

The place of Tukang Besi and the Muna-Buton languages

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1 Introduction

Until recently, the linguistic position of Tukang Besi in South-east Sulawesi has always been safely within the Muna-Buton group.¹ This classification is based on Esser (1938), who included Tukang Besi within the Muna-Buton group, an entity first postulated by Adriani (1914). In the *Atlas van Tropisch Nederland*, Esser attempted a comprehensive classification of the Austronesian languages of Indonesia, but unfortunately he did not provide any reasons for his decisions or include an evidential basis for his subgrouping. He recognised nine primary subgroups in Sulawesi (then Celebes), one of which (No. XII) is the Muna-Buton group, consisting of the following four languages (with modern names in brackets):

1. Muna-Buton (Muna)
2. South-Buton (Cia-Cia)
3. Language of the Tukang Besi islands,
Kalaotoa, Karompa and Bonerate (Tukang Besi)
4. Wolio and Layolo (Wolio, Layolo)

Anceaux (1978) added to our knowledge of the area by showing that the language situation on Buton is actually more complex. Leaving the Bungku-Tolaki languages aside for the purposes of this paper, he found three new languages on Buton island, to which he assigned letter codes rather than names: E (now called Lasalimu), G (Pancana) and H (Kamaru). Not much was said about the internal classification of these languages. Based on lexicostatistics, Anceaux (1978:281) notes that B (Tukang Besi) 'scores relatively low with

¹ This paper is a slightly revised version of the one presented at the Ninth International Conference on Austronesian Linguistics, Canberra, January 2002. I wish to thank Robert Blust, Mark Donohue, David Mead, Daniël Vermonden and Erik Zobel for comments and corrections. The following abbreviations are used in the glosses: A.PART = active participle, ART = article, NOM = nominative, OBJ = object, OBL = oblique, REQ = requestive. A list of language abbreviations and sources of data is given at the end of the paper.

all the others. Still there is reason to believe that all the languages of this area belong to one subgroup, but it is only through further comparisons that the truth of this hypothesis can be tested'.

Subsequent work by Bhurhanuddin (1979), van den Berg (1991a), Donohue (1993, 2000) has shown that the situation is even more complex. The most recent listing of the Muna-Buton languages is found in the 14th edition of the *Ethnologue* (B.F. Grimes 2000), where the following 17 languages are given, split into four subgroups.

Table 1: Muna-Buton languages with numbers of speakers²

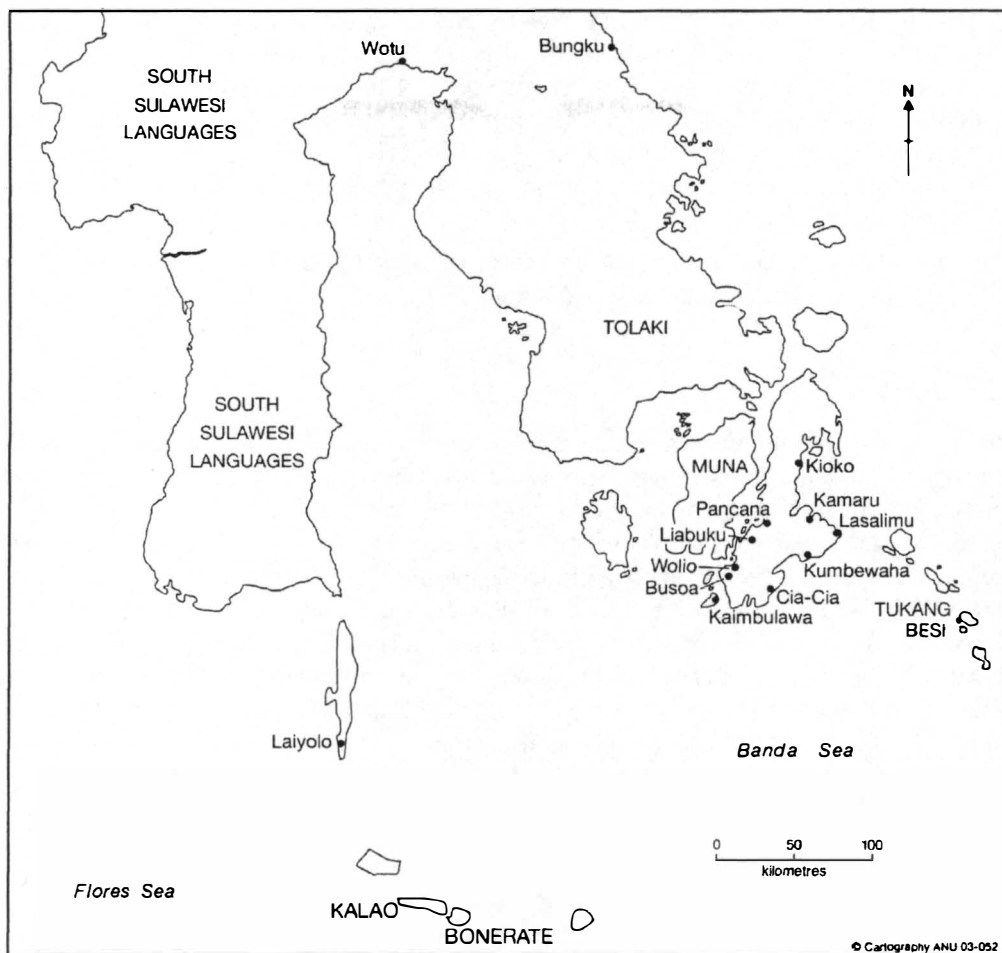
a.	Buton	1.	Cia-Cia	61,000
		2.	Kamaru	3,000
		3.	Wolio	50,000
		4.	Wotu	5,000
	Lasalimu-Kumbewaha	5.	Kumbewaha	2,600
		6.	Lasalimu	1,700
b.	Kalao	7.	Kalao	500
		8.	Laiyolo	800
c.	Muna	9.	Busoa	2,300
		10.	Kaimbulawa	1,600
		11.	Kioko	1,000
		12.	Liabuku	>150
		13.	Muna	280,000
		14.	Pancana	6,000
d.	Tukang Besi-Bonerate	15.	Tukang Besi North	120,000
		16.	Tukang Besi South	130,000
		17.	Bonerate	9,500

Apart from the classification (to which I return below), a few other points should be raised regarding this list.

1. The status of some of these languages is still tentative, especially Kumbewaha, Kioko, Liabuku and Pancana. Detailed survey work still needs to be done in this part of Buton in order to establish the exact number of languages and dialects (to the extent that this is possible).
2. Donohue (1993) splits up Cia-Cia into three languages: Cia-Cia, Masiri and Island Cia-Cia, but no evidence is given.
3. Bonerate is best considered a dialect of Tukang Besi South (85% cognate with the Binongko dialect, Donohue 2000:57). Also, Tukang Besi North and South are 'often identified as one by the native speakers'. I will follow this usage and refer to the language(s) as Tukang Besi, indicating individual dialects when necessary.

The accompanying map (adapted from Donohue 1993) gives the location of most of these languages.

² These figures are based on *Ethnologue* (14th edition) supplemented by local updates obtained by David Andersen and myself.



Map 1: The Muna-Buton languages

In an important but as yet unpublished paper, Donohue (1993) has questioned the validity of the Muna-Buton group as a unity.³ He was the first to take up the challenge of putting this putative subgroup on firm comparative ground. Based on a number of sound correspondences he reached the following conclusions:

1. Wolio is to be removed from the Muna-Buton group. Instead, together with Kamaru (eastern Buton) it links up with Laiyolo (southern part of Selayar island) and Wotu (at the tip of the gulf of Bone in South Sulawesi), as suggested earlier by Grimes and Grimes (1987). Presumably Kalao should also be included in this Wolio-Wotu group.

³ In spite of its unpublished nature, I refer to this paper as Donohue (1993) as it has been in circulation for several years. A more recent version of this paper (to be published by Pacific Linguistics) was kindly made available to me by the author, but reached me after I had written most of this article. The recent version differs from the earlier one (among other things) in that all references to the position of Tukang Besi have been removed.

2. *Tukang Besi* is also to be removed from the Muna-Buton group, as it differs in crucial respects from the 'real' Muna-Buton languages. Its subsequent affiliation is unclear, although Donohue mentions that 'certain aspects of linguistic classification point to an origin in the Tomini gulf area in their prehistory' (Donohue 1993:18). This statement must be considered speculative. In his grammar of *Tukang Besi* (Donohue 1999), the author makes no further reference to the question of the position of *Tukang Besi* within the wider Sulawesi context.
3. The remaining languages of Muna and Buton do constitute a valid group containing two subgroups, which he calls *Munan* and *Buton*.

2 Current hypothesis

Based on further comparative work, I would like to validate Donohue's claim that *Wolio* is not part of the Muna-Buton group. This would also seem to apply to *Kamaru*, although the scarcity of data for this language makes it difficult to be dogmatic. Whether or not *Wolio*, *Kamaru*, *Wotu*, *Kalao* and *Laiyolo* form a distinct subgroup is a completely different question which has not been properly addressed. Further research may well indicate that the putative *Wolio-Wotu* group is part of the *Kaili-Pamona* microgroup.

However, my conclusion for *Tukang Besi* is different from Donohue's. I propose that this language is indeed part of the Muna-Buton group, but constitutes a primary branch of it. The remainder I call *Nuclear Muna-Buton*, which splits into *Munic* and *Butonic*. In other words, I postulate the following structure (leaving details within *Munic* and *Butonic* to be worked out).

