

A Comparative Study of Bunun Dialects

Paul Jen-kuei Li

Abstract: This is a comparative study and classification of the five main dialects in Bunun, based on field data (some 1,100 lexical items) collected in eleven villages. Sixteen consonants and three vowels are reconstructed for Proto-Bunun, and Bunun developments from Proto-Austronesian to modern dialects via Proto-Bunun are traced. Both phonological and lexical evidence is presented to prove that the southern dialect, Ishbukun, split the earliest from Proto-Bunun. Ishbukun is the most innovative of the five dialects, whereas the two northern dialects are the most conservative. A list of dialects, villages and informants is given in the appendix.

1. Introduction

This is an attempt to make a comparative study and classification of Bunun dialects in Taiwan.¹ We shall also trace Bunun developments from Proto-Austronesian and discuss some of the problems.

There are five main dialects in Bunun: Takitudu, Takibakha, Takbanuað, Takivatan and Ishbukun. Roughly speaking, the first two dialects are located to the north, the third and fourth dialects in the central part, and the fifth to the south in central and eastern Taiwan, mostly in Nant'ou, Kaohsiung, Hualien and T'aitung prefectures.

All Bunun dialects except Ishbukun have three vowels /i, u, a/ and the following consonants: the voiceless unaspirate stops /p, t, k, q, ʔ/, the preglottalised voiced stops /b, d/ [ʔb, ʔd], the voiced labiodental fricative

1 The data of this paper was all collected by myself with the support of the National Science Council Grant NSC 73-0301-H001-04, Republic of China. The field work was done mainly between August 1983 and January 1984. I wish to acknowledge valuable comments on an earlier version of this paper by Pang-hsin Ting and Hwang-cherng Gong.

/v/, the voiced interdental fricative /ð/, the voiceless palato-alveolar fricative /s/[ʃ], and the voiceless glottal fricative /h/, the voiced lateral /l/, and the voiced nasals /m, n, ŋ/.² In addition, both the Takitudu and Takibakha dialects have the palato-alveolar affricate /c/ [tʃ], which has been merged with /s/ in all other dialects. The Ishbukun dialect shares all the above vowels and consonants except that (1) it has the uvular fricative /X/[χ] instead of the uvular stop /q/, (2) it has no glottal fricative /h/, and (3) it tends to devoice the lateral in all positions and the voiced fricatives /v, ð/ to [f, θ] respectively in the syllable final position.

2. Reconstruction

The following 16 consonants /p, t, k, q, ʔ, b, d, c, s, h, v, ð, l, m, n, ŋ/ and 3 vowels /i, u, a/ can be reconstructed for Proto-Bunun (PB).

	<u>Takitudu</u>	<u>Takibakha</u>	<u>Takbanuað</u>	<u>Takivatan</u>	<u>Ishbukun</u>	
*p	/p/	/p/	/p/	/p/	/p/	
	pulavað	pulavað	pulavað	pulavað	puɭavaθ	'beans'
	—	qupsil	qupsil	qupsil	Xuspiɭ ³	'body hair'
	ku-kuplaʔ	ku-kuplaʔ	kulpaʔ	kulpaʔ	ku-kuɭpaʔ	'toad'
	si-cupcup	si-cupcup	si-supsup	si-supsup	supsup	'to suck'
*t	/t/	/t/	/t/	/t/	/t/	
	tahun	tahun	tahun	tahun	taʔun	'steam'
	buqtuŋ	buqtuŋ	buqtuŋ	buqtuŋ	buXtuŋ	'joint'
	cakut	cakut	sakut	sakut	sakut	'pygmy deer'

Proto-Bunun *t has been palatalized as [c] before /i/ in Ishbukun:

2 In this paper, the symbol X stands for χ, and e for ə.

3 Note the metathesis of /p/ and /s/ in these dialects. It is difficult to determine which dialect or dialects have undergone the metathesis, especially when Ishbukun seems to be the first split from Proto-Bunun (see discussion below).

