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Questions have been raised about the precise genetic affiliation of the Enggano language of the Barrier Islands, Sumatra. Such questions have been largely based on Enggano's lexicon, which shows little trace of an Austronesian heritage. In this paper, I examine a wider range of evidence and show that Enggano is clearly an Austronesian language of the Malayo-Polynesian (MP) subgroup. This is achieved through the establishment of regular sound correspondences between Enggano and Proto–Malayo-Polynesian reconstructions in both the bound morphology and lexicon. I conclude by examining the possible relations of Enggano within MP and show that there is no good evidence of innovations shared between Enggano and any other MP language or subgroup. In the absence of such shared innovations, Enggano should be considered one of several primary branches of MP.

1. INTRODUCTION.[1] Enggano is an Austronesian language spoken on the southernmost of the Barrier Islands off the west coast of the island of Sumatra in Indonesia; its location is marked by an arrow on map 1. The genetic position of Enggano has remained controversial and unresolved to this day.

Two proposals regarding the genetic classification of Enggano have been made:

1. Enggano is an Austronesian language, albeit a highly aberrant one.
2. Enggano is a non-Austronesian language with Austronesian borrowings.

Scholars who classify Enggano as Austronesian include Dyen (1965) and Nothofer (1986). In Dyen's (1965) lexicostatistical classification of the Austronesian languages, it forms one of two first-order Austronesian subgroups located in western Indonesia, while in Nothofer (1986) it is only tentatively classified as a member of his proposed Barrier Islands-Batak subgroup.

Scholars who classify Enggano as non-Austronesian include Capell (1982) and Blench (2014).[2] Capell (1982:6) says Enggano is a "remnant of these pre-Austronesian languages, which does indeed have Austronesian loanwords, but which remains non-

1. I would like to thank Mark Donohue, Robert Blust, and Andrew Pawley, as well as three anonymous reviewers for comments made on an earlier version of this paper, which have led to substantive improvements in both structure and content. Any errors remain my own.

2. Blench (2014) also raises the possibility that Enggano could be a mixed language. This was proposed by Kähler (1942/45), who considered Enggano "mixed" from different *Austronesian* elements: "Philippine-Sulawesi" and "Simalur." This proposal, then, accords with a classification of Enggano as Austronesian.

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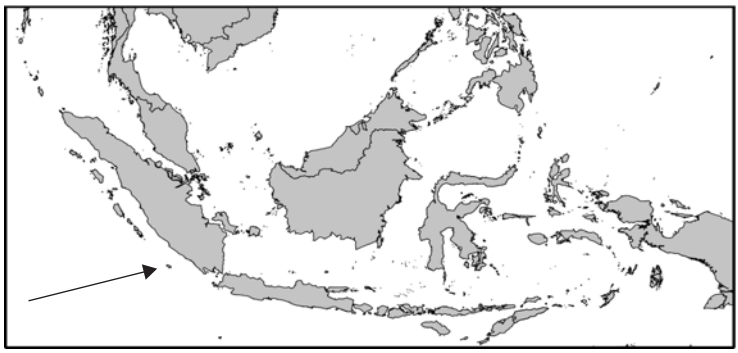
MAP 1. ENGGANO ISLAND WITHIN ISLAND SOUTHEAST ASIA



Austronesian."[3] This is also the position of Blench (2014), who identifies Enggano as "underlyingly a forager language of unknown affiliation."

The scholarly opinion on the linguistic position of Enggano is summarized by its entry in the most recent edition of the *Ethnologue* (Lewis, Simons, and Fennig 2013), which states that Enggano is "not conclusively established as an Austronesian language, rather than an isolate with Austronesian loans."

With the exception of Capell (1982),[4] all previous attempts to classify Enggano have been based primarily on the lexicon of Enggano, which does indeed have little trace of an Austronesian heritage. In this paper, I examine not only the lexicon of Enggano but also its phonology and morphology. I show that all three domains provide evidence, though to different degrees, that Enggano is an Austronesian language of the Malayo-Polynesian (MP) subgroup.

This paper has three main objectives: (i) in section 3, I show that Enggano is an Austronesian language of the MP subgroup; (ii) in doing so, I reconstruct the phonological, morphological, and lexical history of the language, and show the ways in which Enggano has become aberrant; and (iii) in section 4, I examine the subgrouping of Enggano within MP, and conclude that, in the absence of any evidence of shared innovations with other MP subgroups or languages, Enggano should be considered a primary branch of MP.

I conclude in section 5 with a discussion of the implications of this study for wider Austronesian studies. I also offer two suggestions for the aberrant nature of Enggano: (i) that Enggano suffered contact effects with a non-Austronesian language present in the region prior to the appearance of MP languages, and/or (ii) that Enggano island was relatively isolated from the rest of the Austronesian world.

I begin, however, with a summary of the relevant literature on Enggano, the sources of linguistic data, and a brief sketch of the language.

3. "Das Enggano jedoch ... ist ein Überrest dieser vor-IN-Sprachen, das zwar IN-Lehnwörter besitzt, aber un-austronesisch bleibt." (Capell 1982:6)
4. Capell (1982) contains a brief discussion of the pronominals, verbal morphology, and syntax of the language. I examine the morphological evidence in 3.2 and draw different conclusions from Capell (1982).

2. ENGGANO IN THE LITERATURE. The island of Enggano and its inhabitants are mentioned only sporadically prior to the nineteenth century, when various European ships started to come across the island. The earliest accounts comment on the difficulty of finding safe harbor and the shyness and/or aggressiveness of the inhabitants.[5]

From the mid-nineteenth century, the volume of accounts of the island and its inhabitants steadily increases. From these early reports, we learn that the inhabitants lived off coconuts, tubers, taros, bananas, fish, and wild boar (Oudemans 1889:148). They were unfamiliar with sophisticated metalworking and did not wear clothes, with the exception of women, who would wear a short bark or leaf skirt (Oudemans 1889:10–11; Miller 1778:173). They constructed round beehive-shaped houses that were about three meters in diameter and stood on wooden poles two to seven meters long (Oudemans 1889:149).[6] An example of such a house can be seen in figure 1.

The total population of the island was estimated in 1854 to be 4,870 (van der Straaten and Severijn 1855:354), and in 1866 to be 6,420 (Anonymous 1870:200). Whatever the exact figure, the population had entered steep decline by 1888, when it was recorded as 914 (Helfrich 1888:279). This decline is ascribed by Helfrich (1888:305) to various diseases, including a cholera epidemic in 1870–71. *Ethnologue* (Lewis, Simons, and Fennig 2013) estimates the current population of Enggano speakers as 1,500.

2.1 LINGUISTIC DATA. The earliest explicit mention of the Enggano language occurs in Miller (1778:173), who writes of the inhabitants: "they paddled around the vessel, and called to us in a language which nobody on board understood, though I had people with me who understood the languages spoken on all the other islands."

With the increase in accounts of the island beginning in the mid-nineteenth century, there is a concurrent increase in the amount of linguistic data available. The earliest published data on the Enggano language is von Rosenberg (1853:434), who records the numbers 1–10 in eight languages of Sumatra, including Enggano. Other early sources with at least a wordlist include Boewang (1854), van der Straaten and Severijn (1855), von Rosenberg (1855), Walland (1864), Francis (1870) (in Oudemans 1889), Oudemans (1879), Helfrich (1888), Helfrich and Pieters (1891), Modigliani (1894), van de Noord (1895/1987), and Helfrich (1916).

Despite the phonetic ambiguities and inaccuracies of these wordlists, they are important in helping us to partially understand the different dialects of Enggano that had disappeared soon after the population collapse of the late nineteenth century.

Particularly important early materials are Helfrich and Pieters (1891) (with errata published as Helfrich [1893] and Helfrich [1916]). These lists are not only much more substantial than other early wordlists, with over 1,000 lexical items, but they also contain notes on the dialects spoken on the island. In Helfrich and Pieters (1891:600), two dialects are identified, one spoken in the east of the island and the other in the west. Dialect

5. For the earliest accounts of the island, see Leupe (1855:136–41). Oudemans (1889:113–19) repeats much of the information in Leupe (1855) and also provides a summary of publications about the island up to his time of writing.
6. Such houses only find parallels in the traditional houses of the Nicobar Islands (Man 1886:443). Kähler (1987:93) gives the native names for such houses as *euba kiʔiʔiko* and *euba kakakadio*, and reports that they were used only for sleeping as protection against mosquitoes.

FIGURE 1. BEEHIVE HOUSE ON ENGGANO ISLAND (Modigliani 1894:113)

variants for many words are also recorded. Helfrich (1916) also contains fifteen pages of Enggano texts with Malay glosses and Dutch translations.

The main source of data on the language, however, is found in the works of the German linguist Hans Kähler, who stayed seven months on the island in 1937–1938. He published a grammatical sketch of the language (Kähler 1940), more than thirty texts (Kähler 1955, 1957, 1958, 1959a, 1960, 1961b, 1962, 1964, 1975), and was preparing a dictionary when he died. This dictionary was published posthumously in 1987.

By the time Kähler began his work, the language was only spoken by about 200 people who lived concentrated on the northern coast (Kähler 1940:6). Only one dialect was spoken (Kähler 1940:81, 1975:iii), which can be equated with the dialect identified by Helfrich and Pieters (1891:600) as being spoken in the west. Kähler (1975:iii) comments that his informants would occasionally lapse into their old dialects.

Materials collected after Kähler's work on the language consist of an Indonesian government survey of the languages of Sumatra in 1987 (Kasim 1987), a short morphological and syntactic sketch (Syahwin, Rasyad, and Semi 1994), and a master's thesis on the phonetics and phonology of the language (Yoder 2011).

2.2 LANGUAGE BACKGROUND. I provide here a brief sketch of the language as described in Kähler (1940, 1987). I concentrate my discussion on the phonology and also provide an outline of some of the more salient morphosyntactic properties of the language.

2.2.1 Phonology

2.2.1.1 Consonants. Enggano has the consonants given in table 1. The voiced stops /b/ and /d/ have oral [b]/[d] and nasal [m]/[n] allophones, depending on the nasal specification of the word (see 2.2.1.3 below); /d/ additionally has the allophones [r] and [d] in free variation. The voiceless continuant /h/ is realized as [ç] after the high front vowel /i/.

Some consonants occur only in certain dialects of Enggano. Kähler (1940:83–84, 1975:iii), writing after the collapse of the dialects, identified three dialects (northern, southern, and western), while Helfrich and Pieters (1891:600), writing while the dialects were still in use, identified a western and an eastern dialect.[7]

While it is difficult to ascertain exactly what the dialect situation on Enggano was prior to Kähler's work, certain consonants can be identified as dialect variants. The phoneme /p/ was realized as /f/ in the East (Helfrich and Pieters 1891:600; van de Noord 1987:189f). The consonants /l/ and /d/ were in contrast in some varieties of Enggano up until at least the late nineteenth century, but by the time Kähler arrived in 1937 the contrast was being lost through a merger of /l/ and /d/ > /d/ (see 3.1.1 for more information).

The phoneme /ʧ/—for which Kähler (1940:83) gives /ʤ/ as a "south dialect" variant—only occurs before or after the high front vowel /i/, and it may be possible to analyze it as an optional allophone of /t/ in this environment. The phoneme /t/ is cited by Kähler (1940:84) as a dialect variant of /d/; however, it occurs often enough in his dictionary in forms not flagged as dialectal for me to include it in the phoneme inventory in table 1.

2.2.1.2 Vowels. In Kähler's (1940) description, Enggano has six vowels. They are given in table 2. Kähler (1940) also lists the mid-high vowels /e/ and /o/, though /o/ does

TABLE 1. ENGGANO CONSONANTS

	Bilabial	Alveolar	Palatal	Velar	Glottal
Stop [–VOICED]	p	t	(ʧ)	k	ʔ
Stop [+VOICED]	b	d	ɲ		
Continuant		(l)	y		h

TABLE 2. ENGGANO VOWELS

	Front	Central	Back
High	i	ɨ	u
Mid	ɛ		ɔ
Low		a	

7. When Kähler began his work on the language, the inhabitants were concentrated on the northern coast, but spoke a dialect they identified as originally belonging to the settlement of *Kioyo* in the south. Helfrich and Pieters (1891:600) explicitly identify *Kioyo* as being in the western dialect area. It is possible that the northern and southern dialects identified by Kähler (1940) are the same as the western and eastern dialects identified by Helfrich and Pieters (1891), with Kähler's geographic identification being an artifact of the fact that the only half of the island populated during his work was the northern half.

not occur outside of his phoneme list and /e/ only occurs in the nominal prefix *e-* and in the word *kiteda* 'all' (Kähler 1987:iv, fn. 3 and fn. 4). With this consideration in mind, I will henceforth transcribe the mid vowels /ɛ/ and /ɔ/ as *e* and *o*, respectively.

Vowel sequences consisting of /a/ followed by another vowel, a mid vowel followed by /i/, and /o/ followed by /u/ are all listed as diphthongs in Kähler (1940:83), apparently in contrast with the equivalent sequences of two vowels. However, it seems possible to analyze these diphthongs as two underlying vowels that phonetically diphthongize in certain word positions.

Descriptions of the language after Kähler describe a seventh vowel phoneme: a mid central vowel described as /ə/ (Kasim 1987; Nothofer 1992) or as /ɵ/ (Yoder 2011). This vowel has arisen from a split of Enggano /o/. (See 3.1.2 for more details.)

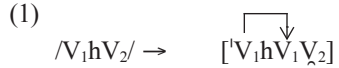
2.2.1.3 Suprasegmental features. Enggano has a system of word level nasal harmony. Minimal pairs, such as /e-uku/ 'ribs' and /ẽ-ũkũ/ 'fart, flatulence', show that nasalization is contrastive. However, it is a feature of entire words, rather than individual segments. Lexical roots are specified as either nasal or oral, while affixes are unspecified for nasality.[8] When affixes are attached to roots, vowels and voiced stops assimilate to the nasality of the root. To illustrate, the possessive paradigms of /e-uku/ 'ribs' and /ẽ-ũkũ/ 'fart, flatulence' are given in table 3.

TABLE 3. ENGGANO NASAL/ORAL CONTRASTS

	'ribs'	'fart, flatulence'
1EXCL.MIN	e-uku-ʔu	ẽ-ũkũ-ʔũ
1INCL.MIN	e-uku-ka	ẽ-ũkũ-kã
2MIN	e-uku-bu	ẽ-ũkũ-mũ
3MIN	e-uku-dia	ẽ-ũkũ-nĩã
1EXCL.AUG	e-uku-dai	ẽ-ũkũ-nãĩ
1INCL.AUG	e-uku-kaʔa	ẽ-ũkũ-kãʔã
2AUG	e-uku-du	ẽ-ũkũ-nũ
3AUG	e-uku-da	ẽ-ũkũ-nã

Finally, there is a kind of "vowel leak" phenomenon in Enggano, whereby a vowel before either of the glottal consonants /ʔ/ or /h/ will "leak" across the consonant and be found after the glottal as well, so long as the preglottal and postglottal vowels are of different qualities. Such vowels carry no weight for the purposes of assigning stress (see below) and often form a diphthong with the following vowel. This process is schematized in (1):

(1)



Such vowel leak is obligatory in some morphemes, such as the 1st person singular genitive suffix *-ʔVu*; for example, *e-adá-ʔaʊ̯* 'my child', *ʔãnṍ-ʔõũ̯* 'my friend' (Kähler 1940:86). It appears to have happened historically in many lexemes, such as *e-báhaʊ̯* 'heart', and remains optional in others, such as *ẽ-ãĥĩ* ~ *ẽ-ãĥãĩ̯* 'younger brother'.

8. The palatal stop /ɲ/ does not occur in any affixes, and occurs only in nasal roots. Its oral allophone is unknown.

Stress in Enggano usually falls on the penultimate syllable (Kähler 1940:84), though it occasionally falls elsewhere: notably, stress is antepenultimate when vowel leak has occurred.

2.2.1.4 Transcription. The way in which Kähler transcribed certain Enggano sounds changed throughout the years. In table 4, I provide a summary of the different systems Kähler used, along with the transcription used in this article.

My transcription is essentially phonemic, with the exception of the voiced stops and vowels, which are transcribed according to the nasal quality of the word in which they occur. I do not differentiate diphthongs from vowel sequences, as they do not appear to be contrastive. Angled brackets are used for orthographic transcriptions cited from a nineteenth-century source. I follow Kähler in marking nonpenultimate stress with an acute accent.

TABLE 4. ENGGANO TRANSCRIPTION CONVENTIONS

IPA		now	1987	1975	1957–64	1940
/p/	[p]	p	p	p	p	p
/t/	[t]	t	t	t	t	t
/ʧ/	[ʧ]	ʧ	c	t'	t'	t'
/ʤ/	[ʤ]	ʤ	j	d'	d'	d'
/k/	[k]	k	k	k	k	k
/ʔ/	[ʔ]	ʔ	ʾ	’	’	›
/b/	[b]	b	b	b	b	b
	[m]	m	m	m	m	m
/d/	[d]	d	d	d	d	d
	[r]	d	r	r	r	r
	[n]	n	n	n	n	n
/ɲ/	[ɲ]	ɲ	ñ	ń	ń	ń
/l/	[l]	l	l	l	l	l
/j/	[j]	y	y	y	y	y
/h/	[h]	h	h	h	h	h
	[ç]	h	x	x́	x́	χ́
/ɨ/	[ɨ]	ɨ	ə	ə̄	ə̄	u̲
/a/	[a]	a	a	a	a	a
/i/	[i]	i	i	i	i	i
/ɛ/	[ɛ]	e	e	e	e/ɛ	e/e̲
/u/	[u]	u	u	u	u	u
/ɔ/	[ɔ]	o	o	o	ɔ	o̲
/ṽ/	[ṽ]	ṽ	ṽ	ṽ	ṽ	ṽ
/ṽṽ/	[ṽː]	ṽṽ	ṽ̄	ṽṽ	ṽṽ	ṽṽ

2.2.2 Morphosyntax. Enggano has a rich variety of inflectional and derivational morphology, both nominal and verbal. I will provide here only a brief outline of some of the more salient points.

Nouns in Enggano inflect for one of three cases: core, oblique, and locative. These cases are marked by the prefixes *e-*, *u-*, and *i-*, respectively. An example of each is given in (2)–(4) below:

(2) E-keʔepa ẽʔãnã kĩ-hãhãmõ.
CORE-bird that VERB-fly
'That bird flies / those birds fly.' (Kähler 1940:86)

(3) Kia ki-pudu e-koyo ẽʔãnã iʔioo u-bohe.
3SG VERB-kill CORE-pig that PREP OBL-spear
'He kills that pig with a spear.' (Kähler 1940:196)

(4) Kia kĩ-hẽkũ i-dopo.
3SG VERB-sit LOC-ground
'He sits on the ground.' (Kähler 1940:182)

The core prefix also usually occurs in the citation form of nouns.[9] Throughout this paper, I indicate its presence by separating it with a hyphen, as in /e-koyo/ 'pig'.