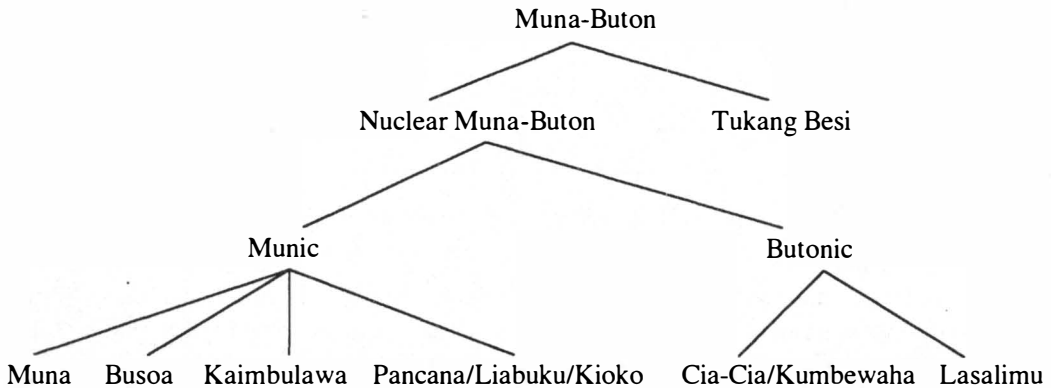


Figure 1: The Muna-Buton group

In this paper I will present the evidence for including *Tukang Besi* within the Muna-Buton group. This evidence will consist of phonological, grammatical and lexical innovations.

3 Phonological evidence

3.1 Phonological innovations

I start off by repeating Table 5 from Donohue (1993), as this presents in his opinion the crucial evidence for separating off *Tukang Besi* from the Muna-Buton group. I hope to show that this table is not without its problems, and that another solution is possible.

Table 2: Muna-Buton vs *Tukang Besi* sound changes

PAn	*b	*e	*Z	*R	*uy	*S	*j	*w
Kaimbulawa	w	o	s	*y	i	∅	*y ⁴	o, u
Muna	w	o	s	*y	i	∅	*y	o, u
Kumbewaha	w	o	s	*y	i	∅	*y	o, u
Cia-Cia	w	o	s	*y	i	∅	*y	o, u
<i>Tukang Besi</i> languages	w	o	s	h	u	?	∅	∅
Wotu-Wolio languages	b	a	d	∅	o, u	∅	*y	o, u, w

It is obvious that the Wotu-Wolio reflexes diverge considerably from the other languages and hence their exclusion from Muna-Buton is justified. For *Tukang Besi* the situation is less clear. Of the eight sound changes listed by Donohue, five are not shared between *Tukang Besi* and the Muna-Buton languages, two of the others (*b > w, *e > o) Donohue considers to be relatively natural changes occurring elsewhere also, which leaves only one (*Z > s). Donohue concludes that a basis of one shared sound change is too weak for subgrouping purposes and, consequently, that *Tukang Besi* is not part of the Muna-Buton group.

A number of critical comments can be made here. First, the change *b > w listed above is too rigorous. Many etyma in the Muna-Buton languages have retained PMP *b as implosive *ɓ* and there is much variation between *ɓ* and w even within the group. For example, PAn **baŋun* ‘get up’ is reflected as Mun *wanu* but as *ɓanu* in Kaimbulawa and as *ɓaŋu* in Busoa, Cia-Cia, Lasalimu and *Tukang Besi*. The change *b > w is one of the lenition changes that pervades the whole group (see below) and cannot be used for subgrouping purposes.

Second, PAn *S > ? in *Tukang Besi* is problematic. I believe it is much easier to assume that PAn *S (PMP *h) became zero in *Tukang Besi*. Donohue (1993:23) gives the following illustrative etyma:

PAN		Tuk	Cia	Mun
* <i>kaSiw</i>	‘wood’	<i>kau ~ kaʔu</i>	<i>sau</i>	<i>sau</i>
* <i>daSun</i>	‘leaf’	<i>roʔo</i>	<i>roʔo</i>	<i>roo</i>
* <i>i-kaSu</i>	‘you’	<i>ikoʔo</i>	<i>isoʔo</i>	<i>(ihintu)</i>
* <i>Su</i>	‘2SG subject prefix’	<i>ʔu</i>	<i>o-, u-</i>	<i>o-</i>

According to Donohue, the glottals in the Cia-Cia forms are a ‘regular non-phonemic insertion between like vowels’, whereas *Tukang Besi* preserves *S as ?. It appears, however, that in *Tukang Besi* the same rule operates in many (but not all) forms. A glottal often appears to break up like vowels where it does not reflect a consonant. Some examples:

PMP		Tuk	Cia	Mun
* <i>pahuq</i>	‘mango’	<i>poʔo</i>	<i>poʔo</i>	<i>foo</i>
* <i>sawa</i>	‘snake’	<i>saʔa</i>	<i>saʔa</i>	<i>sa(a)-</i>
* <i>enem</i>	‘six’	<i>noʔo</i>	<i>noʔo</i>	<i>noo</i>
* <i>epat</i>	‘four’	<i>paʔa</i>	<i>paʔa</i>	<i>paa</i>

This rule is not as strict in *Tukang Besi* as it is in Cia-Cia. Sequences of like vowels do indeed occur in *Tukang Besi*, but they appear to be the result of the loss of *j or (in one case) a sporadic change. Examples are *ʔooloo* ‘day’ (PMP **qalejaw*); *ŋaa* ‘name’ (PMP **ŋajan*)

4 Proto Muna-Buton *y is discussed below.

and *mohii* 'left-handed' (PMP *wiRi, through metathesis from **ihi). Sequences of like vowels are also found in loan words e.g. *karajaa* 'work' (Malay *kerja*); *paraluu* 'need' (Malay *perlu*); *koosu ae* 'socks (of feet)' (Dutch *kous*) and words of unclear origin, e.g. *mohoo* 'sick' and *ree* 'cough'. The glottals in the words *roʔo* 'leaf' and *ikoʔo* 'you' can therefore be considered regular phonemic developments. The second person singular subject prefix has an unexpected initial glottal, but this is almost certainly a later development. The Southern Muna dialect of Gu uses initial glottals on all function morphemes (including pronouns and subject markers). Contrary to regular glottals, these have no corresponding *gh* or *h* in the northern (standard) dialect of Muna. This leaves us with only one etymon from the list (*kau* ~ *kaʔu* 'wood') in which the glottal is unexplained. And even there we find a parallel in Lasalimu which has *kaʔu* for 'smoke', from Proto Muna-Buton *qahu (expected **kau: *h regularly goes to zero in Lasalimu). A last piece of evidence is the reflex of *S as zero in *Tukang Besi dua* 'two' (PAn *duSa). The argument that *Tukang Besi* differs from the other Muna-Buton languages in its reflex of PAn *S can therefore not be maintained.

Third, the claimed change of PAn *w to Muna-Buton *o/u* is also problematic. Donohue gives the following etyma to prove his point.

PAn		Tuk	Cia	Mun
*walu	'eight'	alu	oalu	oalu
*siwa	'nine'	sia	siua	siua
*wanan	'right'	mo/ana	s/uana	s/oana

I posit instead that all the Muna-Buton languages share the change PMP *w > ∅. Initial evidence that PMP *w > ∅ is provided by Muna *sa(a)*- 'snake' (in names of certain snakes and in the place name *Lianosaa* 'snake cave'; from PMP *sawah); *aa* 'waist' (PMP *hawak) and *kai* 'fish hook' (PMP *kawit). The apparent reflexes of *w as *o/u* can all be explained. As Mead (1998:46) has pointed out, Muna and Cia-Cia *oalu* go back to a reduplicated form *wa-walu. The developments are then completely regular, with loss of *w and antepenultimate *a > o. The word for 'nine' is indeed an exception in Cia-Cia and Muna, but it is irregular anyway in that the glide has syllabified (although stress remains on the antepenultimate syllable *si* in Muna, and not — as expected — on the penultimate syllable *u*). Finally, Cia-Cia *soana* and Muna *suana* 'right' go back to PMP *ka-wanan (rather than *wanan), with regular loss of *w, lenition of *k > s and antepenultimate raising of *a > o and even further to *u* in Muna. (For antepenultimate raising of *a > u in Muna, cf. *qateluR 'egg' > *ghunteli* and *baqeRu 'new' > *bughou*.)

In conclusion, of the five changes listed as differentiating Muna-Buton and *Tukang Besi*, two are invalid.

3.2 Reconciling Muna-Buton and *Tukang Besi*

This leaves three changes in Donohue's chart where *Tukang Besi* and the remaining Muna-Buton languages actually differ: the reflexes of PMP *R, *uy and *j. I add here the reflex of PMP *ej (*Tukang Besi* *o*, Nuclear Muna-Buton *e*), The solution I propose is shown in Table 3.

Table 3: Selected Proto Muna-Buton reflexes

PMP	Proto Muna-Buton	Tukang Besi	Proto Nuclear Muna-Buton	Cia-Cia	Muna
*uy	*uy	u	*i	i	i
*ej	*oy	o	*e	e	e
*R	*R	h	∅, vowel coalescence	vowel coalescence	vowel coalescence
*j	*y	∅	∅, vowel coalescence	vowel coalescence	vowel coalescence

The different reflexes of *uy can be accounted for by assuming the diphthong was retained in Proto Muna-Buton. This is relevant for three etyma:

PMP	PMB		Tuk	Cia	Mun
*babuy	*wawuy	‘pig’	wawu	wawi	wewi
*hapuy	*apuy	‘fire’	apu	api	ifi
*(l, n)añuy	*(l, n)añuy	‘swim’	nanu	pika/nanu	leni

(Cia-Cia *pika/nanu* irregularly reflects *uy as u; it is probably a loan from *Tukang Besi*.)

The situation for PMP *ej is similar. For ‘fly’ and ‘snake’ there is disagreement, the *Tukang Besi* reflex *o* pointing to PMB *oy. I therefore tentatively reconstruct this diphthong, so far found in only two reconstructed forms. Notice that the reflexes of *ej differ from those of *ey in *Tukang Besi*.