A Comparative Study of Bunun Dialects

*t	/t/	/t/	/t/	/t/	/t/[c]	
	timpaq	timpaq	timpaq	timpaq	cinpaX	'wave' ⁴
	tilac	tilac	tilas	tilas	ciɬas	'rice'
	tikulac	tikulac	tikulas	tikulas	cikuɬas	'bamboo partridge'
*k	/k/	/k/	/k/	/k/	/k/	
	ku-kucun	ku-kucun	kusun	ka-kusun	ka-kusun ⁵	'shrimp'
	lukic	lukic	lukis	lukis	ɬukis	'tree'
	mis-busuk	mis-busuk	mis-busuk	mis-busuk	mis-busuk	'drunk'
*q	/q/	/q/	/q/	/q/	/X/	
	qacila	qacila	qasila	qasila	Xasiɬa	'salt'
	tuqnað	tuqnað	—	tuqnað	tuXnaθ	'bone'
	ciŋqal	ciŋqal	siŋqal	siŋqað ⁶	siŋXaɬ	'light'
	ci-ciuc	ci-ciuc	siuc	siuc	si-siucX	'frog'

It is not clear why /-q/ turns up only in the central dialects, Takbanuað and Takivatan, in the following interrogatives:

pa-pia	pa-pia	piaq	pa-piaq	pia	'how many'
cima	cima	simaq	simaq	sima	'who'
lakua	lakua	laquaq	laquaq	ɬakua	'when'
ʔi-ca-ca	ʔica	ʔisaq	ʔisaq	ʔisa	'where'
maʔað	maʔað	maaqa	maaqa	maaθ	'what'

The uvular stop in these forms was not historically derived, e. g. PAN

-
- 4 Note the partial assimilation of the nasal n>m to the following bilabial stop in the northern and central dialects.
- 5 The final nasal has been partially assimilated to the initial velar stop (n>ŋ) in Ishbukun.
- 6 There is fluctuation between -ɬ and -ð in some lexical forms in some Bunun dialects.

*pig'aH > pa-pia 'how many,' PFN *t'ima > cima 'who.'⁷

The glottal stop is generally retained initially, finally and medially after a consonant,⁸ but lost intervocalically in Ishbukun:

*ʔ	/ʔ/	/ʔ/	/ʔ/	/ʔ/	/ʔ/	
ʔacaŋ	ʔacaŋ	ʔasaŋ	ʔasaŋ	ʔasaŋ		'village'
qucʔul	qucʔul	qusʔul	qusʔul	Xusʔul		'smoke'
ma-cʔan	ma-cʔan	ma-sʔan	ma-sʔan	ma-sʔan		'ten'
ma-nacʔak	ma-nacʔak	ma-nasʔak	ma-nasʔak	ma-nasʔak		'light'
tal-ʔima	tal-ʔima	tal-ʔima	tal-ʔima	tal-ʔima		'to wash hands'
ma-pacʔaq	ma-pacʔaq	ma-pasʔaq	ma-pasʔaq	ma-pasʔaX		'to wash clothes'
niŋʔav	niŋʔav	niŋʔav	niŋʔav	niŋʔaf		'lake, sea'
qanituʔ	qanituʔ	qanituʔ	qanituʔ	Xanituʔ		'ghost'
Cf. lexical forms that end with an open vowel, as in						
biqu	biqu	biqu	biqu	biXi		'goiter'
*ʔ	/-ʔ-/	/-ʔ-/	/-ʔ-/	/-ʔ-/	/-ø-/	
maʔun	maʔun	maʔun	maʔun	maun		'to eat'
vaʔu	vaʔu	vaʔu	vaʔu	vau		'shoulder'
suʔu	suʔu	suʔu	suʔu	suu		'thou'
qaniʔ-an	qaniʔ-an	qaniʔ-an	qaniʔ-an	Xani-an		'daytime'
niʔaŋ	niʔaŋ	niʔaŋ	niʔaŋ	nian		'not yet'
maʔað	maʔað	—	—	maaθ		'what'
ma-paʔic	ma-paʔic	ma-paʔis	ma-paʔis	ma-pais		'bitter'

7 Abbreviations are as follows: PAN, Proto-Austronesian; PHN, Proto-Hespero-nesian; PFN, Proto-Formosan; PB, Proto-Bunun.