Enggano has a noun class system with at least two classes distinguished: human and common nouns. Common nouns never inflect for number. Human nouns inflect for singular and plural, as shown in examples (5)–(6). Plural nouns do not inflect for case.

(5) Kia ki-pudu ẽ-pɨnãnãmĩ ẽʔãnã.
3SG VERB-kill CORE-youth that
'He kills that youth.' (Kähler 1940:85)

(6) Kia ki-pudu kã-pɨnãnãmĩ ẽʔãnã.
3SG VERB-kill PL-youth that
'He kills those youths.' (Kähler 1940:85)

Enggano has a rich variety of verbal morphology. There are several valence-changing affixes, aspect affixes, and two sets of agreement prefixes in Enggano. Verbs take either the verbal prefix *k(i)-*, in which case the word order is SVO, or they take the verbal prefix *k-a-* (analyzable as *ki+a-*), in which case the word order is VSO. Verbs marked with the prefix *ki-* are described by Kähler (1940:192–94) as having more nominal characteristics, while those with the prefix *ka-* are described as having more verbal characteristics. Examples of the same verb with each prefix are given in (7) and (8) below.

(7) E-koʔeʔe kĩ-kõkõnã kude i-hoo u-kue.
CORE-demon VERB-come.out from LOC-inside OBL-forest
'The demon came out from inside the forest.' (Kähler 1940:203)

(8) K-ã-kõkõnã-hã e-koʔeʔe kude i-hoo u-kue.
VERB-VERB-come.out-EMPH CORE-demon from LOC-inside OBL-forest
'The demon came out from inside the forest.' (Kähler 1940:203)

Alternatively, in certain situations, including when the verb is negated or subordinated (Kähler 1940:100–7), the verb takes a verbal agreement prefix drawn from the first of two such sets. An example is given in sentence (9) below.

(9) Keabaʔa ʔu-edo.
NEG 1SG-cry
'I don't cry / It's not the case that I cry.' (Kähler 1940:100)

Verbs marked with the active prefix *b(u)-*, used to advance the plot line (Kähler 1940:107), take agreement prefixes drawn from the second set. An example is given in sentence (10) below.

9. There is a small class of kin nouns that never occur with this prefix (Kähler 1940:86).

(10) Kia ki-dohoi e-itʃi ka-daʔibiada, ka-bu-dohoi, ka-bu-ʔoʔoboi
3SG VRB-hear CORE-voice PL-enemy 3SG-ACT-hear 3SG-ACT-creep
ki, ka-bu-paiʔio, ka-b-aʔobo iʔoo u-kaka kahaiʔi.
3PL, 3SG-ACT-spear 3SG-ACT-meet PREP OBL-person one
'He heard his enemies' voices, (so) he listened, he crept up to them, he speared one person whom he met with (on the way).' (Kähler 1940:107)

To summarize, nouns are divided into two classes, human and nonhuman. Singular human nouns and all nonhuman nouns are obligatorily marked for case. Verbs occur either with one of the verbal prefixes *k(i)-* or *k-a-* or with agreement prefixes.

3. DIACHRONIC DEVELOPMENT. In this section, I reconstruct the linguistic history of Enggano in three domains: phonology, morphology, and lexicon. In doing so, I show that Enggano is a Malayo-Polynesian language. I also show the ways in which Enggano has become aberrant when compared with other languages of Island Southeast Asia (ISEA).

I begin in 3.1 with the establishment of the sound correspondences between Enggano and Proto–Malayo-Polynesian. Phonologically, Enggano has undergone a number of unusual sound changes, notably: *t > *k*, *s > *k*, *m/n > *b/d*, *ŋ > *h*, and the creation of the system of word level nasal harmony on the basis of an unconditioned split. These sound changes are unique among languages of western ISEA. Nonetheless, with the exception of nasal harmony, the sound changes Enggano has undergone are regular.

In 3.2, I examine the morphological history of Enggano. I will show that most of the verbal morphology of Enggano has been retained from PMP. This is strong evidence that Enggano is indeed an Austronesian language rather than a non-Austronesian language with loans, as proposed by Blench (2014) and Capell (1982).

In section 3.3, I examine the lexical history of Enggano. Enggano has undergone lexical replacement to a massive extent, resulting in only 77 words in the extant corpus being confidently assigned an Austronesian origin.[10]

3.1 PHONOLOGY

3.1.1 Consonant changes

3.1.1.1 Consonant changes in Enggano. The principal consonant correspondences between PMP and Enggano are given in table 5. Most of these correspondences have already been noted by Nothofer (1986) and Schmidt (1988:34–35). Word-initial and word-medial changes are identical; word-final consonants are lost. No clear reflexes of PMP words containing the segments *z, *c, *r, and *g have been identified yet, and PMP *ñ and *y are each attested in only a single putative reflex.

Examples of each of the sound changes in table 5 are given in table 6. This table also records the number of instances of each sound change so far identified.

Concerning the changes whose outcome is a voiced stop, we find both oral and nasal allophones of the stop. In addition to examples such as *mata > *e-baka* 'eye' we find

10. Unless otherwise noted, Austronesian and MP reconstructions are taken from the online *Austronesian comparative dictionary* (Blust and Trussel ongoing).

TABLE 5. CONSONANT CORRESPONDENCES BETWEEN PMP AND ENGGANO

PMP		Enggano
*b,*p	>	p
*m, *w	>	b – [b]~[m]
*t, *s	>	k
*d, *n	>	d – [d]~[n]
*l	>	l > d
*ñ	>	n (ʔ)
*k	>	ʔ
*ŋ, *j	>	h
*q, *R, *h, *y	>	Ø
*z, *c, *r, *g	>	ʔ
*C#	>	Ø

TABLE 6. EXEMPLIFICATION OF ENGGANO CONSONANT CORRESPONDENCES

*C			PMP			Enggano		no.
*b	>	p	*baqbaq	'mouth'	>	e-papa	'cheek'	23
*p	>	p	*pusej	'navel'	>	e-puko	'navel, center'	15
*m	>	b	*mata	'eye'	>	e-baka	'eye'	5
*w	>	b	*wahiR	'fresh water'	>	e-bee	'sap, liquid'	2
*t	>	k	*taqi	'excrement'	>	e-kai	'excrement'	30
*s	>	k	*si-ia	'he, she'	>	kia	'he, she'	10
*d	>	d	*duRi	'thorn'	>	e-dudui	'thorn, spike'	3
*n	>	d	*anak	'child'	>	e-ada	'child; spawn, egg'	6
*l	>	l > d	*qulu	'head'	>	e-udu	'head'	12
*ñ	>	n (ʔ)	*peñu	'green sea turtle'	>	ẽ-pũnũʔõʔõĩ	'tortoise'	1
*k	>	ʔ	*kaka	'older sibling'	>	ʔaʔa	'older sibling'	14
*ŋ	>	h	*taliŋa	'ear'	>	e-kadiha	'ear'	5
*j	>	h	*ijuŋ	'nose'	>	e-ihu	'prow of a boat'	4
*q	>	Ø	*qaqay	'foot'	>	e-ae	'leg, foot'	18
*R	>	Ø	*Rumaq	'house'	>	e-uba	'house'	11
*h	>	Ø	*hasaŋ	'gills'	>	e-ãkã	'gills'	5
*y	>	Ø (ʔ)	*bayu	'pound rice'	>	kĩ-pãũ	'to pound'	1

examples such as *ama > *ãmã* 'father'. Oral allophones are the most common outcome, with 14 out of 21 attestations. Recall, however, that the realization of a voiced stop as either nasal or oral is a function of the synchronic phonology of the language (see 2.2.1.3). This means that the problem lies in the apparently unconditioned split of PMP words into words with either a nasal or oral quality (see 3.1.3).

Concerning the changes *t > *k* and *s > k, it is likely that *s first merged with *t (as /t/), which then underwent the change to /k/. Somewhat complicating this proposal is the fact that /s/ in borrowings is adapted as either /t/ or /k/. Thus, we find examples like *e-takᴜ* 'sago' from Malay *sagu* 'sago' (Kähler 1987:276), in addition to examples like *e-kapii* 'cow' from Malay *sapi*. The change *t > *k* in several Austronesian languages, including Enggano, is discussed in Blust (2004). See also 3.1.1.2 below for more discussion of this change.

PMP *l became /l/ in certain dialects of Enggano and /d/ in other dialects. Helfrich and Pieters (1891), who record data from at least two dialects, give both <*èoeloe*> [eulu]

and <*èoedoe*> [eudu] (< *qulu) for 'head' (Helfrich and Pieters 1891:580), in addition to many similar examples. By the time Kähler began his work on the language, /l/ and /d/ were merging or had already merged as /d/, though Kähler does record dialect variants with /l/ for some words.[11]

Both PMP *ŋ and *j merged as /h/ in Enggano. Recall that /h/ has the allophone [ç] after the high vowel /i/. This allophonic distribution can be accounted for by positing an intermediate stage of *ŋ, *j > *x, with subsequent split of *x > [ç] after high vowels (as attested synchronically in standard German) and *x > [h] elsewhere.[12] Additionally, based on the observation that *m/*n usually became [b]/[d], it is probable that PMP *ŋ first became [g], which subsequently lenited to a fricative. The five-stage pathway in (11) below is possible.

(11) 1 2 3 4 5
*ŋ > *g > *ɣ > *x > h~ç

The change *ŋ, *j > *h* also provides circumstantial evidence that Proto-Austronesian (PAN) *j was velar. If PAN *j was a velar fricative [ɣ], as suggested by Ross (1992:32), the merger of *j and *ŋ in Enggano would have taken place at stage 3 in (11) above.

The PMP consonants *g, *r, and *z have no clear reflexes in Enggano. Based on the change *ŋ, *j > /h/, we would probably expect *g > /h/. However, no putative reflexes attesting this change have been identified. Two possible reflexes of PMP *g in Enggano are *e-pado* < *pager 'fence', which would attest a change *g > *d*, and *kĩpã-pãkõ* 'to go to sleep (of a limb)' < *pagel 'tired, exhausted', which would attest a change of *g > *k*.

3.1.1.2 Consonant changes cross-linguistically. The consonant changes in Enggano have resulted in a complete restructuring of the inherited consonant inventory. While PMP is reconstructed with between 21 and 24 contrastive consonants, Enggano has only nine or eleven.

Of the changes Enggano has undergone, *t > *k*, *s > *k*, *m/*n > *b*/*d*, and *ŋ > *h* are cross-linguistically rare. None of these changes are paralleled in Western ISEA. For this reason, I discuss each change in turn.

***t > k*:** Blust (2004) provides an extensive and thorough discussion of the change *t > *k* in a number of Austronesian languages. He notes that this change is rare outside of Austronesian languages in ISEA, and that within this area it is concentrated in eastern ISEA and the Pacific. Enggano is the sole western representative of this change.

***s > k*:** The change *s > *k* is a very unusual change. This change involves fortition, a change of place, as well as loss of /s/ from the phoneme inventory. No other language of western ISEA has undergone such a change. I have so far been able to uncover only three other languages of ISEA in which this change is attested.[13]

11. Kähler (1987:404) gives *ʔalua* as a dialect variant of *ʔadua* 'two' < PMP *duha. The form *ʔalua* is not recorded in the discussion on numerals in Kähler's grammar sketch (Kähler 1940:189–90) and would be the only attestation of PMP *d becoming /l/. None of the pre-Kähler materials gives a form with <l> for this lexeme; all transcribe it with <d/r>. I hypothesize that the merger of /l/ with /d/ was so far gone by Kähler's time that *ʔalua* was recorded as a kind of dialect hypercorrection for *ʔadua*.

12. While this account may be attractive, it is only supported by circumstantial evidence. Languages abound in which /h/ has developed the allophone [ç] without any intermediate [x] stage. An example is English, for words such as <*human*> /hjuːmən/ > [çuːmn̩]

One is Sera, an Oceanic language of the Schouten subfamily spoken in north New Guinea. In Sera, Proto-Oceanic (POC) *s apparently became *k* word-finally, as in Proto-Oceanic (POC) *pose > *bek* 'paddle' (Ross 1988:127,130). Note, however, that Blust (2004:392) finds the etymologies supporting *s > *k* in Sera unconvincing.

The second instance of *s > *k* is in two Oceanic languages of the Central Papuan family spoken on the Papuan tip, Mekeo and Magori. In Mekeo, *s has universally become *k* (Ross 1988:206), as in *susu > *kuku* 'female breast' (Blust 2004:392), while in Magori, *s became *k* word-initially and split into *r*~*k* word-medially (Ross 1988:206). Note, however, that Ross (1988:206) reconstructs *r as the Proto-Central Papuan reflex of POC *s, in which case the change appears to be one of *s > *r > *k*. Other Central Papuan languages reflect POC *s as *r*, *d*, *t*, *g*, and *ʔ*.

Recall that it is probable that PMP *s first became *t* in Enggano before becoming *k*. The change *s > *t* is still a highly unusual change and is poorly attested cross-linguistically. No other language of western ISEA displays such a change.[14]

s > *t is attested in the South Babar languages, MP languages spoken on and around Babar Island in Southern Maluku (Taber 1993:412–35; Blust 2004:383). Examples include PMP *susu > Emplawas *tut-ijɛʔ* 'breast' and PMP *asu > Emplawas *ut-iɛʔ* 'dog'.[15] Other Austronesian languages that have undergone *s > *t* include Aua and Wuvulu, two closely related Oceanic languages of the west Admiralties (Ross 1988:324), as shown by POC *susu > *tutu-* 'breast' and *saqit > *tawi* 'needle' (Ross 1988:336). Likewise, *s has split into /s/~/t/ in Papapana, an Oceanic language of Bougainville (Ross 1988:221), as well as in the Oceanic Mengen languages of New Britain (Ross 1988:169).

It is of note that those Austronesian languages that have undergone a change of *s > *k* or *s > *t* are all found in regions where Austronesian languages have been in heavy contact with non-Austronesian languages. This change thus provides circumstantial evidence that Enggano has suffered contact effects.

***m/n > *b/d*:** A change of nasals to voiced plosives[16] is vanishingly rare cross-linguistically. The same change is reported for several languages in northwest America around Puget Sound and the Pacific coast, where it is found in three unrelated language families (Thompson and Thompson 1972). This change is entirely absent in ISEA.

Adelaar (1995:87–89) discusses a superficially similar change in several languages of Borneo and the Malay Peninsula. In these languages, word-final nasals have become nasally released plosives. Usually the outcome is a voiceless nasally released plosive /-pm/, /-tn/, or /-kŋ/, though sometimes the outcome is voiced. When another nasal precedes the final nasal, the change is blocked. Adelaar (1995:87) cites data from Sungkung (Land Dayak), showing PMP *ijuŋ > *nukŋ* 'nose' and *zalan > *daʔatn*

13. Regionally, Jiamao and the southern Hlai Tai Kadai languages of Hainan Island in southern China also attest a change of *s > *t* (Norquest 2007:95).
14. Except for some Malayic languages that display the change *s > *t* as an apparent dissimilation from a following *s in the same word (Adelaar 1992:204).
15. The South Babar languages also underwent a change of *t > *k* (before *s > *t*), as exemplified by PMP *telu > Emplawas *wokɛl* 'three' and PMP *batu > Emplawas *wak-ijɛʔ* 'stone' (Taber 1993).
16. While the Enggano change is technically a split of *m/n > [b/d]~[m/n] (as determined by the nasal specification of the word), a change of nasals to stops is still attested. The voiced plosive allophones are also the majority outcome.

'path'. No change occurs when another nasal precedes the final nasal: for example, PMP *enem > Sungkung *nəm* 'six'.

In Urak Lawoi', a Malayic language of Southwest Thailand, the same change has taken place with a subsequent change of the nasally released plosives to plain voiceless plosives. Thus we find PMP *ijuŋ > *hidok* 'nose' and *zalan > *ʤalat* 'path', but *enem 'six' > *nam* and *taŋan 'finger, toe' > *taŋan* 'hand' (Hogan 1989). The change in Urak Lawoi' is also attested in at least some varieties of Mentawai, Enggano's northern neighbor (Nothofer 1986:99). Examples include *qabaŋ > *abak* 'canoe', *quzan > *urat* 'rain', and *paŋdan > *padat* 'pandanus' but *enem > *enem* 'six'.

The change of word-final nasals to nasally released plosives (thence to simple plosives in some languages) is also attested in several Austroasiatic languages of the region. Examples include Temiar and Semai (Adelaar 1995:88) of the Malay Peninsula, and Shom Pen of Great Nicobar (Blench and Sidwell 2011:13–14). That this change is found in different language families in a single region is suggestive of a contact relationship between these languages.

Although superficially similar, the Enggano change of *m/*n > *b*/*d* is of a fundamentally different nature from the change of final nasals to nasally released plosives discussed in Adelaar (1995). Adelaar's change only affects word-final nasals, while in Enggano all nasals are affected. Second, in Adelaar's change the outcome is most often a voiceless (nasally released) plosive,[17] while in Enggano the change could not have gone through a voiceless stage, as we would then expect PMP *m to have merged with PMP *p. The change *m/*n > *b*/*d* is thus unique among languages of ISEA.

ŋ > *h: the change *ŋ > *h* is also an unusual change. This change finds a partial parallel in the varieties of Sama-Bajaw spoken in and around southeast Sulawesi. In these varieties, *ŋ has become *h* ~ *χ* word-finally, while in other positions it is retained as /ŋ/ (Pallesen 1985:54). Thus we find, for instance, *ujuŋ > *uroh* 'nose' and *beteŋ > *bittah* 'belly', but *teliŋa > *taliŋa* 'ear' (data from Youngman 2005). Given that *ŋ > *h* is attested only in certain varieties of Sama-Bajaw, and even then only word-finally, it is certainly an independent sound change and does not attest a period of common development between Sama-Bajaw and Enggano.

w > *b: the change of *w > *b* is the only unusual sound change found in other languages of western ISEA. It is attested in Rejang (Blust 1984b:426), Mentawai, and sporadically in the Lampungic languages (Anderbeck 2007a:70). In Rejang, *w > *b* only occurred word-initially, and *w underwent no change word-medially: Rejang examples include *waRi 'day' > *biləy* and *waRet 'root' > *balət*, while Mentawai examples include *walu 'eight' > *balu* and *sawa 'python' > *saba* 'a large snake'. The two Enggano attestations of this change are *wahiR 'fresh water' > *e-bee* 'sap, liquid' and *kawil 'fish-hook' > *e-ʔãmĩ* 'fish-hook, barb'. While this change has the potential to link Enggano and Mentawai (see 4.1.1.1), that it is attested in Rejang is indicative of it being a change that arose regionally and spread after these languages arrived in the region.