PMP	PMB		Tuk	Cia	Mun
*lalej	*laloy	‘fly’	lalo	lale	lale(mbanua)
*qulej	*quloy	‘snake’	ulo	kule	ghule
*gatey	*qate	‘liver’	ate	hate	ghate
*quey	*que	‘rattan’	?ue	Las kue	ghue

The reflex of PMP *R as *Tukang Besi* *h* is indeed surprising, but a reconciliation with *Muna* and *Cia-Cia* vowel coalescence or zero is possible. I propose Proto Muna-Buton *R, which at that time still had its original quality, probably a voiced velar fricative /ɣ/ or a voiced uvular fricative /ʁ/. A velar or uvular fricative is still a very common sound in the *Muna-Buton* area, synchronically attested for *Muna* (written as *gh*), *Busoa* and the *Pasarwajo* dialect of *Cia-Cia*. While in *Tukang Besi* *R > *h* and *j > ∅, the western *Muna-Buton* languages merged these sounds as either zero in between high vowels or as *y between non-high vowels, with subsequent vowel coalescence. Some examples are:

PMP	*DaRaq	*DuRi	*ŋajan	*qalejaw
	‘blood’	‘thorn’	‘name’	‘sun’
PMB	*raRa	*ruRi	*ŋaya	*qoloyo
Tuk	raha	ruhi	ŋaa	?oloo
PNMB	*rea (< *raya)	*rui	*ŋea	*qoleo
Cia	rea	rui	ŋea	holeo
Mun	rea	ki/ri (< ka/rui)	nea	gholeo

At this point it is not entirely clear whether PMP final *R was completely lost in PMB or whether it was retained as *y. The distribution of the various reflexes is uneven in the daughter languages, and more data is needed before a firm conclusion can be drawn.

The preceding discussion has shown that *Tukang Besi* does indeed differ from the other Muna-Buton languages in four of its PMP reflexes, but this can be accounted for by proposing a higher link between *Tukang Besi* and the Nuclear Muna-Buton languages.

3.3 From PMP to Proto Muna-Buton

In Table 4 below I have listed the reflexes of PMP (Proto Malayo-Polynesian) in seven languages of the Muna-Buton group. My starting point is PMP rather than PAN, as a significant number of PAN phonemes had already merged by the time of PMP. PAN proto-phonemes such as *C, *N and *S are therefore irrelevant for lower-level reconstruction work. In Table 4, multiple reflexes are listed in decreasing order of frequency; brackets denote rare occurrences; *v.c.* = vowel coalescence; and ? indicates uncertainty.

Table 4: PMP reflexes in PMB and selected Muna-Buton languages

PMP	PMB	Tukang Besi	Muna	Busoa	Kaimbulawa	Cia-Cia	Lasalimu
*a	*a	a	a	a	a	a	a
*i	*i	i	i	i	i	i	i
*u	*u	u	u	u	u	u	u
*e	*o	o	o	o	o	o	o
*ay	*e	e	e	e	e	e	e
*ey	*e	e	e	e	e	e	e
*ej	*oy	o	e	e	e	e	e
*uy	*uy	u	i	i	i	i	i
*aw	*o	o	o, u	o	o	o	o
*p	*p	p, h	p, f	p, f	p	p	p
*t	*t	t	t	t	t	t, c/_i, u	t, c/_i, u
*k	*k, *s	k (s)	k, s	? , s	k, s	k, s	k, s
*q	*q	?, Ø	gh (=x)	h	h	h, k	Ø, k
*b	*b, *w	b, w	b, b, w	b, w	b, w	b, w	b, w
*D/d/r	*r, *d	r, d	r, d	ɣ, ?	ʃ, ?	r, d	r, ?
*Z/z	*s, (*d)	s (d)	s, (d)	s, ?	s, ?	Ø (d)	Ø, ?
*j	Ø, *y	Ø	v.c	v.c	v.c	v.c.	?
*m	*m	m	m	m	m	m	m
*n	*n	n	n	n	n	n	n
*ñ	*n	n	n	n	n	n	n
*ŋ	*ŋ	ŋ	n	ŋ, n	n	ŋ	ŋ
*R	*R, Ø, ?*y	h	Ø, v.c	Ø, v.c.	Ø, v.c.	Ø, v.c.	Ø, v.c.
*l	*l	l	l	l	l	l	l
*s	*s, *h	s, h	s, h	s, h	s, Ø	s, Ø	s, Ø
*h	Ø	Ø	Ø	Ø	Ø	Ø	Ø
*w	Ø	Ø	Ø	Ø	Ø	Ø	Ø
*y	Ø	Ø	Ø	Ø	Ø	Ø	Ø

3.4 PMB phonological innovations

I propose the following phonological innovations from PMP to PMB as defining the Muna-Buton subgroup.

1. *Z/z > *s, *d
2. *s > *s, *h
3. *D/d/r > *d, *r
4. *b > *ɓ, *w
5. *h, *w, *y > ∅
6. *e, *aw > *o
7. *ay, *ey > *e
8. Loss of all final consonants (except in the diphthongs *uy and *oy).
9. Reduction of all medial clusters.

3.5 Proto Muna-Buton phonology

Based on the preceding discussion, the following picture emerges of Proto Muna-Buton phonology:

Consonants				Vowels		Diphthongs
*p	*t	*k	*q	*i	*u	*uy
*ɓ	*d	*g		*e	*o	*oy
*mp	*nt	*ŋk			*a	
*mb	*nd	*ŋg				
	*s		*R			
	*ns		*h			
*m	*n	*ŋ				
	*l					
	*r					
*w	*y					

The following comments on the phoneme chart need to be made:

1. I assume *q was a voiceless uvular plosive /q/.
2. There were three voiced plosives, two of which were implosives (*ɓ and *d), as well as a regular *g. In present-day languages the implosive quality of the voiced stops is greatest for the bilabials, somewhat less for the alveolars and rare for velars, with only *Tukang Besi* having an implosive [ɠ] as an allophone of /g/. Implosives have spread to non-Muna-Buton languages in the area such as *Wolio* (Anceaux 1952) and *Kulisusu* (Mead 1998:21); even *Tolaki* on the Sulawesi mainland has implosives in free variation with plain plosives (Mead & Tambunan 1993).
3. In *Muna*, *Cia-Cia* and *Lasalimu* /ɓ/ does not occur before /u/, but in *Tukang Besi* it does (according to Donohue 1999). I tentatively reconstruct *ɓ also before /u/, e.g. Proto Muna-Buton *ɓura ‘face powder’, based on *Muna*, *Cia-Cia* *bura* and *Tukang Besi* *bura*.
4. *R was probably phonetically /ɣ/ or /ʁ/.
5. The seven prenasalised consonants functioned as units: *mp, *mb, *nt, *nd, *ns, *ŋk and *ŋg. Some of these also occur word-initially in PMB etyma, e.g. *mbaka ‘delicious’, *ndoke ‘monkey’, *nturu ‘often’.
6. *w was probably /β/ and could alternatively be listed in the fricative column.
7. Syllable structure was open: (C) V.

8. Sequences of two or three vowels were allowed: **deu* 'needle', **daoa* 'market'.
9. The diphthongs occurred only word-finally.
10. Stress was penultimate.

3.6 Sporadic sound changes within the Muna-Buton group

Several lenitions and other types of changes have pervaded the Muna-Buton subgroup, but they are clearly not diagnostic for the group as a whole. These changes have taken place to a greater or lesser extent in individual languages, but only affecting part of the vocabulary. In other words, they are typically wave-like in character. The most common lenitions are as follows:

PMB		Reflexes in individual languages
* <i>p</i>	>	<i>f, h</i>
* <i>k</i>	>	<i>s</i>
* <i>q</i>	>	<i>ʁ, k, ʔ, h, ∅</i>
* <i>ɸ</i>	>	<i>w</i>
* <i>d</i>	>	<i>r</i>
* <i>s</i>	>	<i>h, ∅</i>

I discuss these in more detail below.

1. PMB **p* > *f* > *h*. The change **p* to *f* has primarily affected Muna, and to a lesser degree some Pancana dialects. Tukang Besi has gone even further in this lenition process, and often reflects **p* as *h* (actually [ϕ] before *u*). Even /*p*/ can be realised as [ϕ] or [pϕ] before /*a*/ and /*o*/ (Donohue 1999:16). This lenition process is interesting in that the two languages on the geographical edges of the group are affected, but those in the middle are not. However, Muna and Tukang Besi do not always agree with each other in the etyma in which this lenition occurs, giving further evidence to the irregular spread of this sound change. Some examples of PMP and PMB **p* in Tukang Besi and Muna:

PMP	PMB		Tuk	Mun
* <i>epat</i>	* <i>pato</i>	'four'	<i>hato-</i>	<i>fato-</i>
* <i>pitu</i>	* <i>pitu</i>	'seven'	<i>hitu-</i>	<i>fitu-</i>
* <i>paniki</i>	* <i>poniki</i>	'bat'	<i>honiki</i>	<i>ponisi</i>
* <i>Depah</i>	* <i>ropa</i>	'fathom'	<i>sa/roha</i>	<i>pute</i>
* <i>paqah</i>	* <i>paqa</i>	'thigh'	<i>paʔa</i>	<i>fagha</i>
* <i>pakay</i>	* <i>pake</i>	'wear, use'	<i>pake</i>	<i>pake</i>
* <i>pandak</i>	* <i>panda</i>	'short'	<i>me/panda</i>	<i>panda</i>

2. The lenition of PMP **k* > *s* is widespread in Nuclear Muna-Buton (e.g. PMP **kahiw* 'wood' > PNMB **sau*; PMP **kali* 'dig' > Muna *seli*), but in Tukang Besi it has only occurred in the possessive suffix *-su* 'my' (Muna *-ku*) and the dative object suffixes *-nso* and *-nsami* (see below).
3. None of the Muna-Buton languages has retained **q* as a uvular plosive, but only in Tukang Besi is there a split between glottal and zero, with glottal occurring medially (with one exception), and zero or glottal initially, without obvious conditioning factors. In one case a difference in meaning seems to have developed, if the transcription and the glosses are correct. Notice the following reflexes of PMP **q* in Tukang Besi, Cia-Cia and Muna:

PMP	PMB		Tuk		Cia	Mun
*qatep	*qato	'roof'	ato		hato	ghato
*qazay	*qase	'chin'	ase		hae	ghase
*qabu	*qabu	'ashes'	awu		hawu	ghabu
*qenay	*qone	'sand'	?one		hone	ghone
*qalipan	*qolipa	'centipede'	oliha 'centipede'		honipa	gholifa
			?oliha 'scorpion'			

4. PMB **ɸ* > *w*. This is an ongoing lenition in the whole Celebic group (see van den Berg 1991b:12), especially common before *u*. In some cases PMB had already undergone weakening (e.g. PMP *tebuh 'sugarcane' > PMB *towu). Notice the erratic pattern in the following words:

PMP	PMB		Tuk		Cia	Mun
*baɲun	*baɲu	'get up'	baɲu		baɲu	wanu
*bisul	*bisu	'boil'	bisu		ka/wincu ⁵	ka/wisu
*baqeRu	*boqou	'new'	wo?ou		wukou	bughou

5. PMB **s* > *h* > zero is again a lenition pattern which had already begun in some words before PMB: note PMP *tasak 'ripe' > PMB *taha; PMP *tasik 'sea' > PMB *tahi (Mun *tehi*, Cia *tai*).

