá)	[kávaru]ra	[ovaru]re	[kvaru]
‘bite’	[a’]i	[áak]a	ju’ne	w[at]
‘branch’	[aráná], ùvu	[aránà], óha[haàgwa]	[hagwa]re	gehia
‘citrus fruit’	[simutó]	(húndu]i	[himoto]vre	namdir
‘coconut husk’	a[ráta]	[ráàha]	[apre]	[apre]
‘coral’	raróata	[háaru]	reega]e	[haru]
‘disappear’	[avar]i	b[ábar]à	gwaroogwa’e	niot
‘drum’	(tivar)a	á[hiiraà]	[hir]re	[hari]
‘dry in sun’	agwarà	[híir]e	[hii]gwovnae	[hir]
‘eagle’	mànu emá	[gánggaani]	[gangganiivre]	[ggan]
‘fire starter’	[bororó]a	[bóroroo]vè	[bororo]vre	[bo]ha
‘hide’	a[mu]à	[mù]kúa		r[mu]
‘hit, beat’	va(vò)	áau	[uv]ruhe	[uv]
‘jackfruit-like fruit’	[kakaná]’a	[náknaak]a	[a’na]piire	[aknak]
‘long (objects)’	mana’i	gwéi	[braa]’re	m[bra]r
‘measure’	[’o]nà	kà[kó]		[to]
‘meat, flesh’	tú	[krá]día	hendie	[tra]i
‘mouth’	turé	[ó]paahe	[oo]mogre	[o]
‘needle’	[ret]i		[ret] paivre	[ret]
‘new’	ahùjo	[óore]	j[oore]	enau
‘night’	vàra’a	[róoi]	o[roo]e	[roj]o
‘outrigger’	jeàti	jáarà	[hong]gre	[hon]an
‘pandanus’	[ponda]rànu	jóopu ráània	na]aroogre	[ponda]
‘papaya’	(sar]iavó	[héner]ovà	[her]re	[hen]nen
‘pound (v.)’	[’ar]à	[kár]e	[’ee]re	[tar]
‘roast’	[a’]à	[ákaa]i	’ene	[ta]
‘sago chopsticks’	[kaké]	[kàè]pa	[ai]vre	[kae]
‘slave raiding group’	[rá]’a	[rát]ia	[ree]’re	[rat]
‘smell (v.)’	anità	[nóh]à	[nuh]ne	[noh]
‘smoke’	tavéra	ogwáahugùà	[hodu]gre	[odu]
‘spit’	i[nù]ku’a	[nùh]úa	[nuh]ve’re	tarvuh
‘stab’	utumì	[hún]ia	[huun]de	[hun]
‘steal’	[mara]há	bà[mará]	jemenae	an [mar]e
‘sweet’	[man]anà	énitaàme		e[man]
‘whale’	gwovuró	[háro]vreevè	[haro]vre	[haroi]
‘white’	vehúta	[búugwah]à	[huaboog]re	[hugbo]
‘yellow’	veranggunâ	[ràú]i	muurugre	[ru]

- Most items show the expected correspondences (e.g., ‘baked sago’, ‘bite’, ‘measure’, ‘roast’)
- Some do not (e.g., ‘acquaintance’, ‘anchor’, ‘armband’, ‘ball-shaped sago’, ‘needle’); these may be recent loans