I have discussed five sound changes that Enggano has undergone that are typologically unusual among languages of western ISEA: *t > *k*, *s > *k*, *m/*n > *b*/*d*, *ŋ > *h*, and

17. While in some languages the outcome is a voiced nasally released plosive (Adelaar 1995:87), the acquisition of voicing could be a later development.

*w > *b*. While these changes have resulted in Enggano having an aberrant phonology, it is important to note that they are regular and do not indicate that Enggano is not an Austronesian language. The change *s > *k*, being found elsewhere only in regions where both Austronesian and non-Austronesian languages are spoken, is also suggestive of Enggano once having been in contact with a non-Austronesian language.

3.1.2 Vowel changes. The principal correspondences between PMP and Enggano vowels are given in table 7. The vowels *e and *u have phonologically conditioned outcomes, as shown in the 'ENV.' column. Examples of each change and the number of attestations are given in table 8. PMP *h was lost before the changes affecting the PMP diphthongs.

There are also two words that possibly attest the change *e > *i* /_*b. They are *qebel 'smoke' > *ẽ-ĩpõ* 'smoke, steam, fog' and *tebuh > *e-kípokipoo* 'wild sugarcane'. The strange conditioning environment, and the fact that this change did not occur before PMP *p, leads me to suspect that the posited conditioning environment is spurious, and that these words simply show a sporadic change of *e > /i/.

PMP *uy may have become /i/ in Enggano. There is only one possible reflex of *uy: *hapuy > *e-obi* 'fire'. This reflex is highly problematic, with irregular *a > *o* and *p > *b*. It is probably a chance resemblance. The development of PMP *iw is unknown.

Finally, since Kähler's work on the language in 1937–1938, two other changes have affected vowels. Enggano /o/ has split into /o/~/ɔ/, and word-final vowels have been lost (at least in citation form). Both changes are attested by Kasim (1987), Nothofer (1992), and Yoder (2011).

TABLE 7. VOWEL CORRESPONDENCES BETWEEN PMP AND ENGGANO

PMP		Enggano	ENV.
*a	>	a	
*e	>	o	
	>	u	/_Cu
*i	>	i	
*u	>	u	
	>	o	/_*R
*ay	>	e	
*au	>	o	

TABLE 8. EXEMPLIFICATION OF ENGGANO VOWEL CORRESPONDENCES

*V			ENV.	PMP		Enggano		NO.
*a	>	a		*kaka	'older sibling'	ʔaʔa	'older sibling'	66
*e	>	o		*telen	'swallow'	ki-kodo	'swallow'	20
	>	u	/_Cu	*qetut	'fart, flatulence'	ẽ-ũkũ	'fart, flatulence'	2
*i	>	i		*kita	'1PL.EXCL'	ʔika	'1PL.EXCL'	29
*u	>	u		*ka-duha	'two'	ʔadua	'two'	47
	>	o	/_*R	*ikuR	'tail'	e-iʔo	'rear-end, stern'	4
*ay	>	e		*m-atay	'die'	e-kabake	'corpse'	4
*au	>	o		*kahu>*kau	'2SG'	ʔo-	'2SG verbal prefix'	2

The change of /o/ > /o/~/ɔ/ is partially conditioned by the quality of the following vowel. Before high vowels, /o/ became /ɔ/, and before the low vowel /a/, it remained unchanged. When the vowel following was a mid-vowel, the split appears to be unconditioned. This is illustrated in table 9.[18]

While Enggano has undergone several unusual consonant changes, the vowel changes are all well attested both cross-linguistically and among other Austronesian languages. I note, however, that the high central vowel /ɨ/ does not occur in any words derivable from PMP. It may have entered Enggano via contact with a pre-Austronesian language of the region that possessed such a vowel.

3.1.3 Nasal harmony

3.1.3.1 Nasal harmony in Enggano. The system of word-level nasal harmony in Enggano is represented among MP inheritances as an unconditioned split. Of the 77 words for which a nonproblematic PMP etymology has so far been established, 20 are nasal, 51 are oral, and 6 show variation.

We might expect that nasalization has arisen through the loss of nasal consonants, as has happened in modern French. Or we might expect that nasalization is associated with the change *ŋ > /h/. However, in both instances we find both nasal and oral reflexes in Enggano. Complicating the picture are six words with PMP etyma that have both oral and nasal variants (marked N~O), of which four are given in table 10.

3.1.3.2 Nasal harmony cross-linguistically. The system of nasal harmony found in Enggano, in which nasalization is a kind of word-level prosody, is very rare. The only

TABLE 9. SPLIT OF ENGGANO /o/

/o/ >	Kähler	Yoder	
ɔ /_(C)V+HI	ʔakodu	ʔakɔr	‘three’
	e-odi	i-ɔr	‘price’
o /_(C)V+LO	e-ʔadopa	ʔarop	‘underarm’
o ~ ɔ elsewhere	e-boo	bɔ	‘water’
	e-poo	po	‘coconut tree’

TABLE 10. ENGGANO NASAL HARMONY

	PMP		Enggano	
*N > Ø	*beteŋ	‘belly’	e-poko	‘interior; navel’
	*hasaŋ	‘gills’	ẽ-ãkã	‘gills’
	*telen	‘swallow’	ki-kodo	‘swallow’
	*taŋan	‘finger, toe’	ẽ-ãkãhã	‘stem, stalk’
*ŋ > /h/	*taliŋa	‘ear’	e-kadiha	‘ear’
	*bubuŋ-an	‘(ridge of the) roof’	ẽ-pũhã	‘gable, ridge, apex’
N~O	*bahuq	‘smell, odor’	e-pau ~ e-pãũ	‘stench, odor’
	*buluŋ	‘medicinal herbs’	e-pudu ~ ẽ-pũnũ	‘leaf’
	*keti	‘dry up, low tide’	e-ʔoki ~ ẽ-ʔõkĩ	‘low tide’
	*nabuq	‘fall’	ki-dapu ~ kĩ-nãpũ	‘to strike (lightning)’

18. It is not uncommon (though far from universal) for a word in Kähler’s dictionary to be listed as having alternatives with either /o/ or the high central vowel /ɨ/; one example is *ki-ʔikáhai* ~ *ki-ʔokáhai* ‘to laugh at s.o.’ (Kähler 1987:62). It is unclear whether this is connected with the later split of /o/ > /o/, /ɔ/.

languages of the world displaying a similar system of word level nasal harmony are the Tucanoan languages of the Amazon (Barnes 1996, 1999:211–12; Kaye 1971).

Unlike the situation in Enggano, where all affixes are unspecified for nasality, in the Tucanoan languages, different morphemes can carry different nasality specifications. In Tuyuca, an Eastern Tucanoan language, some affixes are specified as [+N], some are specified as [–N] (that is, oral), and some are unspecified for nasality (Barnes 1996:35–39). Stems are specified as either [±N]. An example of each kind of suffix attaching to both [+N] and [–N] stems is given in table 11.

Although nasalization as a feature associated with entire words is only found in Enggano and the Amazonian Tucanoan languages, similar systems at the syllable level are slightly more common. I'saka, a Skou language of northern Papua New Guinea, is the language geographically nearest to Enggano with syllable-level nasalization (Donohue and San Roque 2004:19).[19] Examples of I'saka nasalization are given in table 12.

Among Austronesian languages, I know of only two that exhibit any kind of syllable-level nasalization: Cèmuhî (Rivierre 1980) and Paicî (Rivierre 1974; Gordon and Maddieson 1996), two Oceanic languages of New Caledonia. In both languages, oral and nasal vowels contrast. However, the prenasalized plosives [mb], [nd], [ŋg] are in complementary distribution with the nasals [m], [n], [ŋ]. Prenasalized plosives are found only before oral vowels, while nasals are found only before nasal vowels. It is, therefore, possible to analyze each set as allophones of a single series that assimilates to the nasality of the syllable. Examples from Paicî are given in table 13.[20]

While such a system is entirely absent from western ISEA, languages with a more familiar system of contrastive nasal and oral vowels are found in the same region. Acehnese, an Austronesian language of north Sumatra, has ten oral vowels and seven nasal vowels (Durie

TABLE 11. TUYUCA NASALIZATION

STEM	SUFFIX	STEM	SUFFIX	OUTCOME	
[–N]	[ ]	sia	-ya	siayá	'tie-IMP'
[–N]	[–N]	tutí	-ri	tutíri	'scold-IMP'
[–N]	[+N]	koá	-mã	koamã́	'dig-PERMISSIVE'
[+N]	[ ]	sĩã	-ya	sĩãŋ̃á	'kill-IMP'
[+N]	[–N]	w̃ãkã́	-go	w̃ãkãgó	'wake.up-EVID'
[+N]	[+N]	w̃ãkã́	-ŋõ	w̃ãkãŋṍ	'wake.up-DEP'

TABLE 12. I'SAKA NASAL LEVEL PROSODY

ORAL				NASAL			
/ba˥/	>	[ba˥]	'elder sibling'	/baȷ/ + N	>	[mãȷ]	'hot'
/daȷ/	>	[daȷ]	'thorn'	/daȷ/ + N	>	[nãȷ]	'make wet'
/jɛȷ/	>	[jɛȷ]	'bone'	/ju˥ȷ/ + N	>	[ɲ̃ũ˥ȷ]	'bird'
/wi˥ȷ/	>	[wi˥ȷ]	'water, river'	/wi˥ȷ/ + N	>	[w̃ĩ˥ȷ]	'banana'

19. Other languages of Papua in which voiced plosives and nasals do not contrast, or where the latter are lacking entirely, include Asmat of western Papua (Voorhoeve 1965:19–20), as well as several of the Western Lakes Plains languages of western Papua (Clouse and Clouse 1993:7–8).

20. A system the same as that found in Cèmuhî and Paicî is also found in the Jukunoid languages of West-Africa (Hyman 1975:262; Shimizu 1980:20).

TABLE 13. PAICÎ SYLLABLE LEVEL NASAL PROSODY

ORAL				NASAL			
/ʧoːˀ/	>	[ʧoːˀ]	'look'	/ʧoːˀ/ + N	>	[ʧõːˀ]	'cloth'
/ᵐboːɬ/	>	[mboːɬ]	'descend'	/ᵐboːɬ/ + N	>	[mõːɬ]	'cold'
/ⁿdaɬ/	>	[ndaɬ]	'spear'	/ⁿdaːɬ/ + N	>	[nãːɬ]	'to'

1985:16). Likewise, the Aslian languages of the Malay Peninsula generally have both oral and nasal vowels. Semelai has a full set of ten oral and nasal vowels (Kruspe 2004:37).

The creation of contrastive nasalization at the word level, which is reflected as an unconditioned split among inheritances from PMP in Enggano, is a highly unusual innovation. This system is unique among languages of the entire Asia-Pacific region, finding only partial parallels in northern New Guinea and New Caledonia.

3.1.4 Summary. Phonologically, we find that Enggano has undergone several unusual sound changes that are regionally unattested. These include the consonant changes *t > *k*, *s > *k*, *m/*n > *b*/*d*, and *ŋ > *h*, as well as the creation of a system of word-level nasal harmony. While these changes have led to Enggano having a highly aberrant phonology when compared to other languages of western ISEA, these changes are regular (with the exception of nasal harmony). Having identified the regular sound correspondences between Enggano and PMP, we are now in a position to establish cognates in the morphology and lexicon.

3.2 DIACHRONY OF THE MORPHOLOGY. In the previous section, we saw that Enggano is highly innovative phonologically, having undergone several cross-linguistically rare and, among languages of western ISEA, unique sound changes. Morphologically, however, Enggano is comparatively conservative. A large portion of its rich verbal and pronominal morphology is inherited from PMP. Only among the nominal morphology do we find that the majority of morphemes are innovative.

3.2.1 Pronominal affixes. In this section, I discuss the origin of Enggano pronominals. Enggano has four pronominal paradigms: free pronouns, genitive suffixes, and two sets of verbal agreement affixes. While there are some interesting systemic innovations in these paradigms, most of the forms are clear PMP inheritances. In this respect, Enggano is conservative, and pronominals provide strong evidence that Enggano is indeed a MP language (contra Blench 2014 and Capell 1982).

Before discussing the origin of the pronominal affixes, it is helpful to first discuss the reconstructed PMP pronouns and the Enggano free pronouns. The pronouns reconstructed for PMP are given in table 14, adapted for PMP from Ross (2002:36), who reconstructs for PAN. Forms that are probably retained in one of the Enggano pronominal paradigms are in boldface. The Enggano free pronouns are given in table 15.

First, note that Enggano has developed a minimal/augmented system in which the form *ʔika* (<*k-ita 1PL.INCL) refers only to the speaker and addressee. (It is described by Kähler [1940:88] as a "dual.") I use the labels SG and PL for ease of comparison.

The 3SG Enggano pronoun *kia* derives straightforwardly from PMP *s-ia. The 1SG.INCL *ʔika* is, likewise, a regular reflex of PMP *kita. While the 1PL.INCL *ʔikaʔa* is clearly related to the singular form, the source of the final syllable is unclear.

Enggano *ʔai* '1EXCL.PL' shows loss of the medial *m of PMP *kami. This loss is also found in several other MP languages, including nearby Mentawai, which has the form *kai* (Kähler 1987:9), and languages as far away as Mori-Bawah and Kulisusu of southeast Sulawesi, which have *iŋkai* and *iŋgai*, respectively (Mead 1998:145). The 2SG pronoun *ʔoʔo* appears to come from *kahu > *kau > *ko > *ʔo, though the source of the extra syllable is not clear.

The 1SG pronoun *ʔua* could either be a reflex of the reconstructed GEN1 clitic *=ku, with an unexplained final syllable, or it may be a reflex of the free pronoun *aku, with the loss of the initial vowel influenced by the analogous 1st person pronominal affixes. The origin of the Enggano 3PL pronoun *ki* is unclear. It could be connected with either PMP 3PL *si-da or PMP 3SG *s-ia, though in both cases the complete loss of the final syllable is hard to explain. Finally, the 2PL pronoun appears to be a reflex of Ross's GEN3 2SG pronoun *ni-hu, with an unexplained initial vowel.

I now turn to the Enggano pronominal affixes. I begin by discussing the genitive suffixes, given in table 16. The 1INCL.SG form *-ka* and the 3PL form *-da* derive regularly from Ross's GEN1 clitics *=ta and *=da, respectively. The 2SG form *-bu* derives regularly from Ross's 2PL GEN1 form *=mu, which had become 2SG by PMP (Blust 2003). The 1SG form *-ʔVu* has developed an echo vowel (see 2.2.1.2,), but is otherwise a regular reflex of Ross's GEN1 *=ku.

1EXCL.PL *-dai*, 2PL *-d(i)u*, and 3SG *-dia* are reflexes of Ross's GEN3 reconstructions *n-ami, *ni-hu, and *n-ia, respectively.The GEN3 2SG pronoun *ni-hu has become plural

TABLE 14. PMP RECONSTRUCTED PRONOUNS (after Ross 2002:36)

	Free	Free polite	GEN1	GEN3
1SG	***aku**	—	***=ku**	*n-aku
2SG	***hu**	***ka-hu**	***=hu**	***ni-hu**
3SG	***s-ia**	—	***=ia**	***n-ia**
1EXCL.PL	*i-ami	***k-ami**	*=mi	***n-ami**
1INCL.PL	*ita	***k-ita**	***=ta**	*n-ita
2PL	*i-amu	*k-amu, *ka(mu)i(h)u	***=mu**, *=miu	*n-amu
3PL	***si-da**	—	***=da**	*ni-da

TABLE 15. ENGGANO FREE PRONOUNS (Kähler 1940:106)

	SG (MIN)	PL (AUG)
1EXCL	ʔua	ʔai
1INCL	ʔika	ʔikaʔa
2	ʔoʔo	adiu, aduu
3	kia	ki

TABLE 16. ENGGANO GENITIVE SUFFIXES (Kähler 1940:106)

	SG	PL
1EXCL	-ʔVu	-dai
1INCL	-ka	-kaʔa
2	-bu	-d(i)u
3	-dia	-da

in Enggano. Like the free pronoun *ʔai,* the 1EXCL.PL form *-dai* shows a loss of medial *m from *n-ami. The 2PL has two variant forms: *-du* and *-diu*. The (optional) loss of /i/ may have arisen as a result of paradigmatic pressure from the 2SG form *-bu*.

In addition to the genitive suffixes, there are two sets of verbal pronominal prefixes. Set A prefixes are used in certain contexts when the verb would otherwise take the generic verbal prefix *ki-*. Set B prefixes are used when the verb takes the active prefix *b(u)-*. These prefixes are given in table 17.

TABLE 17. ENGGANO VERBAL AGREEMENT PREFIXES (Kähler 1940:106)

	Set A		Set B	
	SG	PL	SG	PL
1EXCL	ʔu-	ʔu-..-ʔai	ʔu-	ʔu-..-ʔai
1INCL	ka-	ka-..-aʔa	ka-	ka-..-aʔa
2	u-	u-..-aʔa	ʔo-	ʔo-..-aʔa
3	i-	da-	ka-	ki-/di-

The 3SG Set A prefix is realized as /i/ before consonants, /ɲ/ before vowels when the stem is nasal and contains a voiced alveolar stop, and /y/ before vowels in other environments. Examples of each form are *i-pudu* '3SG-kill', *ɲ-ãnẽnẽ* '3SG-be.fine', and *y-ãʔãhãũã* '3SG-bear.fruit'.

The plural forms (with the exception of 3rd person) are all circumfixes. In the case of the 1EXCL.PL *ʔu-..-ʔai*, the suffixal element is identical to the 1EXCL.PL free pronoun *ʔai*, and the prefixal element is a reflex of Ross's GEN1 1SG clitic *=ku. The second element of the other plural circumfixes, *-aʔa*, appears connected with the "extra" syllable in the 1INCL.PL free pronoun *ʔikaʔa*, which probably had the pre-Enggano form **ʔika-aʔa,* though the ultimate origin of this *-aʔa* remains unknown.

The set A singular prefixes derive from Ross's GEN1 clitics, the only minor wrinkles being the loss of the final vowel in the development of 3SG *ia > *i-*, and the extension of the singular 1st and 2nd person forms into the plural. While it is tempting to link the *ɲ-* allomorph of the 2SG prefix with reconstructed *n-ia, this is unlikely, as the reflex of *n-ia in the Enggano genitive paradigm is *-dia/-nia* rather than ***-ɲa*. It seems that the *ɲ-* allomorph is a later development.