Other sporadic changes occurring in the *Muna-Buton* group are as follows:

6. Vowel height assimilations, e.g. *iCa > eCa or iCe and even iCi, as in PMB *mia 'person', Cia Tuk *mia*, Mun *mie*, Bus *mii*. Also *aCi > eCi and *uCa > uCe, as in PMB *wuta 'earth, ground', Tuk *wuta*, Bus *wute*, Mun *wite*.
7. Fronting of back vowels (**u* > *i*; **o* > *e*), e.g. PMB *tau 'put, place', Mun *tei* (through ***tai*).
8. Antepenultimate raising (**a* > *o* or *u* in pretonic syllables), e.g. PMP *ka-wanan 'right side', Cia *soana*, Mun *suana*.
9. Final **u* > *o*, e.g. PMB *taqu 'year', Tuk *ta?o*.
10. Prenasalisation, e.g. PMP *tade 'stand', Tuk *tade*, Cia *tade* ~ *ntade*, Mun *ntade*.
11. Metathesis (often involving words of VCV shape with identical vowels), e.g. PMB *isi 'flesh', Cia *isi*, Mun *ihi*, Bus *hii*.

3.7 Irregular phonological developments from PMP to PMB

The following list shows a number of irregular phonological developments in individual etyma which are shared by all the languages in the *Muna-Buton* group, including *Tukang Besi*. Again, this is strong subgrouping evidence. For reasons of space the supporting material in the individual languages cannot be given.

⁵ The Masiri/Mambulu dialect of Cia-Cia has *ka**b**isu*.

PMP		PMB	
<i>*bahaq</i>	'flood'	<i>*mawa</i>	(possibly fossilized <i>ma-</i>)
<i>*baReqaŋ</i>	'molar tooth'	<i>*baqa</i>	'cheek' (* <i>Req</i> > * <i>g</i>)
<i>*binehiq</i>	'seed'	<i>*wine</i>	(contraction and lowering)
<i>*(ma-)beReqat</i>	'heavy'	<i>*boRa</i>	(contraction of final syllables)
<i>*baqeRu</i>	'new'	<i>*boqou</i>	(loss of * <i>R</i>)
<i>*dilaq</i>	'tongue'	<i>*lela</i>	(assimilation and vowel lowering)
<i>*Dalem</i>	'inside, deep'	<i>*laro</i>	'inside' (metathesis)
		<i>*ndalo</i>	'deep' (prenasalisation)
<i>*enem</i>	'six'	<i>*noo</i>	(free) (metathesis)
		<i>*nomo</i>	(bound) (paragogic vowel)
<i>*epat</i>	'four'	<i>*paa</i>	(free) (* <i>e</i> > * <i>a</i> , metathesis)
		<i>*pato</i>	(bound) (paragogic vowel)
<i>*isa</i>	'one'	<i>*sa</i>	(bound) (loss of * <i>i</i>)
<i>*kabut</i>	'fog, mist'	<i>*gawu</i>	(* <i>k</i> > * <i>g</i>)
<i>*kempuŋ</i>	'intestines'	<i>*kompo</i>	(lowering of * <i>u</i> to * <i>o</i>)
<i>*kita</i>	'see'	<i>*ita</i>	(loss of * <i>k</i>)
<i>*maRi</i>	'come'	<i>*mai</i>	(loss of * <i>R</i>)
<i>*maRuqanay</i>	'man'	<i>*moqane</i>	(reduction of first syllable)
<i>*mula</i>	'plant'	<i>*pembula</i>	(prefix and prenasalisation)
<i>*penuq</i>	'full'	<i>*pono</i>	(lowering of * <i>u</i> to * <i>o</i>)
<i>*putiq</i>	'white'	<i>*pute</i>	(lowering of * <i>i</i> to * <i>e</i>)
<i>*qelet</i>	'crevice'	<i>*qolota</i>	'space between' (irregular paragogic vowel)
<i>*Ribu</i>	'thousand'	<i>*riwu</i>	(* <i>R</i> > * <i>r</i> irregular; or loan?)
<i>*sa-puluq</i>	'ten'	<i>*ompulu</i>	(prenasalisation, loss of * <i>s</i>)
<i>*sebu</i>	'temper'	<i>*soropu</i>	(* <i>b</i> > * <i>p</i> ; infix)
<i>*ZaRum</i>	'needle'	<i>*deu</i>	(via ** <i>dayu</i> , with * <i>R</i> > * <i>y</i>)

Some of these innovations may in fact have occurred in a higher-order subgroup comprising both Proto Muna-Buton and Proto Bungku-Tolaki. Compare PBT **laro* 'inside'; **nomo* 'six'; **pato* 'four'; **gawuQ* 'mist'; **kompoN* 'stomach, intestines'; **mai* 'come' and **pono* 'full'. If this is indeed the case, it would strengthen the hypothesis of a South-eastern Celebic subgroup as put forward by Mead (this volume).

4 Grammatical evidence

In this section I list some apparently exclusively shared grammatical innovations in the Muna-Buton group. This section is far from exhaustive and is probably only indicative of what can be further unearthed.

4.1 The pronominal system

The substantial similarities in form and function of the pronoun systems in three daughter languages indicate that a similar system existed in PMB. Let us first consider present-day languages for which data are available. (In these charts the symbol ' marks a glottal stop).

Table 5: *Tukang Besi* pronominal forms (terminology from Donohue 1999)

	Free forms	Irrealis Subject	Realis Subject	Possessive	Object	Dative object
1SG	<i>iaku</i>	<i>ku-</i>	<i>ku-</i>	<i>-su</i>	<i>-aku</i>	<i>-naku</i>
2SG	<i>iko'o</i>	<i>ko-</i>	<i>'u-/nu-</i>	<i>-'u</i>	<i>-ko</i>	<i>-nso</i>
3SG	<i>ia</i>	<i>na-/a-</i>	<i>no-/o-</i>	<i>-no</i>	<i>-'e</i>	<i>-ne</i>
1PAUCAL	<i>ikami</i>	<i>ka-</i>	<i>ko-</i>	<i>-mami</i>	<i>-kami</i>	<i>-nsami</i>
1PLURAL	<i>ikita</i>	<i>ta-</i>	<i>to-</i>	<i>-nto</i>	<i>-kita</i>	<i>-nggita</i>
2PL	<i>ikomiu</i>	<i>ki-</i>	<i>i-</i>	<i>-miu</i>	<i>-komiu</i>	<i>-ngkomiu</i>
3PL	<i>amai</i>	<i>na-/a-</i>	<i>no-/o-</i>	<i>-no</i>	<i>-'e</i>	<i>(amai)</i>

Notes to Table 5:

1. 3SG and 3PL are identical in their affixed forms; the free pronoun is different in each case.
2. The pronouns *ikami* and *ikita* are glossed as 'paucal' and 'plural' respectively, but 'they are used with a lot of overlap by most speakers' (Donohue 1999:114). Some younger speakers impose an inclusive-exclusive meaning difference onto these forms (probably due to Indonesian influence), but in the speech of older speakers this is not the case.
3. Respect for the addressee is shown by using the second person plural forms; even greater respect by the use of the first person plural forms (*ikita*).
4. 'The dative object suffixes are observed only rarely in the Wanci dialect, and their use is somewhat archaic' (Donohue 1999:135).

Table 6: *Muna* pronominal forms (van den Berg 1989)

	Free forms	Subject realis	Subject irrealis	Possessive	Direct object	Indirect object
1SG	<i>inodi, idi</i>	<i>a-</i>	<i>a-</i>	<i>-ku</i>	<i>-kanau</i>	<i>-kanau</i>
2SG	<i>(i)hintu</i>	<i>o-</i>	<i>o-</i>	<i>-mu</i>	<i>-ko</i>	<i>-angko</i>
2SG POLITE	<i>intaidi</i>	<i>to-</i>	<i>ta-</i>	<i>-nto</i>	<i>-kaeta</i>	<i>-kaeta</i>
3SG	<i>anoa</i>	<i>no-</i>	<i>na-</i>	<i>-no</i>	<i>-e</i>	<i>-ane</i>
1DU INCL	<i>intaidi</i>	<i>do-</i>	<i>da-</i>	<i>-nto</i>	–	–
1PL INCL	<i>intaidiimu</i>	<i>do-Vmu</i>	<i>da-Vmu</i>	<i>-ntoomu</i>	–	–
1PL EXCL	<i>insaidi</i>	<i>ta-</i>	<i>ta-</i>	<i>-mani</i>	<i>-kasami</i>	<i>-kasami</i>
2PL	<i>(i)hintuumu</i>	<i>o-Vmu</i>	<i>o-Vmu</i>	<i>-Vmu</i>	<i>-angkoomu</i>	<i>-angkoomu</i>
2PL POLITE	<i>intaidiimu</i>	<i>to-Vmu</i>	<i>to-Vmu</i>	<i>-ntoomu</i>	<i>-kaetaamu</i>	<i>-kaetaamu</i>
3PL	<i>andoa</i>	<i>do-</i>	<i>da-</i>	<i>-ndo</i>	<i>-anda</i>	<i>-anda</i>

Notes to Table 6:

1. The subject realis forms are given for only one of the three verb classes (named class *a-*, after its 1SG subject marker). The other two classes (class *ae-* and class *ao-*) are, from a diachronic perspective, combinations of the subject markers and the verbal markers *me-* and *mo-* (e.g. *ae-ala* 'I take' comes from earlier **a-me-ala*; see van den Berg 1991b:24–25 for details).
2. In the suffix *-Vmu*, *V* marks a vowel which is identical to the last vowel of the stem.