8 However, the glottal stop was inexplicably lost after a consonant in the following example:

tasʔa tasʔa tasʔa tasʔa tasa 'one'

Conversely, /ʔ/ appears intervocalically in a few forms in Ishbukun, yet not in the other dialects:

/-ϕ-/	/-ϕ-/	/-ϕ-/	/-ϕ-/	/-ʔ-/	
taaʔ	taaʔ	taaʔ	taaʔ	taʔaX	'mud'
paav	paav	paav	paav	paʔaf	'snow'

Moreover, this rule (R1) of deleting the glottal stop should be ordered before another rule (R2) which converts *h to /ʔ/ in the same phonetic environment (see below):

R1. ʔ → ϕ /V__V

R2. h → ʔ /V__V

Otherwise, /ʔ/ would not occur intervocalically in any Ishbukun form.

Let it be noted that no Bunun form begins with a vowel without a preceding consonant. The glottal stop is phonemically significant in the word-medial and final position. Compare the contrast below:

vauʔ	vauʔ	vauʔ	vauʔ	vauʔ	'eight'
vaʔu	vaʔu	vaʔu	vaʔu	vau	'shoulder'
*b /b/	/b/	/b/	/b/	/b/	
bantac	bantac	bantas	bantas	bantas	'leg, foot'
qabu	qabu	qabu	qabu	Xabu	'ash'

The word-final or syllable-final *-b is retained only in a few lexical forms in Ishbukun; it has been changed to /-ʔ/ or lost (especially in the speech of younger speakers) in the other dialects:

*b /-ʔ/	/-ʔ/	/-ʔ/	/-ʔ/	/-b/	
qatuʔ	qatuʔ	qatuʔ	qatuʔ	Xatub	'trap'
kitŋa	kitŋa	kitŋa	kitŋaʔ	kitŋab	'to begin'
su-suaʔ	su-suaʔ	su-suaʔ	su-suaʔ	si-su-suab	'to yawn'

laqai?	laqai?	laqai?	laqai?	laqaib	'to pass'
mis-cuna?	mis-cuna?	mis-suna?	min-suna?	min-sunab	'to burn'
ma-su?nuq	ma-su?nuq	ma-su?nuq	ma-su?nuq	ma-subnuX	'angry'
?a?num	?a-?a?num	?a-?a?num	?a-?a?num	?abnum	'six'
qaa	qaa	qaa	qaa	Xaab	'knee'

In these dialects the word-final *-b is retained in some of the lexical forms when it is followed by a suffix which begins with a vowel. For example:

/kitɲab-in/ 'to begin' in Takitudu, Takibakha, Takbanuað and Takivatan.
 /laqaib-a/ 'to pass' in Takibakha, /laqaib-an/ in Takbanuað, /ʔaŋqaib-an/ in Takivatan.

Similarly, *d is generally retained in the word-initial and medial position in all dialects, but retained only in a few lexical forms in the word-final position in Ishbukun:

*d	/d/	/d/	/d/	/d/	/d/	
duli?	duli?	duli?	duli?	duɽi?		'thorn'
dalaq	dalaq	dalaq	dalaq	daɽaX		'earth'
diqanin	diqanin	diqanin	diqanin	diXanin		'sky'
qaludun	qaludun	qaludun	qaludun	Xaɽudun		'grasshopper, rice insect' ⁹

*d	/-ʔ/	/-ʔ/	/-ʔ/	/-ʔ/	/-d/	
	ma-cuku?	ma-cuku?	ma-suku?	ma-suku?	ma-sukud	‘to close’
	qu?	qu?	qu?	qu?	Xud	‘to drink’

9 The Takivatan form for 'rice insect' is /ɲasaɲasa/, and the Takbanuað form for 'grasshopper' is /babalav/. The form /qaludun/ has the variant /qadudun/ in some of the dialects.

culkud-an	culku?	silku?	silku?	liskud	'stick' ¹⁰
ma-tula?	ma-tula?	ma-tanu?	ma-tula?	ma-tanud	'to prop up' ¹¹
—	pa-smu?	ma-smu	ma-smu?	ma-smud	'to swallow'

In the dialects which have no -d in the word-final position, they do manifest d~? alternation in the stem followed by a suffix, as in: Takitudu /ma-tula?, tulad-in/, Takibakha, Takivatan /ma-tula?, tulad-i, tulad-an-in/ 'to prop up a house;' Takibakha, Takbanuað, Takivatan /qu?, qud-an-in/ 'to drink.'