The etymologies of the set B prefixes are slightly more obscure. The 1st person forms correspond exactly to the set A affixes, and presumably have the same history. The 2nd person prefix *ʔo-* is a reflex of the PMP free pronoun *kahu. The 3SG form *ka-* could be an irregular development of *si-ia, but it is hard to account for the loss of the *i.[21] There are two 3PL forms, *ki-* and *di-*; the former is presumably from the 3PL free pronoun *ki*, while the latter could be from Ross's 3PL GEN1 clitic *=da, with the irregular vowel change influenced by the alternate from *ki-*.

Among all four Enggano pronominal paradigms, there are five main innovations, of which four (probably) involve innovative forms. These are summarized below:

i. *adiu* (2PL free), *-d(i)u* (2PL GEN) < *ni-hu 2SG GEN3
ii. *ki* (3PL free, 3PL set B)

21. Kähler (1940:108) posits the change *kia > k'a > ka*. This is highly unlikely, as it would be the only example of the sequence *ki*V becoming *k*V.

iii. *di-* (3PL set B)
iv. *ka-* (3SG set B)
v. *-aʔa* (1INCL.PL free, GEN, set A, set B), 2PL (set A, set B)

Of these innovations, the first, in particular, sets Enggano apart from the other Barrier Islands languages. All other Barrier Islands languages are conservative, displaying a reflex of PMP *ka(mu)i(h)u or *kamu: Mentawai *kam*, Nias *yaʔami*, Sikule *yami*, Simeulue *(ya)ame/(e)diame*, and Southern Batak *hamu(na)*.

In summary, Enggano has developed three sets of pronominal affixes. However, these affixes are nearly all reflexes of reconstructed PMP pronominals. These forms provide strong evidence that Enggano is indeed a MP language.

3.2.2 Verbal morphology. As with the pronominal morphology, most of the Enggano verbal morphology can be traced to reconstructed PMP affixes. The Enggano verbal affixes are given in table 18, alongside PMP etyma where these are known. Many prefixes have both a preconsonantal allomorph, occurring with a vowel, and a prevocalic allomorph, in which the vowel is optional. PMP reconstructions are from Blust (2003).

Verbs always occur with either of the prefixes *k(i)-* or *ka-*. The former is probably historically a reduced form of the 3SG pronoun *kia* < *s-ia. While the origin of the latter is unclear, it could be connected with the Set B 3SG prefix *ka-* (also of unclear origin).

TABLE 18. ENGGANO VERBAL MORPHOLOGY

PMP		Enggano	
*-a	subjunctive	-Ca	irrealis
?*-aken	beneficiary	-Caʔa†	instrument/goal applicative
*-an	locative voice	-Ca	V→ locational N
?*‹ar›	plural actor	aha-, ‹ãn›	intensive
*-en	patient voice polite imperative	-Co	obligation
*-i	locative applicative	-Ci	locative/source applicative
*‹in›	perfective	d(i)-	passive
?*ka-	past participle	aʔa-	resultative
*ma-	stative verb		
*maŋ-	intransitive verb	ba-	progressive
*maR-	active verb		
*pa-	causative	pa-	causative
*paŋ-	agent/instrument	pa(V)-	V→ instrumental N
*taR-	accidental	ka-	accidental
*‹um›	agent voice	b(u)-, ‹ub›	active
*sia	3SG pronoun	k(i)-	verb (‘nominal’)
		k-a-	verb (‘verbal’)
?*baka	despite, nonetheless	-baʔa‡	‘indeed’
		-baha	‘also’
		po-/pu-	V→ agentive N
		-pua	‘now’
		-ha	emphasis
		V-	incidental instrument

† The regular reflex would be **-*Caʔo*.
‡ The regular reflex would be **-*paʔa*.

Kähler (1940:203) analyzes the prefix *ka-* as synchronically *k(i)-* + *a-*; he describes verbs with *ka-* as having more "verbal characteristics" than verbs with the prefix *k(i)-*.[22]

The active affix *b(u)-* has the optional infixal allomorph *‹ub›* with stems that begin with /k/: *bu-+kai* > *bu-kai* ~ *k‹ub›ai* 'seize'. This infixal allomorph provides strong evidence that this prefix is derived from the PMP actor focus infix *‹um›.

The passive prefix *d(i)-* from PMP *‹in› does not have an infixal allomorph. This prefix *d(i)-* can be compared with cognate *ni-,* which occurs as an allomorph of *‹in›* in many MP languages, one being Tolaki in southeast Sulawesi (Mead 1998:158).

Some suffixes occur with a thematic consonant that is lexically determined by the root to which they attach. The suffixes -C*a* 'irrealis', -C*o* 'obligation', and -C*a* 'location' occur with /h/, /y/, or Ø. The LOC/SOURCE applicative -C*i* takes /d/, /h/, or Ø. Furthermore, when the thematic consonant is /h/, an echo vowel of the final vowel of the stem occurs: thus *-hVi* (see 2.2.1.2). The INST/GOAL applicative -C*aʔa* takes the thematic consonants /d/, /h/, /y/, or Ø.

The intensive prefix *aha-* has quite complex allomorphy, with some stems also undergoing morphophonemic changes. The allomorphy and associated morphophonemics are summarized in table 19. Although the origins of this allomorphy are obscure, Kähler (1940:205–7) connects the voicing alternations displayed by stems with a nasal-stop cluster. If this nasal were realized as *ŋ before vowels, this could explain the forms with medial /h/. The infix allomorph ‹ãn›, found after stems beginning with /h/, is plausibly a reflex of PMP *‹ar› 'PL actor'.

A large amount of Enggano verbal morphology is inherited from PMP. Of the 21 affixes identified in Enggano, twelve can be confidently assigned an Austronesian etymology, with a further four being plausible, though problematic, inheritances. Given the small number of lexical items retained in Enggano (see 3.2 above), the verbal morphology found in Enggano is particularly important in classifying Enggano as a MP language.

Given that bound morphology is much more resistant to borrowing than lexical items (Thomason 2001), the fact that most of the verbal affixes and pronominal affixes in Enggano are Austronesian in origin is convincing evidence that Enggano is *not* a non-Austronesian language with Austronesian loans, as suggested by Blench (2014) and Capell (1982).

TABLE 19. INTENSIVE PREFIX ALLOMORPHY (Kähler 1940:205–7)

AFFIX FORM	STEM FORM	STEM CHANGES	STEM	STEM.INTENSIVE	
k-aha-	/stop+VOICE		√mĩnŭʔũĩ	k-ãhã-mĩnŭʔũĩ	'smell'
k-aha-	/_V		√odi	k-aha-odi	'buy'
k-aha-	/_ʔ	/ʔ/→/ʔa/	√ʔobu	k-aha-ʔ‹a›obu	'do/build'
k-ahV-	/_ʔ		√ʔobu	k-aho-ʔobu	'do/build'
k-a		/k/→/d/	√kĩkĩ √kodo	k-ã-nĩkĩ k-a-dodo	'rake' 'swallow'
k-a		/p/→/b/	√pãũ √pudu	k-ã-mãũ k-a-budu	'crush' 'kill'
k-a		/h/→h‹ãn›	√hõmẽ	k-ã-h‹ãn›õmẽ	'tread on'

22. Verbs with the progressive prefix *ba-* are always preceded by *ka-* rather than *ki-*.

3.2.3 Nominal morphology. While the pronominal and verbal morphology of Enggano is conservative, the nominal morphology is not. This nominal morphology consists of three case prefixes, a number prefix, and a pragmatic suffix. They are given in table 20.

The plural prefix has two forms, *ka-* and *kaho-*. The latter is used on some kin terms. The locative prefix *i-* has the allomorph *y-* before vowel-initial stems. It is the only nominal affix with a clear PMP etymon: the locative preposition *i (Blust 2003:472). The remaining four nominal affixes have no known Austronesian etymologies; coming as they do from "nowhere," they provide circumstantial evidence that Enggano has suffered contact effects.

TABLE 20. ENGGANO NOMINAL AFFIXES

PMP		Enggano	
		e-	core (S/A/P)
		u-	oblique
*i	locative	i-	locative
		ka(ho)-	plural
		-daʔa	topicalizer

3.3 DIACHRONY OF THE LEXICON. In this section, I discuss the changes that Enggano has undergone in its lexicon. Examination of the lexicon alone was the basis of Dyen's (1965) lexicostatistical classification of Enggano as a first-order subgroup of Austronesian. The lexical evidence is also the basis of Blench's (2014) classification of Enggano as non-Austronesian. These proposals do provide an insight into the origin of the Enggano lexicon (though not the whole language). Enggano has undergone massive lexical replacement, resulting in nearly all its lexicon being of a non-Austronesian origin. I examine first the lexicon as a whole, and then examine in detail two semantic domains: body parts and numerals.

At the time of writing, I have been able to find only 77 words that are nonproblematic inheritances from PMP. A further 20 words have a possible, but problematic, Austronesian etymology. All up, only 97 words in the entire Enggano lexicon have been found to be possible inheritances from PMP. This is among approximately 3,000 lexical headwords given in Kähler (1987).[23] Thus, just over three percent of the entire lexicon can be shown to be of Austronesian descent. These inherited lexical items are given in appendix 1.

In order to better understand this number, I took a wordlist of 223 reconstructed PMP words[24] and a wordlist of Enggano words with the same gloss, and compared the two.[25] This yielded a rough estimate of the rate of lexical retention without semantic shift. The

23. A count of the number of lexical headwords in Kähler (1987) yielded 3,209. This has been rounded down to 3,000 to take account of dialect variants and proper names, which are also listed.
24. The wordlist used was a slightly modified version of the 226-word Sulawesi Combined Survey Wordlist used in Mead (1999) and Grimes and Grimes (1987). This wordlist was selected because it has a good representation of different semantic spheres. The Enggano version of this wordlist is given as appendix 2.
25. A score of 1 was assigned to a pair when Enggano had a nonproblematic reflex of the corresponding reconstruction. A score of 0.5 was assigned when the Enggano word was a possible, but problematic, reflex of the reconstruction, while 0 was assigned when the Enggano word was not a reflex of the equivalent reconstruction, even if it has another PMP etymon. Likewise, a word in the reconstructed list with an Enggano reflex that no longer fitted the gloss scored 0.

same comparison was then performed for nine other Austronesian languages and three control non-Austronesian languages of ISEA. The non-Austronesian languages were Semelai, an Austroasiatic language of the Malay Peninsula; Nancowry, an Austroasiatic language of the Nicobar Islands; and Abui of Alor Island in Eastern Indonesia. The results are presented in table 21, with the locations of the languages given in map 2.

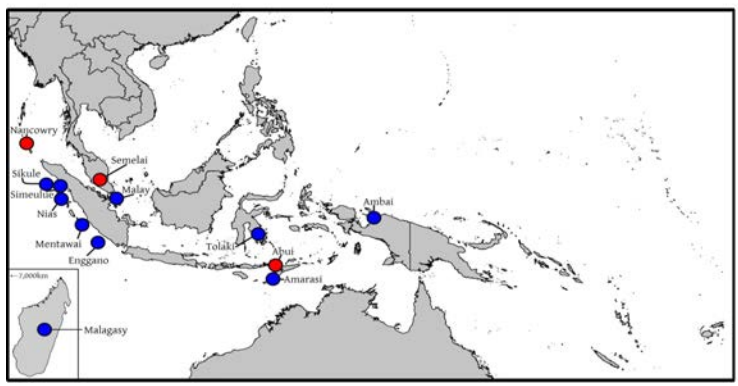
At 21 percent, the retention rate for Enggano is quantitatively more similar to the "retention" rates for the non-Austronesian languages Abui (14 percent) and Semelai (18 percent) than it is to the other Austronesian languages. I discuss these figures in more detail in 4.1.3.

While these figures show the perils of both carrying out historical linguistics without rigorously establishing regular sound correspondences and of examining only lexical data, the fact that the Enggano lexicon is quantitatively most similar to two non-Austronesian languages is indicative of the high rate of lexical replacement in Enggano.

TABLE 21. LEXICAL RETENTION RATES IN 12 LANGUAGES OF ISEA

Language	Retention Rate		Location	Source of Lexicon
Nancowry	8/211	4%	Nicobar Islands	Man (1889)
Abui	28.5/202	14%	Alor, East Indonesia	Kratochvíl (2007)
Semelai	36/202	18%	Malay Peninsula	Kruspe (2004)
Enggano	**46/217**	**21%**	**Barrier Islands**	**Kähler (1987)**
Ambai	74.5/209	36%	West Papua	
Mentawai	76.5/210	36%	Barrier Islands	Morris (1900)
Malagasy	83.5/213	39%	Madagascar	de La Beaujardière (2013)
Amarasi	96.5/214	45%	Timor, East Indonesia	own fieldnotes
Nias	95.5/208	46%	Barrier Islands	Lase (2011)
Sikule	97/203	48%	Barrier Islands	Kähler (1959b)
Simeulue	103/211	49%	Barrier Islands	Kähler (1961a)
Tolaki	117/223	52%	Southeast Sulawesi	Mead (1999)
Malay	132.5/223	59%	Malay Archipelago	

MAP 2. LOCATION OF LANGUAGES IN TABLE 21



3.3.1 Body part terms. In this section, I exemplify lexical change in Enggano with a detailed study of the semantic sphere of body part terms. The comments made in this section can be considered broadly indicative of the rest of the Enggano lexicon.

Body parts are generally considered a sphere of basic vocabulary terms that are highly resistant to borrowing and replacement. Of the 97 possible PMP inheritances so far identified in Enggano, 19 are body part terms—20 percent of the inherited lexicon. Those Enggano body parts with PMP etyma are given in table 22.

TABLE 22. ENGGANO BODY PART TERMS WITH PMP ETYMA

PMP		Enggano	
*baqbaq	mouth	e-papa	‘cheek’
*baReqaŋ	molar tooth	ẽ-pãã	‘molar’
*beteŋ	belly, abdomen	e-poko	‘interior, base, depth; navel’
*buku	joint; knuckle; knot in wood	ẽ-pũʔũ	‘knot, joint’
*bulu	body hair; fur; feather; down	e-pudu e-pududui	‘pubic hair’ ‘bristles, hair, feather, leaves’
*ikuR	tail	e-iʔo	‘rear-end, buttocks, stern (of boat)’
*kapet	hold onto, cling to	e-ʔapo	‘hand; beam’
?*kanuhkuh	fingernail	ẽ-kãnũʔũnũ	‘nail, claw’
*kulit	skin; hide; rind; bark	e-ʔudi ~ e-ʔuki	‘skin, husk (of fruit), bark’
*mata	eye	e-baka	‘eye, face’
*pusej	navel; center	e-puko	‘navel, center’
*qaqay	foot	e-ae	‘foot, paw; lower torso’
*qulu	head	e-(ʔ)udu	‘head, head-hair’
*Rusuk	chest, rib	e-uku	‘rib’
?*susu	breast	e-koko	‘breast (female)’
*taliŋa	ear	e-kadiha	‘ear, earlobe’
*taqi	feces, excrement	e-kai	‘feces, excrement; dirt, rust’
*tinaqi	small intestine	e-kitai, e-kidai	‘intestines, stomach, belly; beliefs, thoughts, feelings’

The first thing to note is that nearly half these words have undergone semantic shift. In the case of *e-baka, e-ae, e-(ʔ)udu*, and *e-kitai*, the shift is a broadening of the original meaning. In the case of *e-kitai* (with variants *e-kitei, e-kidai, e-kidei*), the broadening to ‘beliefs, thoughts, feelings’ is unusual in western ISEA, with the liver usually being conceptualized as the seat of emotions. In the case of *e-papa, e-poko, e-pudu, e-iʔo*, and *e-ʔapo*, the semantic shift has been complete and the original sense is no longer retained.

Associated with this last observation are PMP body part terms that have undergone semantic shift in Enggano to such an extent that they no longer refer to body parts. Two such words are found: *ẽ-ãkãhã* ‘stem, stalk’ < PMP *taŋan ‘finger, toe’, and *e-ihu* ‘prow of a boat’ < PMP *ijuŋ ‘nose’; both semantic shifts are unusual in western ISEA.

In isolation, none of these observations is particularly striking. As already noted, it is the sheer scale of lexical replacement and semantic shift that Enggano has undergone that is unusual. To further illustrate this point, I present in table 23 the body part terms in Enggano and the other languages of the Barrier Islands. Clear retentions from PMP are bolded, while problematic retentions (which scored 0.5) are in italics. At the bottom of this table, the rate of retention for body parts and for the entire 223-item wordlist is given.

TABLE 23. BODY PART TERMS IN LANGUAGES OF THE BARRIER ISLANDS

	PMP	ENGGANO	MENTAWAI	NIAS	SIKULE	SIMEULUE
head	*qulu	e-**(ʔ)udu**	uteʔ	həgə	tuhu	ulu
hair, head	*buhek	e-pududui	alai	**bu**	**bu**	**bu**ʔ
face	*daqih	e-baka	mata	bava	muko	bobaŋon
eye	*mata	e-**baka**	**mata**	hərə	**mata**	**mata**
nose	*ijuŋ	ẽ-pãnũ	asak	**ixu**	**nixu**	**ixuŋ**
mouth	*baqbaq	e-kaʔa	ŋaŋa	**bava**	**bafa**	**ba**(ʔ)**ba**
lips	*biRbiR	e-ukudipo	**bibo**	**beve**	**befe**	**befil**
tongue	*dilaq	e-dio†	**lila,** ʤala	**lela**	**l/nela**	**dila**
tooth	*nipen	e-kaʔa	ʧon	**ifi**	**ifi**	**ehen**
ear	*taliŋa	e-**kadiha**	**taliŋa**	**taliŋa**	guguyu	(k)oeuʔ
neck	*liqeR	ẽ-ũʔũ	lolokat	bagi	ʔogu	*leŋgəl*
hand	*kamay/*lima	e-ʔapo	*kabei*	bələxa,taŋa	taŋa	kaoʔ,siʔu
fingernail	*kanuhkuh	ẽ-*kanũʔũnũ*	sulet	siʔa	tena	tenab¬
breast	*titi(q)/*susu	e-*koko*	*tottot*	**susu**	*totoʔ*	*totuʔ*
belly	*tian	e-kitai	baɣa	talu	amatan	besil
leg	*qaqay	e-**ae**	dere	**ahe**	**ae**	**hai**
knee	*tuhud	ẽ-pũʔũ u-ae	bókolo	**tuhi**	bohun	boxul
hair, body	*bulu	e-**pududui**	**bulu**	bu	bu	buʔ
skin	*kulit	e-ʔ**udi**	**kulit**	uli	bebi	bebiʔ
meat/flesh	*hesi	e-heda	akkelak	nagole	**ö(h)i**	**isi**
fat/grease	*miñak/*himaR	ẽ-mĩnãʔã‡	lainak	tavə	tafɨ	tafɨ
bone	*tuqelaŋ	e-ʔaa	**tolat**	**təla**	**ti/öla**	sod¬
heart	*pusuq	e-báhau, ẽ-kẽmã	teinuŋ	tədə	**i**laxa, oho	ate
blood	*daRaq	e-kiaki	loɣau	**do**	**do**	**dala**
liver	*qatay	ẽ-nĩũnĩũ	**atei**	**ate**		bala
urine	*iheq	ẽ-ĩkõ	*kia*	**iə**	*xiɨ*	*k/xiɨ*
excrement	*taqi	e-**kai**	**tanai**	**tai**	**tai**	**tai**
No. of retentions		8/27	10.5/27	16/27	13/26	13.5/27
Body part retention rate		30%	39%	59%	50%	50%
TOTAL RETENTION RATE		**21%**	**36%**	**46%**	**48%**	**49%**

† Despite the similarity, deriving *e-dio* from *dilaq strains credulity. Pre-Kähler materials attest alternant forms with initial /l/—<*èlieo*> [elio] (Helfrich and Pieters 1891:588)—which is not a regular reflex of PMP *d. This etymology would also require irregular loss of medial *l as well as irregular *a > /o/.