Table 7: Cia-Cia pronominal forms (van den Berg 1991c)

	Free forms	Subject realis	Subject irrealis	Possessive	Direct object	Indirect object
1SG	(<i>'i</i>)nda'u	<i>o-</i>	<i>a-</i>	<i>-u</i>	<i>-aa'u/-'u</i>	<i>-isa'u</i>
2SG	(<i>'i</i>)so'o	<i>mu-/mo-</i>	<i>cu-</i>	<i>-mu/-mo</i>	<i>-so</i>	<i>-iso</i>
3SG	<i>'ia</i>	<i>no-</i>	<i>na-</i>	<i>-no</i>	<i>-e/-e</i>	<i>-isie</i>
1PL INCL	<i>'ingkita</i>	<i>to-</i>	<i>ta-</i>	<i>-nto</i>	<i>-kita</i>	<i>-ikita</i>
1PL EXCL	<i>'isami</i>	<i>to-</i>	<i>ta-</i>	<i>-mami</i>	<i>-sami</i>	<i>-isami</i>
2PL	<i>'isimiu</i>	<i>ka-</i>	<i>cu-ka-</i>	<i>-miu</i>	<i>-simiu</i>	<i>-isimiu</i>
3PL	<i>mo'ia</i>	<i>no(-ka)-</i>	<i>na(-ka)-</i>	<i>-no (mo'ia)</i>	<i>-e/-e</i>	<i>-isie</i>

Notes to Table 7:

1. The 1SG direct object form *-u* occurs after verb stems ending in *a*. The form *-aa'u* occurs elsewhere.
2. The 3SG direct object form *-e* occurs after verb stems endings in a high vowel (*i* or *u*). The form *-e* occurs elsewhere.
3. There is considerable dialect variation in Cia-Cia and this chart represents the northern Sampolawa and Pasarwajo dialect. The Masiri/Mambulu dialect appears to be more conservative, having e.g. *ia'u* 'I' and a single form *a-* for both realis and irrealis (Daniël Vermonden, pers. comm.).
4. The indirect object forms display unusual dialectal variation (e.g. 1SG also *-sia'u*) which needs more research.

Table 8: Lasalimu pronominal forms (van den Berg, field notes)

	Free forms	Subject realis	Subject irrealis	Possessive	Direct object	Indirect object
1SG	<i>ia'u</i>	<i>a-</i>	<i>a-</i>	<i>-u</i>	<i>-a'u</i>	<i>-'asuna'u</i>
2SG	<i>iso'o/ka'ancu</i>	<i>u-</i>	<i>si-</i>	<i>-mu</i>	<i>-so</i>	<i>-'asoso</i>
3SG	<i>i'ia</i>	<i>no-</i>	<i>na-</i>	<i>-no</i>	<i>-e</i>	<i>-'ase'e</i>
1PL INCL	<i>ikita</i>	<i>to-</i>	<i>ta-</i>	<i>-nto</i>	<i>-kita</i>	<i>-'asokita</i>
1PL EXCL	<i>isami</i>	<i>to-</i>	<i>ta-</i>	<i>-mami</i>	<i>-sami</i>	<i>-'asosami</i>
2PL	<i>isimiu</i>	<i>i-</i>	<i>i-</i>	<i>-miu</i>	<i>-simiu</i>	<i>-'asosimiu</i>
3PL	<i>mo'ia</i>	<i>no-</i>	<i>na-</i>	<i>-no (mo'ia)</i>	<i>-e (mo'ia)</i>	<i>-'aso mo'ia</i>

Notes to Table 8:

1. The 2PL form *i-* is also used as a singular honorific form.
2. The free pronoun *ka'ancu* is related to the demonstrative *ancu* 'there (near you)'.

Because of the very obvious similarities in form and function, I argue that the following system can be posited for Proto Muna-Buton, and that it constitutes a clear and unambiguous set of innovations defining the Muna-Buton group:

1. Realis and irrealis subject pronominal affixes.
2. A nominative–accusative system of pronominal marking.
3. The infix *-um-*, often in combination with irrealis affixes, to mark intentionality.
4. A set of indirect/dative object suffixes to mark beneficiaries, recipients, instruments and other non-core roles.

I will briefly discuss the first three points in more detail.

The use of realis and irrealis subject markers in the Muna-Buton languages is unique in Sulawesi (not even shared by Wolio) and is one of the strongest subgrouping arguments. Realis forms are used for the past and the present, whereas irrealis forms indicate future events. In Muna and Cia-Cia the irrealis forms are also used after negators, but this is not true for *Tukang Besi*, and hence presumably an innovation in Nuclear Muna-Buton. Notice that in Muna realis and irrealis subject prefixes are not distinguished for 1SG, 2SG/PL and 1PL EXCL, while in *Tukang Besi* the contrast is absent for 1SG only. Cia-Cia maintains the distinction throughout the entire paradigm, although not in all dialects. At this stage the extent of the realis-irrealis distinction in the Proto Muna-Buton paradigm is unclear, but it should be at least reconstructed for 3SG and 1PL INCL.

The pronominal system worked on a nominative-accusative basis, as illustrated in the following examples:

Tuk	<i>ku-rato</i>	<i>no-rato</i>	<i>no-sepa-'aku</i>	<i>ku-sepa-'e</i>
Cia	<i>o-rato</i>	<i>no-rato</i>	<i>no-sepa-'u</i>	<i>o-sepa-e</i>
Mun	<i>a-rato</i>	<i>no-rato</i>	<i>no-sepa-kanau</i>	<i>a-sepa-e</i>
	'I came'	's/he came'	's/he kicked me'	'I kicked him/her'

Notice that Wolio (Anceaux 1952) and Kulisusu (Mead 1998) have a nominative-accusative system as well, but most likely this is the result of areal influence from the Muna-Buton languages.

The irrealis prefixes are often used in combination with the infix *-um-*. In Muna this usage is obligatory for class *a-*, where irrealis prefixes and *-um-* must co-occur (e.g. realis *no-kala* 'he goes; he went'; irrealis *na-k[um]ala* 'he will go'; while **na-kala* and **no-k[um]ala* are ungrammatical). In Cia-Cia and *Tukang Besi*, however, this appears to be a tendency only, and irrealis forms without *-um-* do occur. In such cases, i.e. where the irrealis subject prefix is found without *-um-*, the focus appears to be on the intention of the action ('want, will'), rather than on the future itself.

All this means that a system of six pronominal forms can be reconstructed for PMB: one set of free pronouns and five sets of pronominal affixes (possessive, realis and irrealis subject, direct object and indirect/dative object). The exact reconstruction of the forms remains to be worked out, but there is clearly enough evidence to posit such a system. The allomorphy rules of *-um-* also remain to be worked out, but they are likely to be similar or identical to the ones we find in *Tukang Besi*, i.e. vowel-initial roots have *um-* (*m-* in Muna); *p-* and *β-* initial roots take *-um-* (but *p-* changes to *m-* in Muna and *β-* takes zero); roots with initial *m-* take the zero allomorph; while roots with initial *w-* show variation. Complications occur in the case of derived bases.

4.2 The infix *-um-* forming subject relative clauses

Apart from its function to indicate intentionality, the infix *-um-* is also used to create a specific verbal form which I have called an 'active participle'. Such forms are not inflected for person and are only employed in subject relative clauses. In *Tukang Besi* *-um-* is the only affix in active participles, but in Muna the infix occurs in combination with the suffix *-no*; this appears to be the case too in Cia-Cia and Lasalimu (although the evidence is limited).

- (1) Tuk *na mia t[um]jopa te La Udi*
 NOM person slap-[A.PART] CORE La Udi
 'the person who slapped La Udi'
- (2) Mun *o mie t[um]jofa-no La Ali*
 ART person slap-[A.PART] La Ali
 'the person who slapped La Ali'
- (3) Cia, Las *o mia t[um]jopa-no La Ali*
 ART person slap-[A.PART] La Ali
 'the person who slapped La Ali'

The combination of *-um-* and *-no* (or *-na*) to create active participles is also found in Wolio (Anceaux 1952:25) and Kulisusu (Mead 1998:360–362). Again, this must be the result of areal diffusion.

4.3 Derivational morphology

A few other derivational morphemes appear to be innovations in PMB.