As a matter of fact, even in the word-initial and medial position, there are some irregular developments of *b and *d in a few lexical forms, as in

	<u>Takitudu</u>	<u>Takibakha</u>	<u>Takbanuað</u>	<u>Takivatan</u>	<u>Ishbukun</u>	
b-	<u>bit</u> vaq	<u>bit</u> vaq	<u>bit</u> vaq	<u>bit</u> vaq	<u>bit</u> vaX	'thunder'
	<u>ʔic</u> vaq					
	<u>bul</u> alai?		<u>bul</u> alai?	<u>bul</u> alai?	<u>ʔu</u> laʔai?	'leggings'
	—	—	—	<u>bit</u> qu	<u>ʔit</u> Xu	'owl'
d-	<u>ʔal</u> apa?	<u>dal</u> apa?	<u>dal</u> apa?	<u>dal</u> apa?	<u>da</u> ʔapa?	'sole of foot'
	<u>ʔai</u> ða	—	<u>ʔai</u> ða	<u>dai</u> ða	<u>ʔa</u> - <u>dai</u> ða	'there'
-d-	pandian	pandian	panʔaian	—	pandian	'soup'
		panʔian				
	<u>pit</u> dia	<u>pit</u> dia	<u>pit</u> ʔia	<u>pit</u> ʔia	<u>pit</u> ʔia	'to cook'
			pi-pitiʔan	pitdian	pitʔian	'kitchen'
	<u>kat</u> dia	<u>kat</u> dia	—	<u>kat</u> ʔia	—	'to touch'

10 There is some problem with regards to reconstruction of the vowel of the first syllable. PHN *t'uRekud>PB *culkud> /culku?/ in Takitudu and Takibakha, but /silku?/ in Takbanuað and Takivatan, /liskud/ 'stick' in Ishbukun. The sporadic change *u>i might be due to the influence of the initial consonant. Also note the metathesis of /l/ and /s/ in Ishbukun.

11 Note the variation between /ma-tula?/ and /ma-tanu?/ or /ma-tanud/ 'to prop up a house' < *tuRad.

mindia	min?ia	mindia	min?ia	mindia	'to choose'
		min?ia			
matdaq	mat?aq	mat?aq	mat?aq	mat?aX	'raw'
pidiŋ	pidiŋ	pi?iŋ	pidiŋ	pi?iŋ	'cheek'

It is interesting to note that the related forms /pit?ia/ 'to cook' and /pitdian/ 'kitchen' appear in the same dialect of Takivatan. In fact, both forms were elicited from the same informant (a 64 year-old man in 1984).

See Li (1986, 1987) for detailed discussions of the developments of /b, d/ in Bunun.¹²

*c	/c/	/c/	/s/	/s/	/s/	
	cuncun	cuncun	sunsun	sunsun	sunsun	'mole'
	pucuq	pucuq	pusuq	pusuq	pusuq	'navel'
	luvuc	luvuc	luvus	luvus	luvus	'wet'
*s	/s/	/s/	/s/	/s/	/s/	
	siva?	siva?	siva?	siva?	siva?	'nine'
	qamisan	qamisan	qamisan	qamisan	Xamisan	'year'
	tiŋas	tiŋas	tiŋas	tiŋas	ciŋas	'food particle'

The voiced fricatives /v, ð/ are devoiced word-finally in Ishbukun:

*v	/v/	/v/	/v/	/v/	/v/[-f]	
	vali	vali	vali	vali	vaɬi	'sun'
	qanvaŋ	qanvaŋ	qanvaŋ	qanvaŋ	Xaŋvaŋ ¹³	'deer'
	saŋlav	saŋlav	saŋlav	saŋlav	saŋɬaf	'vegetable'
	tuqiv	tuqiv	tuqiv	tuqiv	tuqif	'earwax'

12 Commenting on the different rates of sound change reported in Li (1987), Professor William Wang (personal communication, Sept. 21, 1987) remarked, "These rates must be ultimately explainable by a combination of phonetic, frequency, and sociolinguistic factors. To sort these factors out one from another is an immensely challenging task for all of us at present."