‡ Borrowing from Malay or Minangkabau *minyak* (Kähler 1987:360).

From this table, it can be seen that Enggano, with a retention rate of 30 percent, has undergone a higher rate of lexical replacement and semantic shift than any of the other Barrier Island languages, even in the basic lexical domain of body parts.

3.3.2 Numerals. Upon examining the Enggano numerals, rather than finding a general trend of semantic shift and lexical replacement, we find that Enggano has undergone a wholesale restructuring of the entire system. Enggano has developed a vigesimal (base-20) system for the numerals greater than 20, as well as innovating complex numerals for the numerals 7–9. The Enggano numerals are given in table 24.

The first syllable of the numerals 2–6 is /ʔa/. This comes from PMP *ika- 'marker of ordinal numerals' (Blust 2003:473). Two forms for the numeral 10 are attested: *kĩpãʔãũʔũ* and *kahapudu.* The latter form is given by Kähler (1940:189, 1987:113) as obsolete, and

TABLE 24. ENGGANO NUMERALS

	PMP	Enggano	ANALYSIS
1	ʔ*i**sa**	**ka**haiʔi	1
2	*ka-duha	ʔadua	2
3	*ka-telu	ʔakodu	3
4	*ka-epat	ʔáopa	4
5	*ka-lima	ʔadiba	5
6	(*enem)	ʔãkĩãkĩnã ~ ʔãkĩãkĩnẽ	6
7	(*pitu)	ʔadiba hii ʔadua	5+2
8	(*walu)	ʔáopa hii ʔáopa	4+4
9	(*siwa)	abai kahaiʔi	come 1
10	— *saŋapuluq	kĩpãʔãũʔũ ~ kahapudu	10
20	—	kahaiʔi e-kaka	1 person
400	—	kahaiʔi e-kudodo-ka	1 body-1SG.INCL.GEN

he suggests that it is probably a borrowing from Malay or another language. This suggestion finds some support in nineteenth-century wordlists, which variously attest forms with an initial /t/, without the medial /ha/ syllable, and/or with a medial /l/ rather than /d/. Thus, we find the following forms: <*tahapoeloe*> /tahapulu/ (von Rosenberg 1853:434, 1855:386), <*tapoeloe*> /tapulu/ (Severijn and van der Straaten 1855:368), and <*kapoeloeh*> /kapulu/ (Walland 1864:123). Francis (in Oudemans 1889:136), Oudemans (1879:487), and Modigliani (1894:280) all give a form interpreted as /kahafulu/.[26]

The other form for the numeral 10 *kĩpãʔãũʔũ*[27] is from the root *pãʔãũʔũ* 'to lay side by side' (Kähler 1987:230), referring to the laying of both one's hands side by side.

Concerning the complex numerals for 7–9, all sources attest a form composed of 5+2 for the numeral 7. Sources vary in the composition of the numeral 8. With the exception of von Rosenberg (1853:434, 1855:386), who gives a form composed of 5+3, all sources give this numeral as 4+4. Additionally, all pre-Kähler materials that attest the numeral 9 give it as 5+4, with the exception of Helfrich and Pieters (1891:593) and Helfrich (1916:514), who agree with Kähler (1940:189, 1987:113) in giving a form composed of the verb 'to come' followed by the numeral for 1; that is, 'one more is coming'.

A vigesimal counting system is employed for numerals 20 and greater. These all employ the form *e-kaka/e-taka* 'person' with reference to the total number of fingers and toes a person has. The next base is 400 (20×20): *e-kudodo-ka*, which is morphemically body-1INCL.SG.GEN, 'both our bodies', in which each of the speaker's and addressee's twenty fingers and toes stands for twenty. This form is corroborated by Francis (in Oudemans 1889:137), Oudemans (1879:488), and Helfrich (1916:515).

In their study of innovative numeral systems in non-Oceanic MP languages, Schapper and Hammarström (2013:449) identified "perhaps two dozen separate innovation events in non-Oc[eanic] MP numerals." They also observed that the innovations showed a significant geographical skewing towards eastern ISEA.[28] In fact, all the numeral innovations they describe in languages of western ISEA, with the exception of Ilongot in the Philippines,[29] involve innovative forms of the numerals 8 and 9, of which most are inher-

26. Boewang (1854:391) gives the form <*apa apa adoea*> "4 4 2" for the numeral 10.
27. This form is also attested by Helfrich and Pieters (1891:593) and Helfrich (1916:514).
28. Enggano was not included in the sample of 470 languages included in their study.

itances from Proto-Malayic and/or replacements of *pitu 'seven' with a form related to *tuzuq 'point' (Blust 2010:69–71). A system similar to that observed in Enggano is completely unattested within western ISEA.

Those MP languages with a numeral system most closely resembling the system in Enggano are the languages of the Cenderawasih Bay area in West Papua. These languages have developed a vigesimal base from the word for 'person', as well as a quinary base for the numerals 5–9 (Schapper and Hammarström 2013:432–34). The numeral systems of two languages from the eastern Cenderawasih Bay area are given in table 25.

Schapper and Hammarström (2013:446–7) attribute the development of many of the innovative numeral systems of MP languages in eastern ISEA to contact with non-Austronesian languages. Specifically discussing the development of innovative bases such as the quinary and vigesimal bases seen in table 25, they note that there are numerous neighboring non-Austronesian languages with similar systems and suggest that the "resemblance is indicative of calquing from Papuan into Austronesian languages."

Among Oceanic MP languages, innovative quinary numeral systems are common, and the innovation is often attributed to contact with non-Austronesian languages of the region. In fact, the quinary counting systems of the Oceanic languages of Vanuatu and southern Melanesia is one of the "radical innovations" cited by Blust (2005) in his argument for Oceanic contact with non-Austronesian languages previously *in situ* in these regions. Although Blust's (2005) suggestion that non-Austronesian languages were present in Vanuatu and southern Melanesia is highly controversial and rejected by scholars including Pawley (2006:243–247) and Ross and Næss (2007:460), even Pawley (2006:247) favors an interpretation of the data that would see these regions populated by "Oceanic-speaking Lapita migrants ... recruiting men and women from non-Oceanic speaking communities that they came into contact with in Northwest Melanesia."[30]

TABLE 25. INNOVATIVE NUMERAL SYSTEMS IN TWO LANGUAGES OF CENDERAWASIH BAY (Schapper and Hammarström 2013:433)

	Yeresiam	ANALYSIS	Moor	ANALYSIS
1	ké:te	1	tatá	1
2	rú:hi	2	rúró	2
3	kó:rihe	3	óró	3
4	á:kà	4	áʔó	4
5	ríima	5	rímó	5
6	rí:ma ìŋkana ké:te	5+1	rímó maʔa tatá	5+1
7	rí:ma ìŋkana rú:hi	5+2	rímó maʔa rúró	5+2
8	rí:ma ìŋkana kó:rihe	5+3	rímó maʔa óró	5+3
9	rí:ma ìŋkana á:kà	5+4	rímó maʔa áʔó	5+4
10	bàkí rú:hi ~ rí:ma ìŋkana rí:ma	2 arms ~ 5+5	tàura	10
20	hàŋkú kú:karà ké:te	1 complete person	naʔu tatá	1 person
30	hàŋkú kú:karà ké:te bàkí rú:hi	1 complete person + 2 arms	naʔu tatá maʔa tàura	1 person + 10
40	hàŋkú kú:karà rú:hi	2 complete people	naʔu rúró	2 people
100	hàŋkú kú:karà rí:ma	5 complete people	naʔu rímó	5 people

29. Ilongot has innovated a quinary base for the numerals 5–9 (Schapper and Hammarström 2013:443).
30. Pawley (2006:247) suggests that quinary numeral systems may have been present alongside decimal systems in Proto-Oceanic or that they may have spread into the region after it was settled. Neither suggestion provides a motivation for the innovation in the first place.

While the location of the contact that gave rise to quinary numeral systems in Vanuatu and southern Melanesia may be in question, what is not in question is that the system probably arose through contact between Oceanic and non-Austronesian languages.

The numeral system of Enggano is a unique innovation within western ISEA. That similar systems are found in only MP languages that have been in contact with non-Austronesian languages provides circumstantial evidence that Enggano acquired its numeral system from a pre-Austronesian language of the region.

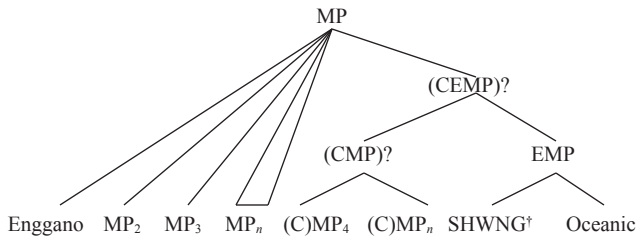
4. ENGGANO WITHIN AUSTRONESIAN. In the previous section, I showed that Enggano is an Austronesian language. The evidence for this comes from the establishment of regular sound correspondences and the identification of cognate bound morphemes and lexical items. The large proportion of bound morphemes that are inherited is especially indicative of Enggano having acquired its Austronesian elements through inheritance rather than borrowing. In this section, I explore the possibilities for subgrouping Enggano within Austronesian.

So far, it has been implicit throughout my discussion that Enggano belongs to the MP subgroup of Austronesian. Where reflexes of the relevant data are found in Enggano, it shares the innovations that define MP. The innovations that define MP—as summarized in Blust (2009:736–37)—that are also found in Enggano, include PAN *C/*t > PMP *t (> Enggano /k/), PAN *n/*N > PMP *n (> Enggano /d/), and the development of PAN *-mu '2PL.GEN' > PMP *-mu '2SG.GEN' (> Enggano /-bu/ '2SG.GEN').

In the following sections, I examine the position of Enggano within MP. I look at two subgroups to which Enggano has been argued (or assumed) to belong: these are Nothofer's (1986) proposed Barrier Islands-Batak subgroup, and the Western Malayo-Polynesian subgroup. I find no significant innovations shared between Enggano and either of these groups, nor with any other MP subgroup or language. It should thus be assigned to the highest node within the MP tree (Blust 1999:32), as exemplified in figure 2.[31]

In this respect, I am proposing that the position of Enggano within MP is comparable to each of the Formosan languages Atayalic, Puyuma, Paiwan, Rukai, and Bunun within

FIGURE 2. PROPOSED POSITION OF ENGGANO WITHIN MALAYO-POLYNESIAN



† South Halmahera-West New Guinea.

31. I include CEMP and CMP in parentheses to indicate their controversial status. This controversy culminates in Donohue and Grimes (2008) arguing against CEMP/CMP and Blust (2009) defending these hypotheses. Citations to earlier papers arguing for and against can be found in each of these papers.

Austronesian: each of these forms a primary subgroup of Austronesian, as none of these languages share any significant innovations with each other or with the other primary subgroups of Austronesian—East Formosan, Western Plains, Northwest Formosan, Tsouic, and MP (Blust 1999).

4.1 BARRIER ISLANDS-BATAK (NOTHOFER 1986). Nothofer (1986) proposes that the languages of the Barrier Islands (Sikule, Nias, Mentawai, Simeulue), the Batak languages, and possibly Enggano form a subgroup he labels Barrier Islands-Batak. The locations of these languages are shown in map 3 and Nothofer's proposed family tree diagram in figure 3.

Enggano is only provisionally included as a member. In his evaluation of Nothofer's proposed subgroup, Blust (2009a:732) states: "The greatest surprise in this proposal is the evidence for including Enggano, one of the most aberrant of all AN languages, as part of the Barrier Islands-Batak group. If valid it would follow that this language, for whatever reasons, has undergone extraordinarily rapid change on all levels (phonological, lexical, morphological, syntactic)."

In this section, I evaluate the evidence for including Enggano in the Barrier Islands-Batak subgroup. I do not evaluate the evidence for Barrier Islands-Batak itself; I only seek to answer the question mark Nothofer (1986) places over Enggano's inclusion in the group. I evaluate whether Enggano exclusively shares any innovations with the Barrier

MAP 3. THE BARRIER ISLANDS-BATAK LANGUAGES

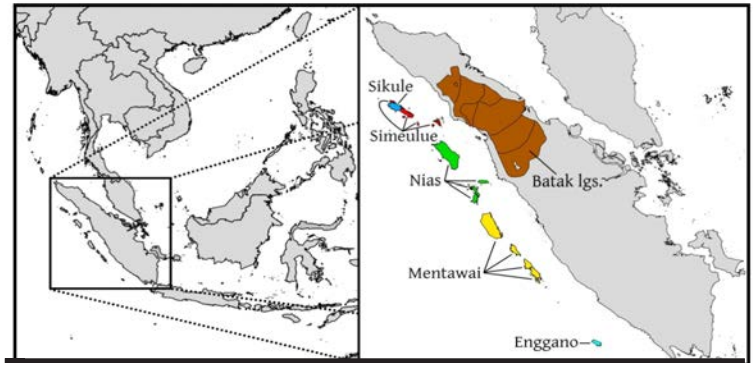
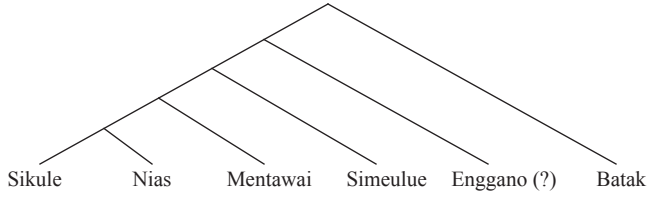


FIGURE 3. PROPOSED BARRIER ISLANDS-BATAK SUBGROUP (Nothofer 1986:107)



Islands-Batak languages in the domain of phonology, morphology, and lexicon. I do not find any convincing evidence that Enggano is a member of this subgroup.

4.1.1 Phonological evidence

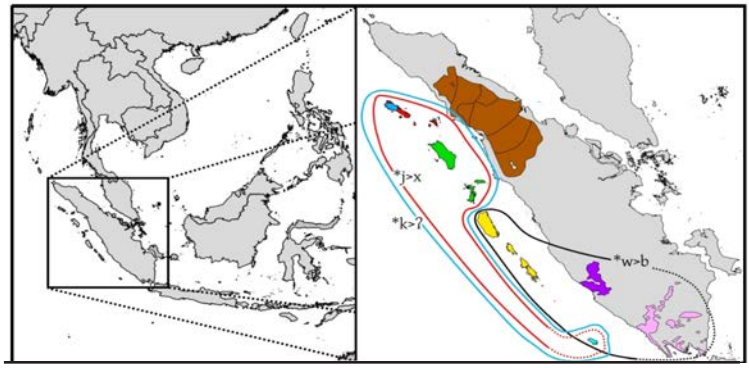
4.1.1.1 Shared regular phonological changes. There are three sound changes potentially shared between Enggano and at least one other Barrier Islands-Batak language. They are shown in table 26 and isoglosses are displayed in map 4.

The first change involves PMP *j and is potentially found in Enggano, Nias, Sikule, and Simeulue. The evidence this change provides is weakened by three facts. First, there is only circumstantial evidence that Enggano went through an intermediate stage of *j > *x* before becoming *h*.[32] Second, while opinion varies as to the exact phonetic quality of *j, it is classified either as a voiced velar stop [ɡ] (Wolff 1988:131–32), a (possibly palatalized) voiced velar fricative [ɣ]~[ɣʲ] (Ross 1992:36), or a palatalized voiced velar stop [gʲ] (Blust 2009a:573).[33] The change from any of these qualities to [x] is fairly natural and could easily arise independently. Last, if we *do* adduce the change *j > *x* as evidence for including Enggano as a member of Barrier Islands-Batak, then we must either exclude

TABLE 26. SOUND CHANGES FOUND IN ENGGANO AND BARRIER ISLANDS-BATAK LANGUAGES

PMP	Enggano	Mentawai	Nias	Sikule	Simeulue	Batak
*j	h	g~ɣ	x	x	x	g, -k
*k	ʔ	k, -ʔ	ʔ~Ø	ʔ~ Ø	k~ʔ~Ø	h, -k
*w	b	b	w	Ø	Ø~w	Ø~o

MAP 4. SOUND CHANGES FOUND IN ENGGANO AND BARRIER ISLANDS-BATAK LANGUAGES



32. This circumstantial evidence is the allophone [ç] of Enggano /h/ after the high front vowel /i/. Simeulue and Sikule /x/ have the allophone [ç] after the vowels /i/ and /i/. A palatal allophone is not described for Nias (Brown 2001:21–46).

33. The Enggano reflex, in which *m/*n > *b*/*d* and *ŋ/*j > [h]~[ç], circumstantially supports the notion that *j was not palatalized. See the discussion surrounding example (11) in 3.1.1.

Mentawai and Batak from the group, or posit the highly unusual change [x] > /g/ ~ /ɣ/ for these languages.

The second change, *k > *ʔ*, is found in Enggano, Nias, and Sikule, and partially found in Simeulue. This change is extremely common cross-linguistically and has arisen independently in many languages. It provides only extremely weak subgrouping evidence.

The sound change with the strongest claim to link Enggano with a Barrier Islands-Batak language is the change *w > *b* found in both Enggano and Mentawai. While this change provides some evidence for an Enggano-Mentawai subgroup, it does not provide evidence for including Enggano in the broader Barrier Islands-Batak group. Note that this change is also attested word-initially in Rejang (Blust 1984b:426) and sporadically in Lampungic (Anderbeck 2007a:70), both spoken in south Sumatra. It is, thus, regionally common, and the evidence it provides for an Enggano-Mentawai subgroup is weakened.