- a. Prefix **pe-* 'make, build'
- | | | | | |
|-----|------------|-----------------|-------------------------|-----------------------|
| Mun | <i>fe-</i> | 'make, build' | e.g. <i>ne-fe-ghato</i> | 'build a roof' |
| Cia | <i>pi-</i> | 'make' | e.g. <i>pi-ka'ana</i> | 'build a house' |
| Tuk | <i>he-</i> | 'produce, make' | e.g. <i>no-fe-ato</i> | 'weave a thatch roof' |
- b. Prefix **pa-* 'occupation' (in Muna and Cia-Cia an unproductive nominal prefix, in Tukang Besi a verb-deriving prefix)
- | | | | | |
|-----|---------------|---------|-----------------------|----------------------|
| Mun | <i>galu</i> | 'field' | <i>pa-galu</i> | 'farmer' |
| | <i>hulo</i> | 'hunt' | <i>pa-hulo</i> | 'hunter' |
| Cia | <i>hamota</i> | 'field' | <i>pa-pi-hamota</i> | 'farmer' |
| | <i>ase</i> | 'iron' | <i>pa-pi-rabu ase</i> | 'blacksmith' |
| Tuk | <i>tutu</i> | 'pound' | <i>no-pa-tutu</i> | 'he is a blacksmith' |
| | <i>langke</i> | 'sail' | <i>no-pa-langke</i> | 'he is a sailor' |
- c. Requestive **pe-* (Muna *fe-*, Tukang Besi *hepe-*). In addition to two regular causative prefixes, both languages have a requestive prefix meaning 'ask X to do something'. Although there is only partial similarity in form, it is striking that in both languages the action takes place for the benefit of the causer (the subject) and that the causee is expressed in an oblique phrase (rather than as the object).
- (4) Mun *ne-fe-gholi bhadhu ne ina-no*
 3SG.R-REQ-buy shirt LOC mother-his
 'he asked his mother to buy him a shirt'
- (5) Tuk *no-hepe-ita-'e na aroloji di ama-no*
 3R-REQ-see-3OBJ NOM watch OBL father-his
 'he is asking his father to show him the watch'
- d. Iterative **para-*. Both Tukang Besi, Cia-Cia and Muna have a prefix *para-* which is used for iterative and/or habitual action.
- | | | | | |
|-----|------------|--------|-----------------|------------------------------|
| Tuk | <i>aso</i> | 'sell' | <i>para-aso</i> | 'sell as a regular activity' |
| Mun | <i>aso</i> | 'sell' | <i>para-aso</i> | 'be a regular seller' |

4.4 Demonstratives

The demonstrative systems of both Muna and *Tukang Besi* are fairly complex. For Muna see van den Berg (1989: Chapter 6) and (1997); for *Tukang Besi*, Donohue (1999: Chapter 6). There are many differences on a detailed level, but it is striking that both languages have a dual opposition of deictic elements with very similar meaning, crucially involving an opposition of the phonemes /t/ and /w/. Consider the following examples of the *Tukang Besi* ‘topographic demonstratives’:

- Tuk *ito* ‘up, landwards, east, north, in’
ivo ‘down, seawards, west, south, out’

Compare these forms with the Muna prepositions *te* and *we* and with the anaphoric (or referential) demonstratives:

- Mun *te* ‘locative preposition used for a position or direction which is higher, up, east (and sometimes north) of the point of orientation’
we ‘locative preposition used for a position or direction which is lower, down, west (and sometimes south) of the point of orientation’
tatu ‘that, there, yonder (higher, up, east, north)’
watu ‘that, there, yonder (lower, down, west, south)’

A clear etymological connection between the Muna forms *te* and *tatu* (and *we* and *watu*) has not been found yet, but it appears that in conjunction with the *Tukang Besi* data a demonstrative pair is reconstructible for Proto Muna-Buton, one containing the phoneme *t for places ‘up, higher, east and north’, and one containing *w for places ‘down, lower, west and south’. It should be noticed that Wolio also has a dual pair (*nca*)/*siate* ‘up there’, (*nca*)/*siroo* ‘down there’ (Alberth 2000), but it lacks both the typical t-w opposition and the meaning component of the cardinal points.

4.5 Other shared morphology

Other shared affixes can be reconstructed for Proto Muna-Buton, but many of these are probably retentions from PMP. Some of these are illustrated in Table 9.

Table 9: Proto Muna-Buton morphology

	Proto Muna-Buton	<i>Tukang Besi</i>	Cia-Cia	Muna
passive in relative clauses	*ni-	i-	ni-	ni-/ne-
applicative/indirect object	*-ako	-ako	-aso	-ghoo
perfective	*-mo	-mo	-mo	-mo
incomplete/future	*-po	-ho	-po	-ho
causative	*pa-	pa-	po-; pa-	fo-
factive	*p(a,o)ka-	hoko-	piko-; pika-	feka-
reciprocal prefix	*po-	po-	po-	po-
accidental passive	*ti-	te-	ci-	ti- ~ te-
locative applicative	*-Ci	-Ci	-Ci	-Ci
temporal ‘when’ (in combination with a possessive suffix)	*sa-	sa-	sa-	sa-

5 Lexical innovations

In this section I present a number of lexical innovations in the Muna-Buton group. If an etymon is found in Tukang Besi and in Muna or Cia-Cia, but not in Wolio (or other Celebic languages), this clearly points to a lexical innovation and the etymon can be reconstructed for Proto Muna-Buton. But many words which look like lexical innovations in Muna-Buton have cognates in Wolio. If the hypothesis is correct that Wolio is not part of the Muna-Buton group but a relatively recent arrival on the island of Buton, then the presence of such a cognate could be accounted for in three ways:

- (a) The word is a Muna-Buton etymon and has been borrowed into Wolio.
- (b) The word was an original Wolio word and has been borrowed into the neighbouring Muna-Buton languages.
- (c) The word is not an innovation at all, but a reflex of an older root (going back to Proto Celebic or PMP) which is directly inherited in both Wolio and Muna-Buton.

Distinguishing between these three options will be the main challenge for future comparative work in the Muna-Buton area.

In §5.1 I present lexical innovations in Muna-Buton without known cognates in Wolio, while in §5.2 I present possible lexical innovations with Wolio cognates. All Wolio lexical material is taken from Anceaux (1987). I offer this list somewhat hesitantly, as several etyma may turn out to have cognates in non-Muna-Buton languages and hence need to be removed. On the other hand, if the main thesis of this article is correct, these deletions will be hopefully be balanced by additions as new lexical material for these languages becomes available.

5.1 Muna-Buton lexical innovations (without known Wolio cognates)

***ambe** 'open, remove'

Cia *ambe* 'open, uncover', Tuk *ambe* 'change clothing, remove skin or husk'

***bai** 'friend, companion'

Mun Las *bai* 'friend, companion' (Tuk *wai* 'mosquito' and Cia *wai* 'gnat' are probably not cognate)

***beka** 'cat'

Mun Cia Las Tuk *beka* (Tolaki *beka* is probably a loan from Mun)

***boru** 'k.o. palm tree'

Mun *boru* 'palmyra tree', Cia Las *boru* 'k.o. tree' (unidentified), Tuk *boru* 'sago tree sp.'

***gande** 'give a lift to'

Mun Cia Tuk *gande*

***kabi** 'break, throw away'

Mun *kabi* 'break', Cia Las *kabi* 'throw away', Tuk *kabi* 'throw away, discard'

***kape** 'shoulder joint; broken (of arm or leg)'

Mun *kape* 'shoulder joint', Las *kape* 'paralysed (of arm)', Tuk *kape* 'wing'

***kapo** 'enough, full'

Mun *kapo* 'enough', Cia *kapo* 'full' (?), Las *kapo* 'cured of a habit' (Indonesian *jera*), Tuk *kapo* 'full (stomach)'

- ***kawea** 'wind'
Mun Kai Cia (Pasarwajo) TukKTB *kawea*, Bus ?*awea*
- ***kenta** 'fish'
Mun Tuk *kenta*, Bus ?*inta* (*i* irregular)
- ***kompa** 'eel'
Mun Cia Las Tuk *kompa*
- ***konta** 'hold'
Mun *konta* 'hold back, restrain', Cia *konta* 'efficient (of prayers)' (if cognate), Tuk *konta* 'hold, grasp'
- ***leŋke** 'sexually different'
Mun *leŋke* 'infertile, impotent', Cia Las *leŋke* 'effeminate male', Tuk *leŋke* 'homosexual'
- ***mena** 'hot, burn'
Mun *mena* 'catch fire, burn, on fire', Tuk *mena* 'hot'
- ***moapa** 'why?'
Mun *noafa* (with *-mo-* hidden as class prefix), Cia *moapa*, Las *mo^oapa* (glottal unexplained), Tuk *noha^oa* (with metathesis; *n* irregular) [cf. PMP **apa* 'what']
- ***poroqu** 'drink'
Mun *foroghu*, Bus *foyoyu* (with assimilation of second *y*; expected ***foyohu*), Kai *po^oohu*, Cia *poroku*, Tuk *moro^ou* (*m* irregular) (possibly cognate with Proto Sangiric **dou* 'thirst' Sneddon 1984:79; cf. Tuk *motindo^ou* 'thirsty')
- ***posolo** 'scabbard, sheath'
Mun *pusolo* 'penis sheath', Las Tuk *posolo* 'scabbard'
- ***potu** 'head'
Mun Bus *fortu* 'head', Kai *potu* 'head', Cia *pocu* 'head', Las *pocu* 'hair', Tuk *hotu* 'hair'
- ***puhoi** 'termite nest'
Mun Las *puhoi*, Tuk *pu^ooi*
- ***qawa** 'get, receive'
Mun *ghawa*, Tuk ?*awa*
- ***rimba** 'quick'
Mun *rimba*, Bus *ma/yimba*, Cia *ma/rimba*, Tuk *me/rimba*
- ***sula** 'burn weeds'
Mun Cia Tuk *sula*, Las *sule* (final *e* unexplained)
- ***to^oe** 'flee'
Cia *to^oe* 'run' Tuk *to^oe* 'flee'
- ***tonduri** 'object that sinks'
Mun Cia *tonduri* 'to bury in the sea, sink s.t.', Las Pnc (Kambowa) *tonduri* 'stone', Tuk *tonduri* 'hook for fishing'. Related to PMB ***tondu** 'sink, drown'.
- ***tuqo** 'fell, cut down'
Mun *tugho*, Tuk *tu^oo*, Las *cuko* 'stump of a felled tree'
- ***wenka** 'split open fruit'
Mun *wenka* 'split open; half (of coconut)', Las *wenka* 'split open; betelnut', Tuk *wenka* 'betelnut'