13 Note the assimilation of the nasal in the first syllable to that of the second: n > ŋ.

A Comparative Study of Bunun Dialects

*ð	/ð/	/ð/	/ð/	/ð/	/ð/[-θ]	
	ðaku	ðaku	ðaku	ðaku	ðaku	'I'
	daðə?	daðə?	daðə?	da-daðə?	da-daðə?	'above'
	ma-cuað	ma-cuað	ma-suað	ma-suað	ma-suaθ	'to plant'

In fact, the extent of devoicing of the fricatives depends not only on the dialect, but also on the age of the speaker. Speakers from Takitumpu? have much more devoicing than speakers from Luna, both being Ishbukun villages. Younger speakers from Takiqatu?, a Takitudu village, also tend to devoice /v/ in all positions.

The glottal fricative *h had been changed to /ʔ/ in the word-initial and intervocalic positions, but lost after a consonant in Ishbukun:

*h	/h/	/h/	/h/	/n/	/ʔ/	
	hima?	hima?	hima?	hima?	?ima?	'five, hand'
	huknav	huknav	huknav	kuknav ¹⁴	?uknaf	'leopard'
	haiðə?	haiðə?	haiðə?	haiðə?	?aiðə?	'to exist'
	hiku?	hiku?	hiku?	hiku?	?iku?	'back'
	luhum	luhum	luhum	luhum	lu?um	'cloud'
	tahun	tahun	tahun	tahun	ta?un	'steam'
	min-puhuq	min-puhuq	min-puhuq	min-puhuq	min-pu?uX	'rotten'
*h	/h/	/h/	/h/	/h/	∅	
	banhil	banhil	banhil	banhil	banil	'cypress'
	ma-kaðhav	ma-kaðhav	ma-kaðhav	ma-kaðhav	ma-kaðaf	'cold (thing)'
	ma-cuŋha?	ma-cuŋha?	ma-suŋha?	ma-suŋha?	ma-suŋa?	'itchy'
	muŋhav	—	muŋhav	muŋhav	muŋpuŋaf	'lost'
			puŋhav			
	kukhuŋ	kukhuŋ	kukhuŋ	kukhuŋ	kukuŋ	'fox'
	huŋhuŋ	huŋhuŋ	huŋhuŋ	huŋhuŋ	?uŋuŋ	'valley, cliff'

14 The initial has been assimilated to the following /k/ in Takivatan.

Paul Jen-kuei Li

baihal	baihal	baihal	baihal	baiaɿ ¹⁵	'Alocasia'
bahak	bahak	bahak	bahak	baak ¹⁶	'lung'
tamuhun	tamuhun	tamuhun	tamuhun	tamuun ¹⁷	'hat'
kahun	kahun	kahun	kahun	kaun ¹⁸	'skin'

The glottal fricative /h/ does not occur word-finally in any Bunun dialect.

*l	/l/	/l/	/l/	/l/	/l/	
	laac	laac	laas	laas	laas	'fruit'
	qalua?	qalua?	qalua?	qalua?	ʔaXɿua? ¹⁹	'ant'
	tipul	tipul	—	—	cipuɿ	'corn'
*m	/m/	/m/	/m/	/m/	/m/	
	mata	mata	mata	mata	mata	'eye'
	simul	simul	simul	simul	simuɿ	'to borrow'
	—	qaðam	qaðam	qaðam	Xaðam	'bird' ²⁰
*n	/n/	/n/	/n/	/n/	/n/	
	nipun	nipun	nipun	nipun	nipun	'tooth'
	tina	tina	tina	tina	tina	'mother'
	vini	vini	vini	vini	vini	'leech'
	daan	daan	daan	daan	daan	'road'
*ŋ	/ŋ/	/ŋ/	/ŋ/	/ŋ/	/ŋ/	
	ŋulus	ŋulus	ŋulus	ŋulus	ŋuɿus	'mouth'
	ŋisŋis	ŋisŋis	ŋisŋis	ŋisŋis	ŋisŋis	'lip'