The regular sound changes potentially shared between Enggano and other Barrier Islands-Batak languages provide neither consistent nor strong evidence that Enggano subgroups with any of these languages. On the one hand, the changes *j > *x* and *k > *ʔ* provide a weak link between Enggano, Nias, Sikule, and Simeulue, while on the other hand, the change *w > *b* links Enggano with its northern neighbor Mentawai.

I conclude that the changes *j > *h* and *k > *ʔ* arose independently in Enggano. I also conclude that the change *w > *b* does not reflect a period of common development between Enggano and Mentawai. It does, perhaps, reflect a change that arose subsequent to the arrival of the current languages in the area, a change that was spread by diffusion in varying degrees between languages of the region.

4.1.1.2 Shared irregular phonological changes. Another kind of innovation Nothofer (1986) cites in support of the Barrier Islands-Batak subgroup is shared phonological irregularities. The phonological irregularities in support of Barrier Islands-Batak for which an Enggano reflex exists are given in table 27.

The first of these changes, irregular loss of PMP *b, is not found in all languages with a reflex. Furthermore, any of the Enggano, Nias, or Simeulue forms could be a borrowing from Bugis *əlli*, given our knowledge that Bugis traders were operating in the region, including Enggano, since at least the mid-nineteenth century (Boewang 1853; Helfrich 1888:279). Another Bugis loanword associated with trade in Enggano is one of the words for 'coconut', *e-kaduku* < *kaluku*, which was a common item of trade on Enggano.

The second change would involve metathesis of PMP *wanan > *nawan* and appears to be found in both Enggano and Simeulue. However, an examination of the pre-Kähler materials reveals that the Enggano form originally had /l/ in those dialects that preserved this phoneme. Thus we find <*èlaba*> /e-laba/ 'right' in Helfrich and Pieters (1891:579) and <*èloeba*> /e-luba/ in van den Noord (1987:200). Considering that the change *n > /l/

TABLE 27. PHONOLOGICAL IRREGULARITIES SHARED BETWEEN BARRIER ISLANDS-BATAK LANGUAGES

PMP		Enggano	Mentawai	Nias	Sikule	Simeulue	Batak	IRREGULARITY
*beli	'buy'	k-odi		əli	bili	(b)əli		loss of *b
*wanan	'right'	e-daba				enawan		metathesis
*uRat	'vein'	e-ua	uŋat	uo	g-uŋo		urat	*R > ŋ

is otherwise unattested in Enggano, the comparison of Enggano *e-daba* with Simeulue *enawan* is likely a chance resemblance.

Finally, Nothofer (1986:103) also cites reflexes of PMP *uRat with irregular medial /ŋ/ in Sikule and Mentawai as evidence for the Barrier Islands-Batak subgroup. While this form may indeed link Sikule and Mentawai, other putative members of Barrier Islands-Batak, including Enggano, reflect PMP *uRat regularly.

In conclusion, shared phonological irregularities do not provide any evidence for including Enggano in the Barrier Islands-Batak subgroup. Of the two irregularities that exist in favor of its inclusion, closer examination shows one is possibly a loan and one is a chance resemblance.

4.1.2 Morphology. Nothofer (1986) does not provide any morphological evidence for his proposed Barrier Islands-Batak subgroup. However, for the sake of completeness I discuss here the morphology of Enggano in comparison with the Barrier Islands-Batak languages.

Two types of morphological evidence could potentially be adduced for subgrouping Enggano with another Barrier Islands-Batak language: shared innovative morphemes and shared semantic innovations among inherited morphemes. I discuss each in turn. Those morphemes that are innovative in Enggano are given in table 28 below.

None of these innovative morphemes has cognates in any other Barrier Islands-Batak language. Simeulue has the verbal affix *-maʔa* 'indeed, but', which bears a superficial resemblance to Enggano *-baha*/*-mãhã* 'also', but /ʔ/ in Simeulue (from *k) does not correspond to /h/ in Enggano (*h* < *ŋ/*j). It is possible that this Simeulue suffix is connected with the Enggano suffix *-baʔa*/*-mãʔã* 'indeed'; however, the latter is possibly an inheritance from the PMP conjunction *baka 'despite, nonetheless'.[34] Simeulue has also innovated a plural prefix for nouns, but it has the form *da-,* which is not cognate with Enggano *ka-*.

Another potential source of morphological subgrouping evidence would be shared semantic innovations among inherited morphemes. All the inherited Enggano morphemes and cognates in other Barrier Islands-Batak languages are given in table 29. In this table, there is one semantic innovation potentially shared between Enggano and other Barrier Islands-Batak languages. This is PMP *‹in› 'perfective; marker of deverbal nouns' > Enggano *d(i)-* 'passive', Mentawai *‹in›* 'passive', and Karo Batak *(n)i-* 'passive'. However, this semantic shift is extremely common, being found in many Austronesian languages.

TABLE 28. ENGGANO INNOVATIVE MORPHEMES

Verbal		Nominal		Pronominal	
aha-	intensive	e-	core (S/A/P)	ka-	(3SG set B)
k-a-	VERB ('verbal')	u-	oblique	di-	(3PL set B)
-baha	'also'	ka(ho)-	plural	-aʔa	1PL.INCL
po-/pu-	$V \rightarrow N_{AGT}$	-daʔa	topicalizer		
-pua	'now'				
-ha	emphasis				
V-	incidental INST				

34. This etymology is problematic, as we would expect *b > /p/ resulting in **-*paʔa*. We could posit that the Enggano form preserved the voicing due to being found word-medially, but this is an ad hoc explanation not attested elsewhere in the language.

TABLE 29. INHERITED BARRIER ISLANDS-BATAK MORPHOLOGY

PMP	Enggano	Mentawai	Nias	Sikule	Simeulue	Karo Batak
*-aken	-Caʔa	-akeʔ	-ʔə			-ken
BEN	$APPL_{INST/GOAL}$	TR	CAUS			TR
*-an	-Ca		-Ca			peN- -en
LOC voice	$V \rightarrow N_{LOC}$		$V \rightarrow N_{LOC}$			$V \rightarrow N_{LOC}$
*-en	-Co	-en	-Cə		-ən	-en
PAT voice POL IMP	obligation	NMLZ	$V \rightarrow N_{PAT}$		GERUND	$V \rightarrow N_{PAT}$
*-i	-Ci	-i	-Ci	-Ci	-e/-i	-i
$APPL_{LOC}$	$APPL_{LOC/SOURCE}$	APPL	TR	$CAUS_{LOC}$	$APPL_{LOC}$	$APPL_{LOC}$
*‹in›	d(i)-	‹in›			in-/‹in›	(n)i-/‹in›
PFV	PASS	PASS			PFV N	PASS/V→N
*ka-	(ʔ) aʔa-	ka-	a-			ke- -en
PST PTCP; achieved state	RESULT	PFV	RESULT			affected by
*ma-	ba-	ma-	mo-	m(a)-	ma-/me-	me-
V_{STAT}	PROG	N→ADJ.	$N \rightarrow V_{STAT}$	V_{STAT}	V_{STAT}	adj. prefix
*maR-						(ʔ) N-
V_{INTR}						V_{INTR}
*maŋ-			maN-/mo-	maN-	maN-	N-
V_{ACT}			$N \rightarrow V_{ACT}$	N→V	V_{ACT}	active voice
*pa-	pa-	p/ma-	fa-	f(a)-	a(ʔ)-	pe-
CAUS	CAUS	CAUS	CAUS	CAUS	CAUS	CAUS
*paŋ-	pa(V)-					peN-
AGT/INST	$V \rightarrow N_{INST}$					$V \rightarrow N_{AGT}$
*paR-		pa-	fa(ʔa)-	f(a)-		per-
V→N		stative	NMLZ	NMLZ		$N \rightarrow V_{CAUS}$
*taR-	ka-	ta-	te-/to-	te-/to-	tal-/te-	ter-
ACCID	ACCID	ACCID	ACCID	ACCID	ACCID	ACCID
*‹um›	b(u)-/‹ub›	(ʔ)p/mu-	‹um›/m-		um-/‹um›	‹um›
AGT voice	active	PROG	IMPRF		process	‘do erratically’

Additionally, this shift is not found in Simeulue, which retains this affix nonproductively in some perfective nouns.[35]

All the other similarities between Enggano and another Barrier Islands-Batak language are shared inheritances and thus cannot be used as subgrouping evidence. (In fact, this table reveals at least one semantic shift found only in Enggano: *ba-* ‘progressive’ < PMP *ma-, *maŋ-, or *maR-.)

An examination of the Enggano and Barrier Islands-Batak morphology provides no evidence for subgrouping Enggano with any of these languages, similarities being due to shared retentions. On the contrary, there are fourteen innovative morphemes found only in Enggano (as shown in table 28), providing support for the hypothesis that Enggano does not subgroup with other languages of the region.

35. Morphemes retained in Enggano but lost in all other languages (such as *-a ‘subjunctive’ > -C*a* ‘irrealis’) are not included in table 28. See 3.2.2 for a fuller discussion of the diachrony of Enggano morphology. Abbreviations are according to the Leipzig glossing rules. Morphological data were drawn from the following sources: Mentawai from Morris (1900) and Zainuddin, Nio, and Zainil (1978); Nias from Brown (2001); Sikule from Kähler (1959b); Simeulue from Kähler (1961a); and Karo Batak from Woollams (1996). PMP reconstructions are from Blust (2003).

4.1.3 Lexical innovations. Another type of evidence cited for the Barrier Islands-Batak subgroup is lexical innovations. An examination of Nothofer (1986, 1994),[36] as well as the etymological notes in Kähler (1987), produces 13 lexical items potentially shared between Enggano and at least one other language of the Barrier Islands, which do not appear to be found in other MP languages. These lexical items are given in table 30.

First of all, several of the sound correspondences in table 30 are problematic. The Mentawai and Nias words for 'k.o. insect' do not display the expected sound correspondences for a hypothetical Proto-Barrier Islands-Batak *(a)t[ə/a]ŋaŋan. Neither is the correspondence between Enggano *e-ʔodo* and Simeulue *(x)areŋ/arөŋ* 'sharpness' regular. The best reconstruction that one could come up with for this pair would be *(k)[o/a]dəŋ. Last, the Nias and Sikule forms for 'knee hollow' are problematic if the Enggano and Simeulue regularly were to regularly reflect *kod[ə/o]d.

This list is not particularly impressive. In addition to the three problematic sound correspondences noted above, only three of the lexical items in table 30 are basic vocabulary items: 'breast',[37] 'river', and 'land'. Such a small number of shared vocabulary items is easily the result of chance or a contact relationship between the languages. That this is the case can be demonstrated by a cursory examination of a basic Swadesh wordlist for

TABLE 30. LEXICAL ITEMS SHARED AMONG BARRIER ISLANDS-BATAK LANGUAGES

	Enggano	**Mentawai**	**Nias**	**Sikule**	**Simeulue**
breast	e-koko	tottot	toto	totoʔ	totuʔ
banana bunch	e-abo(ʔoi)† 'k.o. banana'	abo	havo		
armpit	e-aroʔopa	matat-kepa			əpa
k.o.S insect	e-kahaha 'k.o. ant'	tel/reŋaŋa 'scorpion'	tariŋəŋə 'k.o. insect'		ateŋaŋan 'scorpion'
piece	e-kopi		atəfi 'broken off'	atəpi 'a little'	təpi(x)
knee hollow	ẽ-ʔõnõʔõnõ		o̲lu-ʔo̲lu	olöt-olöd	korod᾽
river(mouth)	e-bedoa			eloa	luan
lung	e-bobo	bo		bo	
sharpness	e-ʔodo				(x)areŋ/arөŋ
k.o. basket	e-ʔodae				kudae
land	e-lopo/e-dopo				ləpol
(sting)ray	e-pudukíoʔoi	buluk			
collect	ki-padudu	paruru			

† Helfrich (1916:478) and Helfrich (1888:277) both have <*èabo*> 'zekere pisangsoort/pisang tandoek', while Kähler (1987:3) has *e-abóʔoi* 'k.o. banana (Malay: pisang tanduk)'.

36. Nothofer (1994) actually argues for a Paleo-Hesperonesian subgroup consisting of the Barrier Islands-Batak languages along with several languages of south Sulawesi and the Philippines. I do not find the evidence presented in favor of Paleo-Hesporonesian convincing. In particular, it is unclear why the shared lexical items and semantic shifts should be treated as innovations rather than retentions.

37. In fact, the words for breast are also problematic. Mentawai attests final /t/, while Simeulue has final /ʔ/; not a regular development of *t word-finally. These forms may reflect an irregular development of PMP *titiq, though this is unlikely. The Enggano form may also reflect PMP *susu with irregular *u > o.

English that reveals ten borrowings in the basic vocabulary: 'face', 'skin', 'person', 'they', 'fruit', 'flower', 'sky', 'mountain', 'lake', and 'river'.

Recall also from 3.3 that the non-Austronesian languages Abui and Semelai were included in the calculation of lexical "retention" from PMP. In that exercise, at least 25 items were identified as possible retentions for Abui and 33 were identified for Semelai. In the case of Semelai, nearly all the retentions are Malay loanwords, while in the case of Abui there is a mix of chance resemblances and loans. Thirteen of the resemblances between Semelai and PMP are given in table 31.

If we were to ignore the abundant competing evidence for classifying Semelai as a South Mon-Khmer language, we could make a case on the basis of this lexical evidence that it is an Austronesian language of the Malayic subgroup. The sound correspondences are regular and there are at least 33 shared basic vocabulary items. In fact, the lexical evidence for classifying Semelai as a member of the Malayic subgroup is nearly three times stronger than the lexical evidence for classifying Enggano as a member of the Barrier Islands-Batak subgroup.

That non-Austronesian languages can share between 25 and 33 basic lexical items with other Austronesian languages due to chance or contact speaks strongly against subgrouping Enggano with the Barrier Islands-Batak languages on the basis of such scanty evidence as 13 lexical items, of which only three are basic vocabulary items.

TABLE 31. CHANCE / CONTACT LEXICAL RESEMBLANCES BETWEEN MALAY AND SEMELAI

Malay	**Semelai**		
mata	mɔt	'eye'	CHANCE
bibir	bɛbɛr	'lips'	LOAN
leher	lʰhɛr	'neck'	LOAN
kulit	kulit	'skin'	LOAN
minyak	mʰɲak	'fat/grease'	LOAN
adik	ʔadiʔ	'younger sister'	LOAN
kahu	kɒ	'2SG'	CHANCE
ikur	ʔikur	'tail'	LOAN
daun	dawon	'leaf'	LOAN
laut	lawot	'sea'	LOAN
abu	habuʔ	'ashes'	LOAN
batu	batuʔ	'stone'	LOAN
tuli	tuliʔ	'deaf'	LOAN

4.1.4 Summary. The evidence for including Enggano in the Barrier Islands-Batak subgroup is extremely weak. Nothofer (1986) was right to only provisionally include it in his proposed subgroup. A closer examination of the data has revealed that its inclusion would rest on either one or two problematic sound correspondences as well as 13 lexical items, of which only three are items of basic vocabulary.

That this constitutes very weak evidence for including Enggano in this subgroup can be seen by comparing it with the evidence adduced for establishing other low-level subgroups among MP languages. The phonological evidence in favor of establishing a Malayic subgroup (Adelaar 1992) consists of at least seven sound changes shared

between all members of the proposed group, in addition to a minimum of 51 lexical innovations in the basic vocabulary. The sound changes between PMP and Proto-Malayic (PML) are given in table 32 below.

Likewise, the evidence for establishing a Bungku-Tolaki subgroup (Mead 1998:29–83, 86–87, 424–92) consists of at least seven sound changes shared between all languages, at least 15 innovations in basic vocabulary, and two grammatical innovations. The sound changes from PMP to Proto–Bungku-Tolaki (PBT) are also given in table 32.

If we were to apply a similar standard of rigor to establishing Enggano as a member of Barrier Islands-Batak, the evidence is reduced to nearly zero. There are no sound changes and only one basic lexical item shared between Enggano and all other Barrier Islands-Batak members. The Barrier Islands language perhaps most likely to be connected with Enggano is its northern neighbor, Mentawai. One unusual, though regionally attested, sound change is found in both, *w > *b*, and six lexical items are likewise found in both. At present these similarities appear to be due to contact or chance.

TABLE 32. SOUND CHANGES FROM PMP TO PROTO-MALAYIC / PROTO–BUNGKU-TOLAKI

PMP	PML	PMP	PBT
*d, *j	*d, *-t	*b	*b~*β
*R, r	*r	*s	*s~*h
*z, *Z	*j	*z, *c	*s
*q	*h	*ñ	*n
*(q/h)əT	*(h)əNT	*w	*h-, Ø
*əy	*i	*ay, *ey	*e
*əw	*u	*aw, *ew	*o

4.2 WESTERN MALAYO-POLYNESIAN. A Western Malayo-Polynesian (WMP) subgroup was first recognized by Blust (1977:2). If valid, it would include all the Austronesian languages of ISEA west of (and including) the Bima-Sumba group and Sulawesi.

However, it is recognized today that the evidence for a WMP subgroup within MP is lacking, there being neither phonological evidence nor clearly innovative shared lexical items (Blust 2009a:736, Adelaar 2005:14). Blust (2009a:736) concludes that "it is therefore possible that WMP represents several primary branches of MP." One of these primary branches would be the Barrier Islands-Batak subgroup proposed by Nothofer (1986). Blust (2009a) renames this subgroup "Barrier Islands-North Sumatra," and accepts it as valid, noting that the inclusion of Enggano is surprising.

However, as argued in 4.1 above, there is no good basis for including Enggano in this subgroup. Given that WMP is not a valid subgroup, and is instead a collection of several primary subgroups, Enggano, then, belongs alongside Barrier Islands-Batak (or Barrier Islands-North Sumatra) as one of several primary subgroups of MP located in western ISEA. This has already been exemplified in figure 2 above.

Finally, Blust (2010:91–96) presents twelve lexical items that he proposes as shared innovations identifying a "Proto-Western Indonesian" subgroup "ancestral to all languages of western Indonesia outside Sulawesi." While I have serious reservations about

any subgrouping proposals that rest on such scanty evidence as twelve lexical items alone, the quality of the evidence is, in this case, beside the point, as none of the proposed Proto-Western Indonesian reconstructions are found in Enggano.[38]

5. CONCLUSIONS. At the outset, I identified three main objectives of this paper: (i) to show that Enggano is an Austronesian language, (ii) to reconstruct the phonological, morphological, and lexical history of the language and to identify the ways in which it has become aberrant, and (iii) to examine the possibilities for subgrouping Enggano within MP. I return now to each of these three points and draw out some wider implications.

5.1 ENGGANO AS AN AUSTRONESIAN LANGUAGE. Enggano has a typological profile completely different from other Austronesian languages of western ISEA and has inherited only a tiny fraction of the nearly 3,000 PMP reconstructions currently made.[39] Despite these facts, Enggano is demonstrably an Austronesian language of the MP subgroup.