***woru** ‘down, under’

Mun *woru* ‘bent down, curved (of branches), Cia *woru* ‘under’, Tuk *woru* ‘underneath’

***wuŋa-nu lima** ‘finger’ (lit: ‘flower of hand’)

Mun *wunano lima*, Bus Cia Las *wuŋano lima*, Tuk *wuŋanu lima* (but also Bungku *funga lima*, Wawonii *wunga lima*; possibly borrowed)

***wuŋa-nu qaqe** ‘toe’ (lit: ‘flower of foot’)

Mun *wunano ghaghe*, Bus *wuŋano hahe*, Cia Las *wuŋano kake*, Tuk *wuŋanu ae*

5.2 Possible Muna-Buton innovations, with Wolio cognates

***agori** ‘immediately’

Mun Cia *agori* ‘hurriedly, quickly’, Tuk *agori* ‘immediate’ (also Wol *agori* ‘do hastily, do speedily, speed up’)

***anano (losu, (ka)tumbu(qa))** ‘pestle’

Mun *anano katumbu*, Kai Cia *anano losu*, Tuk *anano tumbu?a* (also Wolio *anana nosu*)

***aso** ‘sell’

Mun Cia Bus *aso*, Tuk *?aso* (glottal unexplained) (also Wol *aso*)

***baŋuli** ‘marble’

Mun Cia Tuk *baŋuli* (also Wol)

***baŋe** ‘heart, fruit’

Mun Kai Las *baŋe* ‘fruit, heart’, Cia *baŋe* ‘heart’, Bus *ba'e* ‘heart’, Tuk *baŋe* ‘heart’; *ba?e* ‘fruit’ (glottal unexplained). (Also Wol *baŋe* ‘fruit, heart’. Compare Pam (priestly language) *bake* ‘fruit’)

***bale** ‘young leaf’

Mun Cia Tuk *bale* (also Wol)

***balobu** ‘object filled with water’

Mun Cia *balobu* ‘bowl with leg, cup (without handle)’, Tuk *walobu* ‘freshwater pool, sinkhole’ (also Wol *balobu* ‘earthen or china jar for storing food’)

***bosu** ‘k.o. water container’

Mun Cia *bosu* ‘earthenware water jar’, Tuk *bosu* ‘k.o. water container’ (also Wol)

***bura** ‘face powder’

Mun Cia Las *bura* Tuk *bura* (also Wol *bura*)

***buso** ‘smithy, bellows’

Mun *buso* ‘smithy’, Tuk *buso/?a* ‘bellows used when forging’ (also Wol *busoa* ‘bellows, metal-casting house, funnel’)

***daoa** ‘market’

Mun Cia Tuk *daoa* (also Wol)

***dapi** ‘twin’

Mun Cia *rapi*, Tuk *dapi* (also Wol *rapi*, Pam *rapi*)

***dawu** ‘give, share’

Mun *dawu* ‘divide, share’, Cia Las *dawu* ‘give’, Tuk *dawu* ‘portion’ (also Wol *dawu* ‘part; give, provide’)

***dola** 'move along the surface'

Mun *dola* 'creep along the ground', Cia *dola* 'creep, surf on waves with a canoe', Tuk *dola* 'float' (cf. also Mun *sola* 'crawl on hands and knees') (also Wol *dola* 'writhe, wriggle, twist, wind')

***gai** 'pull in (a net?)'

Mun *gai* 'fish with a net with small meshes', Cia *gai* 'pull closer with the arm', Tuk *gai* 'pull in' (also Wol *gai* 'pull, draw')

***garaa** 'surprise particle'

Mun Tuk *garaa* (also Wol *garaaka*)

***gau** 'desire, wish'

Mun Cia Tuk *gau* (also Wol)

***giu** 'sort, kind'

Mun Cia *giu* 'sort, kind; matter, something', Tuk *giu* 'sort, kind' (also Wol)

***gua** 'pull, push, nudge'

Mun *gua* 'push with the body, nudge, elbow; rebel', Cia *gua* 'nudge, take a person's rights', Tuk *gua* 'pull back, withdraw' (also Wol *gua* 'not following, stubborn, stiff, reluctant, resistant, rebellious')

***hali** 'difficult, expensive'

Mun *hali*, Bus Tuk *mo/hali*, Cia *ka/hali* (also Wol *ma/ali*)

***ka(h)ipu** 'youngest child'

Mun *kahepu*, Bus *?aepu*, Kai *kaepu* (< Proto Muncic **ka(h)epu*), Cia *ka?opu*, Las *ka/ka?opu* (*o* unexplained in Cia and Las), Tuk *kai pu* 'last born' (also Wol *kaepu*)

***kalambe** 'young girl'

Mun Tuk *kalambe* (also Wol)

***kamalo** 'paint'

Mun Cia Tuk *kamalo* (also Wol)

***kanda** 'blue'

Mun (*ka*)*kanda*, Cia Tuk *ka/kanda* (also Wol *ka/kanda*)

***kanu** 'get ready'

Mun *kanu* 'prepare', Tuk *ma/kanu* 'get ready' (also Wol *ma/kanu*)

***kapera** 'spit'

MunS *kapeha*, Kai *pe/kape?a*, Cia *pi/kapera*, TukBo *kapera* (also Wol *pe/kapera* 'spit out red betel-nut spittle')

***kaquabulu** 'coconut shell'

Mun *kaghabulu* (with reduction of medial vowel cluster), Kai *kahua* (with loss of *-bulu*), Cia *kabulu* (reduction of second syllable), TukW *ka?awulu* 'coconut husk' (reduction as Mun), TukBo *ke'ua* (with loss of *-bulu*) (also Wol *kauwana bulu*)

***karia** 'initiation ritual'

Mun Cia *karia* 'puberty ritual for girls', Tuk *karia/?a* 'circumcision festival' (also Wol *kariaa* 'feast')

***kokombu** 'mast'

Mun Tuk *kokombu* (also Wol)

***kumbu** 'fist'

Mun *kumbu/no lima* 'fist', Tuk *kumbu* 'arrow-head fist' (also Wol *kumbu* 'fist')

***lagi** 'temporal adverb'

Mun *lagi* 'all the time, every time', Cia *lagi* 'permanent', Tuk *lagi* 'now' (Given the semantics, this is unlikely a loan from Malay *lagi* 'again') (also Wol 'continue; constantly, steadily')

***lalesa** 'wide, spacious'

Mun Cia Tuk *lalesa* (cf. Wol *lalese* 'wide, spacious')

***laju** 'intoxicated, drunk'

Mun *lo/lanu* 'slightly poisoned, intoxicated', MunS *lo/lanu* 'drunk', Cia *mo/langu* 'drunk', Tuk *mo/lango* 'drunk' (final *o* irregular) (also Wol *ma/lango*)

***lego** 'swinging arms'

Mun *lego*, Tuk *lego-lego* (also Wol *lego*)

***maka** 'and then'

Mun Tuk *maka* 'and then', Cia *maka* 'if' (also Wol *maka* 'but')

***marasai** 'difficult'

Mun *marasai* 'poor', Tuk *marasai* 'difficult' (also Wol *marasai* 'difficult, intricate, laborious, in trouble')

***mbaka** 'delicious'

Mun *mbaka*, Tuk *mo/mbaka* (also Wol *ma/mbaka*)

***mbali** 'can, become'

Mun *mbali* 'can, become', Cia *pi/mbali* 'can, become', Tuk *me/mbali* 'all right, OK, fine' (also Wol *me/mbali* 'become, come about')

***mbero** 'to wave, to fan'

Mun Cia *ka/mbero* 'fan', Cia *pi/mbero-mbero* 'to fly (of a flag)', Tuk *mbero* 'gesture to s.o. with hand', *kambero-mbero* 'butterfly' (also Wol *ka/mbero* 'fan')

***mente** 'surprised'

Mun Cia Tuk *mente* (also Wol)

***ndoke** 'monkey'

Mun Cia Tuk *ndoke*, Bus *ndo?e* (also Wol *ndoke*)

***ngilo** 'clean, pure'

Mun *ngela* 'clean' (vowels unexplained), *ηkilo* 'pure, holy' (loss of voicing irregular), Bus *mo/ηgilo* 'holy', Cia *mo/ηgilo* 'clean'. (Note: Las *mo/kilo* 'black' and Tuk *kili* 'clean' possibly cognate) (also Wol *ma/ngkilo* 'clean, pure, clear, holy')

***nturu** 'often'

Mun *ne/nturu* 'often', Tuk *me/nturu* 'normally' (also Wol *me/nturu* 'frequent, often')

***paiasa** 'mirror'

Mun *paeasa*, Cia Tuk *paiasa* (also Wol *paiasa*)

***pali** 'turn around'

Mun *pali* 'travel around, wander about', Cia *pali* 'turn aside, turn around', Tuk *pali* 'turn around' (also Wol *pali* 'turn, take a turn')

***pamuru** 'angry, furious'

Mun Cia Tuk *pamuru* (also Wol 'go berserk, run amuck')