Two facts allow this to be demonstrated. First, careful application of the comparative method allows us to identify *regular* sound correspondences between Enggano and PMP vocabulary items. In some instances, these sound correspondences are very unusual: pairs such as *si(ŋ)jem > *e-kiho* 'ant' or *lima > *ʔadiba* 'five' are not obviously cognate on first inspection. Nonetheless, the correspondences are regular.

Second, these correspondences are found not only in the lexicon, but also in the bound morphology. Although the classifications of Capell (1982) and Blench (2014) of Enggano as a non-Austronesian language with Austronesian loans are erroneous, an examination of the lexicon alone yields no counterevidence. The rate of inheritance in Enggano (21 percent of basic vocabulary) is indeed at the level that can be found in non-Austronesian languages of the region, as evidenced by Semelai's 18 percent and Abui's 14 percent "inheritance" rates. While the lexical evidence is highly suggestive, it must be triangulated with the phonological and morphological evidence to clinch the argument that Enggano is Austronesian.

5.2 ENGGANO AS AN ABERRANT LANGUAGE. While Enggano is demonstrably Austronesian, it is a highly aberrant Austronesian language. In discussing aberrant Oceanic languages of Melanesia, Grace (1992:116–17) identified four criteria by which a language might be judged aberrant. These four criteria are summarized by Pawley (2006:215) as follows:

i. It shows relatively few cognates with other Austronesian languages.
ii. Its sound system departs radically from the systems reconstructed for early stages of Austronesian, often making cognates hard to identify.
iii. Its grammatical structure is atypical.

38. With the possible exception of *əluŋ > *e-bedoa* 'river mouth' (Blust 2010:95), which would require assuming that the initial syllable of the Enggano form is from *e-bee* 'sap, liquid', positing irregular loss of *ə, irregular lowering of *u > *o*, and irregular accretion of final /a/.
39. At the time of writing, the *Austronesian comparative dictionary* (Blust and Trussel ongoing), from which nearly all reconstructions in this paper were drawn, had 2,998 PMP reconstructions.

iv. It is unusually difficult to apply the Comparative Method to the language because multiple sound correspondences obscure the distinction between directly inherited forms and borrowed forms.

Enggano has properties (i) and (ii), relatively few cognates, and a divergent sound system. It also has property (iii), exhibiting verbal agreement, a noun class system, and marking nouns for both case and number, none of which are typical of the languages of western ISEA. The only criterion for aberrancy which Enggano does *not* fulfill is (iv).

The aberrant nature of Enggano is particularly striking given its location. While there are many cases of aberrant Austronesian languages in eastern ISEA,[40] the only other example in western ISEA of a language that might display a level of aberrancy vaguely approaching the level seen in Enggano is its neighbor Mentawai. Indeed, the feeling one has on examining Enggano is of an Austronesian language in the wrong part of the Austronesian-speaking world. Many of the features that make Enggano aberrant find many parallels among Austronesian languages of eastern ISEA and Melanesia. The most salient of these features include:

i. *t > *k*
ii. *s > (*t*) > *k*
iii. a small phoneme inventory
iv. complex forms for numerals 7–9, a vigesimal base for numerals greater than 20
v. verbal agreement
vi. low cognate density

While speculative, it is worth considering whether the socio-cultural factors that operated in eastern ISEA and Melanesia to give rise to such features in (some) Austronesian languages of these regions are the same as those that operated on Enggano Island. Two such possible socio-cultural factors are contact and isolation.

5.2.1 Contact. While there is extensive discussion about the role contact with non-Austronesian languages has played in the development of the Austronesian languages of eastern ISEA, there is conversely much less discussion of the possible role of contact between Austronesian and non-Austronesian languages in western ISEA.[41]

I have not found any concrete evidence in the form of cognate morphemes between Enggano and any other non-Austronesian language of the region,[42] and am not here claiming such contact for Enggano. Nonetheless, the evidence *is* highly suggestive, and we must remain open to the possibility that further investigations may reveal concrete evidence of such contact. Given that there must have been non-Austronesian languages in western ISEA before the arrival of Austronesian languages, we must take seriously the role that these languages have played in the appearance of Austronesian languages of this region.

40. A classic example is the languages of Santa Cruz whose genetic relationship was controversial until Ross and Næss (2006) finally showed that they are indeed Austronesian.
41. The Chamic languages are notable exceptions.
42. I have made fruitless comparisons with the languages of the Nicobar Islands, languages of the southern Andaman Islands, as well as with Proto-Austroasiatic. Curious linguists familiar with languages of the region can examine the Enggano wordlist in appendix 2 for cognates.

Given the highly aberrant nature of Enggano, it is likely that any such contact would have taken the form of a pre–Austronesian-speaking population acquiring an incoming Austronesian language. In this regard, while I disagree with Capell (1982) and Blench (2014), who suggest that Enggano is a non-Austronesian language with Austronesian loans, I am sympathetic to the sociolinguistic situation implicit in their proposals. I would suggest, instead, that Enggano is an Austronesian language with a non-Austronesian substrate. This raises interesting questions about what it means to be an "Austronesian language."

5.2.2 Isolation. That Enggano Island was linguistically isolated until modern times is corroborated by the cultural evidence. Features such as the beehive huts, lack of agriculture, and extremely poor material culture all suggest that there was not much interaction between the inhabitants of Enggano Island and mainland Sumatra. Whether these cultural features are innovations or inheritances is currently unknown, though the existence of similar beehive huts on the Nicobar Islands is suggestive of an ancient cultural sphere once present across a wider range of (I)SEA, which only survived into modern times on the fringes.

The connection between cultural isolation and linguistic change is not well understood. However, a language that is not in frequent contact with other languages is probably more likely to develop typologically unusual features or lose typological common features, as there will be less pressure from its neighbors to conform to regional and global norms.

The system of word-level nasal harmony in Enggano is an example of a typologically (extremely) rare feature which may have arisen in Enggano because there was no external pressure for the language to maintain the more common system of contrasting nasal and oral stops inherited from PMP. The loss of the phoneme /s/ is an example of a typologically common feature which Enggano may have been freed up to lose due to a lack of contact with other languages.

Although details are scarce, Kähler (1978:9) reports that a practice of linguistic taboo operated on Enggano Island in which words similar to the name of a recently deceased person were replaced. This may account for the small number of Austronesian reflexes in Enggano, in which case isolation from the Austronesian speaking would encourage replacement of the taboo items with non-Austronesian terms. In the absence of a neighboring language from which to borrow, other strategies such as novel coinage or derivation from native lexemes must be employed to replace taboo terms.[43]

Contact and isolation as possible causes of Enggano's aberrancy are, of course, not mutually exclusive. While each is probably sufficient on its own to explain the Enggano data, both may have taken place. Contact may have occurred between Austronesian speakers on the Sumatran mainland before their arrival on Enggano, or alternately, an in situ (isolated) population of non-Austronesian speakers may have acquired an Austronesian language.

While we may ultimately never know the reasons why Enggano is so aberrant among Austronesian languages of western ISEA, contact and/or isolation are likely explanations.

43. The situation on Enggano can be contrasted with that of Haji (Anderbeck 2007b), a Malayic language of south Sumatra in which about a third of the basic vocabulary was replaced with loans from Lampungic, a neighboring MP language. Taboo may have been a motivating factor in this lexical replacement.

5.3 ENGGANO AND THE MP LANGUAGES OF WESTERN ISEA. The final objective of this paper was to examine the possibilities for subgrouping Enggano within MP. I showed that Enggano shares no significant innovations with any other MP language or subgroup and should, thus, be considered one of several primary branches of MP (see figure 2).

The implications of this are partly terminological and partly practical. Ever since Blust (1984a:56) conceded that "the WMP languages may constitute more than one primary subgroup," it has been increasingly accepted that there is indeed no Western Malayo-Polynesian node within the MP subgroup, there being neither phonological evidence nor clearly shared lexical innovations (Adelaar 2005:14; Blust 2009a:736).

However, the implications of there being no Western Malayo-Polynesian subgroup have yet to be fully worked through. The subgrouping of many of the Austronesian languages of western ISEA remains an open question. Blust (2009a:738–39) gives about seven possible first order subgroups, Adelaar (2005:15–16) lists 23, Pawley (2006:232) gives 20–25 possible groups, and Ross (2005) gives 25–30 groups.[44] Whether there are seven or thirty primary subgroups of MP within western ISEA is an important question, the answer to which has direct implications for our understanding of the dispersal of Austronesian languages within the region.

Thus, for instance, Donohue and Denham (2010:227) propose "a rapid, multidirectional, and multimodal propagation of Malayo-Polynesian languages across most of ISEA" rather than "a graduated dispersal of Malayo-Polynesian languages south from Taiwan." Part of the basis for this proposal is the identification of 30–40 northern and southern groups of MP.[45] In order to either refute or support proposals such as that presented in Donohue and Denham (2010), we must work out the subgrouping of the languages of western ISEA.

The first step in this process is to discard the unhelpful label "Western Malayo-Polynesian."[46] The second step is to carry out a thorough "bottom-up" investigation of the historical relations of the languages of the region. While a "top-down" approach has so far been quite successful, the filling in of the medial nodes of the family tree will require a thorough investigation of the individual languages of the region, their relations to other individual languages, and, from there, the relations of these different groups to one another.[47]

This bottom-up research will be a multipronged investigation of different linguistic subdomains of languages of the region. In this paper, I have investigated the diachronic development of Enggano phonology, morphology, and lexicon, and this can, perhaps, be taken as the minimum number of domains required to properly establish the historical relationship of a language.

44. While neither Pawley (2006) nor Ross (2005) accept a WMP subgroup, both *do* unfortunately include "Western Malayo-Polynesian" on their maps of Austronesian subgroups alongside other subgroups they do accept, such as Central Malayo-Polynesian.
45. This includes the Central Malayo-Polynesian languages, which they do not accept as forming a valid subgroup.
46. The practice adopted by Schapper and Hammarström (2013:424) is to refer to the "MP languages of the WMP area." While this is a little cumbersome, it is not clear that the practice I have employed in this paper of referring to the "MP languages of western ISEA" is much better.
47. Anderbeck's (2007) work on the Lampungic languages is exemplary of the kind of approach I am calling for here.

Once such work has been carried out, we will be in a much better position to assess the prehistory and migration history of this region. While some progress has been made on this front—see Blust (2009:767–73) for an overview—there are many unanswered questions. Within Sumatra, there are at least five languages and/or language groups whose relations within MP are currently unclear. These include Gayo, Lampungic, Nasal, Rejang, and Barrier Islands-Batak. If these groups turn out to each represent a different subgroup, this could entail five additional movements of Austronesian languages into the region, in addition to the appearance of Enggano, Acehnese, the Malayic languages, and Javanese.

While some of these groups may end up being linked, such as Nasal with Rejang or Simeulue (Anderbeck and Aprilani 2013:12–13), the unity of the Barrier Islands-Batak subgroup is now in doubt, Enggano having been removed. This naturally leads us to ask about the other languages of this proposed subgroup. In particular, Mentawai appears to fit poorly in this subgroup. It lacks the sound changes *j > *x* and *k > ʔ, and has certain features in common with Enggano, including a low lexical retention rate and the change *w > *b*. The nature of these similarities merits further investigation.

APPENDIX 1. ENGGANO LEXEMES WITH POSSIBLE PMP ETYMA

In this appendix, I present those Enggano lexical items so far identified that have a PMP etymon. Where an etymology was originally suggested by Kähler (1987), a page reference to his dictionary is given in the rightmost column. Etymologies without a reference are my own identifications, with the exception of the reflexes of *dapaR and *pija first identified by Schmidt (1988:35). Reconstructions are from the online *Austronesian comparative dictionary* (Blust and Trussel ongoing) unless otherwise noted.

This appendix is divided into two sections. The 77 words that can be (mostly) regularly derived from reconstructed PMP are given in section 1. The remaining 20 putative cases of inheritance that require us to accept irregular sound changes, unlikely semantic shifts, or are otherwise problematic, are given in section 2. Inherited bound morphemes can be found in tables 16–20 in 3.2.

PMP		Enggano		p.
1. UNPROBLEMATIC INHERITANCES				
*ama	father	ãmã	(step)father	12
*anak	child	e-ada	child; spawn, egg	4
*a-nuh	thing whose name is unknown, avoided, or cannot be remembered: what?	hadu [unexpected initial /h/]	possession, thing	
*bahuq	smell, odor	e-pau, ẽ-pãũ	stench, odor	241
*banua	inhabited territory, human ecosystem	e-padua	birth mother, uterus	
*baqbaq	mouth	e-papa	cheek	229
*baReqaŋ	molar	ẽ-pãã [simplification of /aoa/ > /aa/; cf. *maRuqanay > ẽ-mãnĩ]	molar	
*batu	stone, rock	ẽ-ãpãkũ [unexpected initial /a/; cf. *taŋan > ẽ-ãkãhã, *talih > e-akadio]	anchor, heavy stone used as an anchor	236
*bayu	pound rice	kĩ-pãũ [only attestation of *y > Ø]	to pound	

*beRay	give	ki-pee	to give, put, add, arrange	242
*beteŋ	belly	e-poko	interior, base, depth; navel	
		[possible semantic interference from *pusej > e-puko]		
*biRaq	taro, giant arum, *Alocasia* sp.	e-pia	plant, garden, garden produce	248
*buaq	fruit	e-pua	fruit (only as numeral classifier)	260
*bubuŋ-an	roof; ridge of the roof	ẽ-pũhã	gable, peak, tip, head	264
		[initial syllable possibly reinterpreted as a reduplicant and thereby deleted]		
*buku	node; joint; knuckle; knot in wood	ẽ-pũʔũ	knot, joint	268
*bulu	body hair, fur	e-pudu, e-pududui	pubic hair bristle, hair, feather, leaf	263
		[final /dui/ probably from e-dui 'thorn, spike' < *duRi]		
*buluŋ	medicinal herbs	ẽ-pũnũ, e-pudu	leaf	
*bunuq	kill	ki-pudu	kill, fight, put out (fire), battle	262
*butaq	tree with poisonous sap	ẽ-pũkã	k.o. tree	
		[vague semantics weaken etymology. Possibly connected with ẽ-pĩkã 'k.o. tree' (Kähler 1987:247)]		
*dapaR	flat, level, even	ẽ-nãpã	flat land, flat(ness)	
*deŋeR	hear	ki-dohoi	to listen	46
*duha	two	ʔadua	two	47
*duRi	thorn	e-dudui	thorn, spike	48
		[first syllable probably via reduplication]		
*epat	four	ʔáopa	four	226
*hasaŋ	gills	ẽ-ãkã	gills	10
*ijuŋ	nose	e-ihu	prow of boat	92
*kahu	you	ʔoʔo	you (SG)	223
		[unexpected extra syllable]		
*kita	we (incl.)	ʔika	1sg.incl	94
*ikuR	tail	e-iʔo	rear-end, buttocks, stern of boat	97
*iluR	spittle, flow	k-edo	to weep	51
		[irregular *i > /e/, but cf ?*bituqen > ẽ-pẽkõ, *ki/epak > kĩ-ʔẽʔẽpã]		
*kaka	older sibling	ʔaʔa	older sibling	2
*kami	we (excl.)	ʔai	we (excl.)	9
		[irregular *m > Ø; many other AN languages attest loss of *m in this word]		
*kapet	hold onto, cling to	e-ʔapo	hand; beam	
*kawil	fishhook	ẽ-ʔãmĩ	fishhook, barb	13
*keti	dry up; low tide	kã-õkĩ, e-oki	low tide, be dry	
		[cf. *qeti > e-(ʔ)oki ~ ẽ-(ʔ)õkĩ]		
*ki/epak	flap the wings	kĩ-ʔẽʔẽpã	to fly	
		[extra initial syllable probably via reduplication; unexpected *i > /e/, but cf. *iluR > k-edo]		

*kulit	skin	e-ʔudi, e-ʔuki [e-uki variant probably via metathesis of *kulit > *kutil]	skin, bark	281
*libuR	murky, clouded, turbid	ka-dipo	cloudy, unclear	
*lima	five	ʔadiba	five	41
*ma-kapal	thick	kã-ʔãpã	to be thick	
*ma-qetaq	raw, unripe	ki-baka [possible simplification of *ae > /a/]	unripe, raw, uncooked	25
*m-aRi	come	k-ai, k-ei	to come	8
*maRuqanay	male	ẽ-mãnĩ [*ay > /i/ is unexpected. However, three pre-Kähler sources attest [emane] with expected final /e/: <èmanè> (Helfrich 1916:488), <émané> (Oudemans 1879:487), <emane> (Francis 1870 in Oudemans 1889:131); simplification of *aua > /a/; cf. *baReqaŋ > ẽ-pãã]	man, male (animal)	190
*mata	eye	e-baka	eye, face	25
*m-atay	die, be dead	e-kabake [source of initial ka- unclear; cf. ?*putul > e-kabuku]	corpse, dead person	106
*nabuq	fall	ki-dapu, kĩ-nãpũ	to fall (of lightning), come down	
*paqit	bitter	kã-pãĩ	sour	234
*pija	how much? how many?	ʔapíaha	how much? how many?	
*pusej	navel	e-puko [possible semantic interference from *beteŋ > e-poko]	navel, center	266
*qaqay	foot	e-ae	foot; lower torso	6
*qebel	smoke	ẽ-ĩpõ [*e > i, cf. *tebuh > e-kípokipoo]	smoke, steam, fog	
*qeti	ebb tide; evaporate, dry up	e-(ʔ)oki, ẽ-(ʔ)õkĩ [cf. *keti > kã-õkĩ, e-oki]	low tide	218
*qetut	fart, flatulence	ẽ-ũkũ	fart, flatulence	284
*qulu	head	e-(ʔ)udu	head, head hair	281
*Rumaq	house	e-uba	house, container, nest	279
*Rusuk [Zorc 1995]	chest, rib	e-uku	ribs	284
*sa-ŋa-puluq	ten	kahapudu [possible loan from Malay *sepuluh,* though this does not explain the medial /ha/]	ten (archaic)	263
*si(ŋ)jem	ant	e-kiho	ant	143
*si-ia	he, she	kia	3sg	138
*suja [Zorc (1995)]	bamboo trail or pitfall spikes	ẽ-ũkũʔã, e-ukaha, e-kúhua, ẽ-ũkũh(ũ)ã [e-kúhua (2nd /u/ via vowel leak) is regular, other forms involve various irregularities]	pig trap, man-trap	285

*talih	rope	e-kadi, e-akadio	rope	108
		[e-kadi possibly a loan from Malay *tali*; e-akadio unexpected final /o/ and initial /a/; cf. *batu > ẽ-ãpãkũ, *taŋan > ẽ-ãkãhã]		
*taliŋa	ear	e-kadiha	ear(lobe)	125
*taŋan	finger, toe	ẽ-ãkãhã	stalk, stem	110
		[unexpected initial /a/; cf. *batu > ẽ-ãpãkũ, *talih > e-akadio]		
*taqi	excrement	e-kai	dung, excrement; dirt, rust	114
*tebuh	sugarcane	e-kípokipoo	wild sugarcane	150
		[*e > /i/, cf. *qebel > e-ĩpõ]		
*telen	swallow	ki-kodo	swallow	157
*telu	three	ʔakodu	three	158
*timuR	south or east wind	ĩkĩmõ	previously unknown lands	146
		[mainland Sumatra is east of Enggano Is., initial /i/ is the locative prefix. Could be an early borrowing from Malay *timur*]		
*tinaqi	small intestine; guts; belly	e-kitai, e-kidai	bowels, stomach, belly; idea, thought	151
		[form with medial /t/ appears to represent sporadic devoicing of /d/]		
*tirtir	shiver	kã-nĩkĩ (‹kĩkĩ)	to shiver, tremble	
*tiup	blowing on, fanning	e-kiu	wind	154
*tuktuk	knock, pound, beat	ki-kuku	to forge	181
*tuqed	tree stump; stubble	e-kuo	tree, wood, stake	
*umpu	ancestor	(ʔ)ũpũ	grandparent; crocodile	288
		[cf. *ta-umpu > ẽ-kãpũ]		
*uRat	artery, root, etc.	e-ua	liana	
*wahiR	fresh water	e-bee	sap, liquid	

2. PROBLEMATIC INHERITANCES

*aku (?)	I	ʔua	1SG	
		[loss of initial vowel, irregular final /a/, alternately from * = ku with irregular final /a/]		
*beli (?)	buy	k(i)-odi	to buy	215
		[irregular *b > Ø; possibly loan from Bugis *əlli*]		
*beRŋi (?)	night	ẽ-põõ	night	254
		[irregular *ŋ > Ø, irregular *i > /o/]		
*bituqen (?)	star	ẽ-pẽkõ	evening star	244
		[irregular *u > Ø, possibly a simplification of *uo > /o/, but cf. *tuqed > e-kuo; irregular *i > /e/, though cf. *iluR > k-edo]		
*buaq (?)	fruit	ẽ-hũã	fruit	85
		[irregular *b > /h/]		
*dalij (?)	buttress root	ẽ-nãnĩ	fibrous root	199
		[irregular*l > [n]]		
*enap (?)	scale of fish	e-ẽnã	scale (of fish, snake)	56
		[irregular *e > /e/]		

*hapuy (?)	fire	e-obi	fire	213
		[irregular *p > /b/, irregular *a > /o/]		
*huaji (?)	younger sibling	ą̊hãĩ, ẽ-ãhĩ, ẽ̊hẽĩ	younger sibling	7
		[irregular loss of initial *u, penultimate vowel in *ą̊hãĩ* ~ *ẽ̊hẽĩ* via vowel leak (see 2.2.1.3.)]		
*k‹an›uhkuh (?)	fingernail	ẽ-kãnũʔũnũ	nail, claw	
		[irregular *k > /k/, irregular final /nũ/]		
*kutu (?)	head louse	ẽ-hũkũ	louse	87
		[irregular *k > /h/]		
*pagel (?)	tired, exhausted	kĩpã-pãkõ	go numb (of limb)	
		[only instance of *g > /k/, dubious semantics]		
*pager (?)	fence	e-pado	fence(post)	232
		[only instance of *g > /d/]		
*peñu (?)	green sea turtle, tortoise	ẽ-pũnũʔõ̍ʔõĩ	tortoise	266
		[only attestation of *ñ, final /ʔõ̍ʔõĩ/ is unexplained, though could be a historic compound; cf. e-pudukíoʔoi 'stingray']		
*putul (?)	break off, cut off	kabuku	widow	108
		[source of initial ka- unclear; cf. *m-atay > e-kabake; irregular *p > /b/]		
*puqun (?)	tree trunk	e-poo	coconut tree, coconut	254
		[irregular *u > /o/ but cf. ?*susu > e-koko]		
*qaRta (?)	slave	e-kaka, e-taka	person	115
		[irregular initial consonant; Walland (1864:117) also attests <fakka> [faka] with initial /f/]		
*sauq (?)	anchor	ki-koa	to anchor	155
		[unexpected final /a/]		
*susu (?)	breast	e-koko	female breast	161
		[irregular *u > /o/; cf. ?*puqun > e-poo]		
*ta-umpu (?)	ancestor	ẽ-kãpũ	clan chief, old man, elderly person	124
		[irregular *au > /a/; cf. *umpu > (?)ũpũ]		

APPENDIX 2. ENGGANO BASIC WORDLIST (extracted from Kähler 1987)

In this appendix, I present the Enggano wordlist used to measure lexical retention without semantic shift in 3.3. Words are organized by semantic spheres. Notes and/or literal translations of compounds are given in the third column, and the page number of the main entry of the lexeme in Kähler's dictionary in the fourth column. The dagger symbol (†) indicates entries that Kähler marks as being archaic.

This wordlist is presented here because Kähler's dictionary is written in German, is somewhat hard to access, and the arrangement of entries is somewhat idiosyncratic; thus, linguists whose curiosity has been aroused by Enggano and who wish to hunt for cognates between it and other languages of the region with which they are familiar may prefer to start here. If these explorations appear fruitful, Kähler (1987) should be consulted for confirmation.

I present this wordlist subject to the disclaimer that it is only a starting point. The best source of Enggano data is Kähler's dictionary, grammar sketch, and published text collection, all of which are a fitting tribute to this gifted linguist.

A – Body Parts		**Notes**	**p.**
head	e-udu		281
hair, head	e-pududui		267
face	e-baka		25
eye	e-baka		25
nose	ẽ-pãnũ		238
mouth	e-kaʔa		103
lips	e-ukudipo		285
tongue	e-dio		43
tooth	e-kaʔa		103
ear	e-kadiha		125
neck	ẽ-ũʔũ		289
hand	e-ʔapo		19
fingernail	ẽ-kãnũʔũnũ		122
breast	ẽ-ãmãhã	male	12
	e-koko	female	161
belly	e-kitai, e-kidai		151
leg	e-ae		6
knee	ẽ-pũʔũ u-ae	'leg joint'	268
hair, body	e-pududui		267
skin	e-ʔudi, e-ʔuki		281
meat/flesh	e-heda		71
fat/grease	ẽ-mĩnãʔã	< Malay *minyak*	192
bone	e-ʔaa		1
heart	e-báhau		24
	ẽ-kẽmã		132
blood	e-kiaki		140
liver	ẽ-nĩũnĩũ		205
urine	ẽ-ĩkõ		94
feces	e-kai		114
B – Human and Kin Terms			
person, human	e-kaka, e-taka		115
man/male	ẽ-mãnĩ		190
woman	e-huda		86
husband	dadu		35
wife	e-dahebua		36
	hõnã		83
	e-houba	< e-hoo u-uba 'inside house'	85
father	ãmã		12
mother	nãẽ		197
child	e-ada		20
	e-pae		233
firstborn	e-ada e-pehe	'child first'	20
lastborn	e-ada ẽ-ãkãkãnũ		20
grandchild	ẽ-kõhõpĩõ		160
grandparent	(ʔ)ũpũ		288
ancestor	(ʔ)ũpũ		288
older sibling	ʔaʔa		2
younger sibling	ẽ-ǻhãĩ, ẽ-ẽ́hẽĩ, ẽ-ãhĩ		7
uncle	k-ahao ẽ-mãnĩ		112
aunt	k-ahao e-huda		112
slave	—		
guest	e-kitabo		151

friend, companion	ʔãnõ		16
	hobeʔa		80
name	ẽ-nĩ̈		204
C – Pronouns			
I	ʔua		278
you (SG)	ʔoʔo		223
he/she	kia		138
we (EXCL)	ʔai		9
we (INCL)	ʔika	dual	94
	ʔíkaʔa	plural	94
you (PL)	adiu		5
they	ki		138
D – Animals			
horn	e-kaduʔu	< Malay *tanduk*	110
tail	e-iʔo		97
	e-pahɨdai		234
bird	ẽ-kẽʔẽpã		130
egg	e-ada		20
feather	e-pududui		267
louse	ẽ-hũkũ	head louse	87
	ẽ-kãpẽñẽʔã	clothes louse	124
	ẽ-nãẽ		197
bat	e-kadabɨʔa		108
	ẽ-kãnãhãũnĩ		120
mosquito	e-kiʔao		140
	e-kadopipi	small mosquitos (*agas*)	126
snake	ẽ-ʔãnõ̃ãẽ, ẽ-ʔãnõ̃ãĩ	small snake	16
	ẽ-ãnõnõũ	river snake	16
	ẽ-ãpũʔũ	python	20
fish	e-ʔaiyo		10
mouse, rat	e-húao		86
	ẽ-kõʔãnũ		156
	e-peha		243
dog	e-beo		27
	e-ʔayedi		23
E – Plants			
tree	e-kuo		185
leaf	ẽ-pũnũ, e-pudu		266
root	ẽ-ãpũ		19
bark	e-ʔudi, e-ʔuki		281
wood	e-kuo		185
fruit	ẽ-hũã		85
flower	e-upuyo		289
thorn	e-dudui		48
	e-pudadi		261
banana	e-ʔito, e-ido		100
	†e-kibáha(u)		140
coconut	e-poo		254
	†ẽ-kãmũʔã		120
coconut shell	e-ʔaa u-poo	‘coconut frame’	1
	e-odoya		229
bamboo	e-(ʔ)abeha		3
	ẽ-pã-pũʔũ	CORE-CAUSE-node	268
sago palm	e-taku	< Malay *sagu*	276

rattan	ẽ-kĩhĩĩ	thin rattan	143
	e-piʔía?a	k.o. thick rattan	246
	ẽ-ĩʔĩã	k.o. rattan	92
	e-pá?e	k.o. rattan	233
areca palm	e-upo		288
sword grass	e-kaihiu		115
pandanus	ẽ-ʔãnĩmãẽ, ẽ-ʔãnĩmãõ, ẽ-ãnũmãẽ	k.o. pandanus	15
seed	ẽ-kṹã?ãkũ̀ã?ã		174
	ẽ-kõʔõkã?ã		168
	ẽ-hũẽ		86
field rice	e-padii	< Malay *padi*	231
hulled rice	e-ada u-kiho	'ant eggs'	20
cooked rice	nasi	< Malay *nasi*	200
sugarcane	ẽ-ãmãĩñõ		13
	ẽ-ũkõ		284
	e-kípokipoo	wild sugarcane	150
	e-hopiʔio	'that which is slurped'	84
F – Natural World			
night	ẽ-põõ		254
sun	e-baka u-kahaʔo	'eye of the day'	25
	†e-kehebu		130
	†ẽ-pãpãnõĩ u-kehebu		238
moon	ẽ-kãnĩãĩ		121
	ẽ-kĩʔũnã		154
	†ẽ-kãmũnãĩyõ		120
star	e-ʔapedúau		19
sky	e-ʔaa u-dahauhu	'thunder frame'	1
	e-ʔaa u-dopo i-tebe	'upper environment frame'	1
cloud	e-kai u-dahauhu	'thunder feces'	114
rain	e-boo		28
	ẽ-kãnĩnãhãĩ		121
	ẽ-kãnõpõã		122
wind	e-kiu		154
sea	e-ʔue		283
sand	e-doʔodao		47
	e-hahɨao		66
earth	e-dopo, e-topo, e-lopo	'environment'	47
	†ẽ-nãũõ		200
salt	e-ʔue		283
water	e-boo		28
spring	e-baka u-boo	'water eye'	25
	e-dihia u-boo		42
mountain	e-kohoi		160
	e-kaɨhɨiʧia		110
forest	e-kudio		186
	e-kue		177
river	e-boo		28
	e-bedoa		26
lake	—		
fire	e-ʔobi		213
smoke	ẽ-ĩpõ		98
	ẽ-kãnõã		121
ashes	e-ah(a)oi		8
stone	e-ʔea		50

G – Human Artifacts			
boat	e-doh(o)ao, e-dohɨao, e-tohɨao		46
	e-bodohaua		29
mortar	ẽ-páĩhũ, ẽ-pãĩhũ		234
	e-padau		240
pestle	e-ʔedako		51
	e-(pak)eké?ei	‘thing for pounding’	131
knife	ẽ-pã-kãmãĩ	‘thing for sharpening’	119
	e-pa-hɨka	‘thing for cutting’	75
machete	e-pá-itʃi, e-pé-itʃi	‘thing for hitting’	90
	†e-koʔohoi	‘killer’	167
rope	e-bohoyo		29
	e-epeko		58
	e-akadio		109
	e-ekeke		131
	e-oko		219
cloth	e-opouda		228
	ẽ-kãẽnĩ	< Malay *kain*	110
road	e-ʔekoa		55
house	e-uba		279
roof/thatch	e-pududui u-uba	‘house hair’	314
needle	e-(ʔ)ukui, e-pa-ukui	‘thing for piercing’	285
	e-ekeho	‘thing for piercing’	130
	e-(pa-)itʃiʔa	‘thing for sewing’	32, 91
H – Properties			
big	ãĩʔĩõ		9
	ʔãmũhõ		14
small	hĩnũ(ʔĩ)kĩ		78
good	ka-ʔuʔua		290
dry	kãʔã-kĩhĩ		142
far	kõnõnã		166
	kĩ-mĩĩ		191
near	pãnẽẽ		238
new	epoʔituda		256
old (things)	ka-buodo		32
old (people)	kãpũ(ũ)		124
thick	kã-ʔãpã		18
hot (water)	ka-dodohodi		45
	kaʔ(a)-itahauda		99
cold	kãʔã-ʔɨhĩã		62
lukewarm	—		
short	ka-kúoʔo		185
long	kã-ʔĩnũʔũ		97
blind	kãʔã-kẽnẽ e-baka	‘scabbed eyes’	132
deaf	ki-pehodo		244
thirsty	e-kihɨa		142
hungry	e-koo		154
round	kaka-kadodi, kaka-kadio		109
full	kĩ-páõmõ		221
white	ka-hiabi		76
black	kãʔã-ũĩ		283
	kã-ʔũʔũĩ		291
yellow	kaʔa-kitahayo		151
red	kaʔi-koko		162
blue, green	ki-kehíʔia	blue like a corpse	130
	kaʔa-padoba	deep blue	241

I – Location			
this	éiʔie	1st person	54
that	eʔana	2nd person	50
	éaʔa	3rd person	50
here	i-teʔe	1st person	100
there	i-dita, i-tita	2nd person	91
way over there	i-taʔa	3rd person	99
west	e-dakóaha		37
east	ẽ-ãkõnãhã		165
below, under	i-kituu, i-kiduu		153
above, over	i-tebe, i-debe		276
	y-apaua		18
behind	ĩ-kãhãõ	‘LOC-back’	112
	ĩ-kũkã	‘LOC-back’	181
	i-pou	‘LOC-back’	259
	i-koʔoki	‘LOC-back’	168
in front	pa-baka	pa- ‘eye, face’	25
outside	kude iʔioo		176
in, inside	i-hoo		80
edge	e-kaʔa	cf. mouth	103
J – Counting			
one	kahaiʔi		111
two	ʔadua		22
three	ʔakodu		158
four	ʔáopa		18
five	ʔadiba		21, 5
six	ʔãkĩãkĩnã		11
seven	ʔadiba hii ʔadua	‘five and two’	21, 5
eight	ʔáopa hii ʔáopa	‘four and four’	18
nine	abai kahaiʔi	‘one more is coming’	8
ten	kĩpãʔãũʔũ		230
	†kahapudu		112
twenty	kahaiʔi e-kaka	‘one person’	115
hundred	ʔadiba e-kaka	‘five people’	21, 5
thousand	—		
all	kíteda, kídeda		152
many	mõkõ		193
K – Verbs			
know	kĩpã-kãʔãũãʔã		105
say	ki-ʔua		278
repeat	ki-hii		76
sing	ki-hehebu		72
	ki-hohoda		81
cry	k-edo		51
laugh	ki-ʔɨkahai, ki-(ʔo)ʔokáhai		218
	ki-ʔoʔoʔoi		226
hear	ki-dohoi, ki-tohoi		46
see	ki-pɨa		245
	†kĩ-pĩnã		251
eat	kĩ-nõõ		205
drink	k-itɨ		100
bite	ki-hau		69
fall (INTR)	kĩ-kẽnẽnã		133
	kĩ-nõnõnã (√kõnõnã)		166
	ki-puʔuda		268
drop s.t.	ki-puʔudaʔa		268
burn	ki-duduki		48

pound (rice)	kĩ-pãũ		241
	ki-kekéʔei		131
die	ka-ʔao		17
	ka-kudu		177
dry in sun	kãʔã-kĩhãʔã		142
bathe	k-eke		55
	ki-kiti, ki-kito		152
wash (TR)	kã-nõkĩ	things	207
	kipa-kiti	person	152
	ki-ʔudóhoi	hair	281
swim	kĩ-ʔãʔãkõ		2
	ki-ʔaʔakia		2
fly (V)	kĩ-ʔẽʔẽpã		53
	kĩ-hãhãmõ		65
kill	ki-paka-hadee, ki-paka-halee		235
	ki-pudu		262
give	ki-pee		242
cough	kĩ-ʔẽʔẽhẽ		52
spit	kah-ito		101
vomit	k-eo		57
	k-iʔa		59
itch	kĩ-hĩãmã		77
walk	k-aa		1
	k-aha(a), k-áhae		6
stand	kab-éʔeu		53
	kĩ-ʔẽnũ		56
sit	kĩ-hẽkũ		73
lie (down)	k-ãnũ		16
	ki-ʔúoho, ki-ʔúohe		287
	ki-kiʔopo	on belly	148
	ki-dadau	on back	38
sleepy, be	kãʔãpã-nũkõ		209
	ki-ʔodea		215
sleep	k-ãnũ		16
	ki-ʔúoho, ki-ʔúohe		287
	k-ããmĩ		13
dream	kãʔã-nĩhãã, kãʔã-nĩhãĩ		204
wake up			
awaken s.o.	pa-ʔipaʔa		98
	kipa-diʔpaʔa		41
come	k-ai		8
pregnant, be	ki-ʔakeo		133

L – Miscellaneous

not	kéabaʔa	128
what?	e-ʔíaha	89
who?	hãĩ	66
where?	i-ʔíaha	89
how many?	ʔãnõ	16
	ʔapíaha	19
how?	adiha(pe)	4
	(ʔ)adoho	6
	ãnõnõ	16
why?	mẽ mẽõ, be mẽõ	191

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