- *pandaŋa** ‘k.o. spear’
Mun Cia Tuk *pandaŋa* (also Wol)
- *pogau** ‘say, word, language’
Mun Bus Kai Cia Las Tuk *pogau*. (Contains reciprocal prefix *po-*; cf. **gau* ‘make, do’) (also Wol)
- *pooli** ‘able, finish, after’
Mun *pooli* ‘can, be able; after’, Cia *poʔoli* ‘finish; able; after, then’, Tuk *poʔoli* ‘finish, complete’ (also Wol)
- *porai** ‘fiancee’
Mun Tuk *porai* (also Wol *porae*)
- *qopa** ‘k.o. yam’
Mun *ghofa* ‘yam’, Tuk *opa* ‘sweet potato’ (also Wol *opa*)
- *qoti** ‘food’
Mun *ghoti* ‘cooked rice, food’, Tuk *hoti* ‘meal given to the poor’ (*h* irregular for **q*) (also Wol *hoti* ‘food, nourishment’)
- *rambu** ‘(fibrous) string’
Mun *rambu* ‘fibrous part in fruits’, Cia *rambu* ‘rope, string’, Tuk *rambu* ‘string’ (also Wol *rambu* ‘loose ends of thread along the edge of a piece of weaving’)
- *rampu** ‘burn’
Mun Cia Las *rampu* ‘burn’, Tuk *rampu* ‘burn (firewood), roast’ (cf. Wol *rampu* ‘scorched, blackened, pitch-black’)
- *randa-nu lima** ‘palm of hand’ (lit. ‘chest of hand’)
Mun Cia *randano lima*, Bus *yandano lima*, Tuk *randanu lima* (also Wol *randana lima*)
- *randa-nu qaqe** ‘sole of foot’ (lit. ‘chest of foot’)
Mun *randano ghaghe*, Bus *yandano hahe*, Cia *randano kake*, Tuk *randanu ae* (also Wol *randana ae*)
- *sagaa** ‘sometimes’
Mun *sigaa* ~ *seгаа*, Cia *agaʔa*, Tuk *sagaa* ~ *sagaʔa* (Compound of **sa-* ‘one’ and **gaa* ‘part, separate’) (also Wol *sagaa*)
- *saŋka** ‘complete’
Mun *saŋka* ‘complete, ready, finished’, Cia *saŋka* ‘complete’, Tuk *saŋka* ‘pass, exceed’ (also Wol *saŋka* ‘complete, comprehensive, perfect’)
- *saori** ‘very, too much’
Mun *soori*, MunS *saohi* ‘serious; defeat’, Cia *sauri* ‘too much’, Tuk *saori* ~ *sauri* ‘very’ (also Wol *saori* ‘bad, serious (of illness), disobedient, mischievous’)
- *sepa** ‘kick’
Mun Cia Tuk *sepa* (also Wol)
- *sundu** ‘command’
Mun *sundu* ‘overwork s.o., make s.o. do slave work’, Tuk *sundu* ‘command’ (also Wol *sundu* ‘consider, think about, remember (harmfully, of spirits of the deceased)’ — if cognate)
- *taliku** ‘behind, back’
Cia Tuk *taliku* (also Wol)

***tara** 'stay, endure'

Mun *tara* 'endure, hold out', Cia *tara* 'endure; *pa/tara* 'live, stay; stop; Tuk *tara* 'depart' (The words are probably cognate, but the semantics is unclear) (also Wol 'make a firm stand, hold out, be stable; stand, endure')

***tido** 'delouse s.o.'

Mun Cia Tuk *tido* 'kill (lice) by crushing between thumb and finger' (also Wol *tido/ki*)

***tonde** 'drinking vessel'

Mun Cia *tonde* 'drinking glass', Tuk *tonde* 'cup and saucer' (also Wol *tonde* 'glass')

***totumbu** 'house post'

MunS *totumbu*, Cia *cucumbu*, Tuk *totumbo* (final *o* unexplained) (also Wol *tutumbu*)

***tula-tula** 'story'

Mun Bus Tuk *tula-tula*, Cia *cula-cula* ~ *cucula* (also Wol *tula-tula*)

***tuwu** 'classifier for clothes'

Mun *tuwu*, Cia *cuwu*, Tuk *uwu* (loss of **t* unexplained) (also Wol *tuwu*)

***umba** 'appear, rise up'

Mun Cia *umba* ~ *omba*, Tuk *umba* (also Wol *umba* 'come, arrive')

***wulelu** 'eel'

Mun *wulelu* 'moray, river snake', Bus Cia Tuk *wulelu* 'eel' (also Wol *wulelu* 'eel')

6 Conclusion and remaining issues

Even though not all of the proposed lexical innovations may stand up to scrutiny, I believe there is very strong evidence to consider *Tukang Besi* to be part of the traditional Muna-Buton group. Shared sound changes, irregular phonological developments, the pronominal system, the demonstrative markers and a considerable number of lexical innovations constitute the firm basis for this classification. New grammatical and lexical evidence will likely emerge which will confirm this position. A position challenging the inclusion of *Tukang Besi* within Muna-Buton will somehow have to account for all these similarities.

However, *Tukang Besi* also has a large number of unique features not shared by any of the other Muna-Buton languages. The most conspicuous of these is the use of the articles *na* and *te* before noun phrases (see detailed discussion in Donohue 1999). Other such features include medial gemination of certain consonants and a considerable corpus of unique lexical material in daily vocabulary which accounts for the relatively low cognate percentages with the other Muna-Buton languages: around 31–37% with Muna and 40–48% with Cia-Cia (figures from Donohue 1993). These features are probably local innovations, although the articles may have retained information from an earlier protolanguage. Further comparative work is needed to determine which features are retentions, which ones are innovations and which have been borrowed. The same is true for *Wolio*, which has never been the subject of a thorough comparative investigation. Its 'expulsion' from the Muna-Buton group is almost exclusively based on phonological evidence, but a thorough historical phonology of *Wolio* has not yet been undertaken.

Two other issues need to be addressed. First, there is the question of what is the next higher macrogroup of Proto Muna-Buton. Elsewhere (van den Berg 1996) I have proposed that Muna-Buton, *Bungku-Tolaki* and *Kaili-Pamona* may be part of a Celebic supergroup.

Now that a substantial part of Proto Bungku-Tolaki has been reconstructed (Mead 1998), fresh material is available to test this hypothesis.⁶

The other issue concerns the homeland of the speakers of Proto Muna-Buton. Since little or no archaeological work has been done in South-east Sulawesi, conclusions can only be drawn on the basis of current language distribution and oral tradition. It seems clear that the Muna-Buton area was populated from the east and the south, rather than from the north through the Sulawesi mainland. Bhurhanuddin (1979:47) argues for southern Muna as the homeland for the Muna-Buton group, in which he includes only Muna, Pancana and Cia-Cia (he excludes Wolio and Kamaru, but also Lasalimu and Tukang Besi). Based on the linguistic evidence I put forward the hypothesis that the Proto Muna-Buton homeland was in eastern Buton, around the present-day area of Lasalimu and Kamaru. In Lasalimu there is an oral tradition that this area was an important political centre long before the Wolio-speaking people built the *kraton* in Baubau. This may well reflect historical reality. If so, a possible scenario could be that once this area was settled, one group crossed over to the Tukang Besi islands, while the majority stayed on Buton (the ancestors of Proto Nuclear Muna-Buton). They colonised south and central Buton and crossed over to southern Muna as well. Northern Buton had already been partly occupied by speakers of Bungku languages (Kulisusu and Taluki), but the remainder of Muna and Buton was probably empty. The west coast of northern Buton was colonised by speakers of Muna in relatively recent times through back-migration. Going even further back in time, I speculate that speakers of Proto Muna-Buton possibly originated around the Tolo bay area (the present day Mori homeland), where they left their Celebic kin behind and sailed southwards towards Buton. Putting a date to this event is even more speculative, but somewhere in the first millennium is probably not too far off the mark.

⁶ It has been argued by Hull (1998) in a lengthy article that the languages of Timor (both East and West) are in fact most closely linked with those of the Muna-Buton and Bungku-Tolaki group in a macrogroup which he calls 'Moributonic'. This putative macrogroup comprises all the Austronesian languages of Timor, plus the Muna-Buton and Bungku-Mori languages. Hull boldly asserts that the Austronesian colonisation of Timor took place via Southeast Sulawesi in two waves (illustrative maps accompany his article). The 'Austromunic' languages of Timor (Mambai, Kemak, Tokodede and Idalaka) are claimed to be the descendants of an 'Old Munic' subgroup. Their closest relatives are the Munic languages (Muna, Pancana, Busoa and Kaimbulawa). The other wave are the descendants of 'Old Fabronic' (from Latin *faber* 'blacksmith' = *tukang besi*), which led to modern-day 'Austrofabronic' languages such as Roti, Helong, Dawan, Tetum, Galoli, Wetar, Habu and Kawaimina. They are most closely linked with the Tukang Besi languages.

If Hull's thesis is correct, the Muna-Buton group should be expanded dramatically. However, quite apart from the sometimes outlandish terminology, there are considerable problems with his work. The evidential basis on which his bold statements are made is seriously flawed. The subgrouping hypothesis is solely made on the basis of apparent lexical similarity and little or no attempt is made to treat phonological correspondences or semantic change systematically. The three 'phonological considerations' for Austromunic (Hull 1998:149), for example, simply do not stand up to scrutiny. The chart of Proto Moributonic phonology also raises many questions. There is indeed a wealth of lexical data (but much of it is based on wordlists filled in by non-linguists and should therefore be used with considerable caution), but the methodology used is too weak to warrant Hull's far-reaching conclusions.

Language abbreviations and sources of data

Bus	Busoa	personal field notes
Cia	Cia-Cia	van den Berg (1991c), Daniël Vermonden (pers. comm.)
Kai	Kaimbulawa	personal field notes
Las	Lasalimu	personal field notes, Donohue unpublished field notes
Mun	Muna	van den Berg (1989, 1991a,b), van den Berg and La Ode Sidu (1996)
MunS	Southern dialect	
Pam	Pamona	Adriani (1928)
PAn	Proto Austronesian	
PBT	Proto Bungku-Tolaki	Mead (1998)
PMB	Proto Muna-Buton	
PMP	Proto Malayo-Polynesian	
PNMB	Proto Nuclear Muna-Buton	
Pnc	Pancana	personal field notes
Tuk	Tukang Besi	Donohue (1999, 2000)
TukW	Wanci dialect	
TukK	Kaledupa dialect	
TukT	Tomea dialect	
TukBi	Binongko dialect	
TukBo	Bonerate dialect	
Wol	Wolio	Anceaux (1952, 1987); Alberth (2000)

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