15 It is not clear why /ʔ/ was lost intervocalically in this form.

16 It is not clear why /ʔ/ was lost intervocalically in this form.

17 It is not clear why /ʔ/ was lost intervocalically in this form.

18 It is not clear why /ʔ/ was lost intervocalically in this form.

19 Note the metathesis of *q and *a.

20 The generic term for 'bird' is /qaðam/ in Takbanuað and /Xaðam/ in Ishbukun, but /qaðam/ refers to 'an omen bird' in Takibakha and Takivatan.

A Comparative Study of Bunun Dialects

bun̄u	bun̄u	bun̄u	bun̄u	bun̄u	'head'
ma-sauqðan̄	ma-sauqðan̄	ma-səqðan̄	ma-səqðan̄	ma-səXðan̄	'hungry'

There is no semivowel /w/ or /y/ in Bunun dialects, hence it is unnecessary to reconstruct semivowels for Proto-Bunun.

*i	/i/	/i/	/i/	/i/	/i/	
	daqis	daqis	daqis	daqis	daXis	'face'
	siðus	siðus	siðus	siðus	siðus	'mat,
						plant sp.'
	tiqtiq	tiqtiq	tiqtiq	tiqtiq	ciXciX	'reed of loom'
*u	/u/	/u/	/u/	/u/	/u/	
	kutu	kutu	kutu	kutu	kutu	'head louse'
	puqpuq	puqpuq	puqpuq	puqpuq	puXpuX	'foam, bubble'
	luvluv	luvluv	luvluv	luvluv	ɬufɬuf	'wind'
	cucu?	cucu?	susu?	susu?	susu?	'breast'
*a	/a/	/a/	/a/	/a/	/a/	
	qacal	qacal	qasal	qasal	Xasaɬ	'hail, flint'
	damuq	damuq	damuq	damuq	damuX	'dew'
	tastas	tastas	tastas	tastas	tastas	'waterfall'
	sila	sila	sila	sila	sila	'shore'

A diphthong such as /au/ may be monophthongized as [ɔ] in one or more dialects, as in

*au	/au/	/au/[au, ɔ]	/au/[ɔ]	/au/[au, ɔ]	/au/[au, ɔ]	
	qauqsa?	qɔqsa?	qɔqsa?	qɔqsa?	?auXsa? ²¹	'seed'
	tau?lac	tau?lac	tɔ?las	tau?las	taupɬas ²²	'radish'
	ma-taupdat	ma-taupdat	ma-tɔpdat	ma-taupdat	ma-tɔpdat	'to adhere'

21 Note the irregular loss of the initial uvular.

22 Note the irregular correspondence of /p/ to /ɾ/.

ma-sauqðan ma-sauqðan ma-sɔqðan ma-sauqðan ma-sɔXðan 'hungry'
 ma-dauqlac ma-dɔqlac ma-dɔqlas ma-dɔqlas ma-dɔXɫas 'white'

However, the diphthong /ai/ seldom gets monophthongized as [ɛ]. For example,

*ai	/ai/	/ai/	/ai/	/ai/	/ai/	
taina?	taina?	taina?	taina?	tanja? ²³	'ear'	
haiða?	haiða?	haiða?	haiða?	?aiða?	'to exist'	

3. Historical Derivations

The Proto-Austronesian (PAN) symbols generally follow Otto Dempwolff (1934-38), but with the subsequently revised phonemic distinctions between *t₁ and *t₂, *n₁ and *n₂ originally proposed by Ogawa and Asai (1935: 6-7), as well as the additions of *q, *s (*S in Dyen 1971 and Dahl 1976, *S₁ in Dahl 1981) and *S (*S₂ in Dahl 1981). The symbols *t₁ and *n₁ are written as plain *t and *n respectively, while the small *c instead of the capital *C as used by Dyen stands for *t₂, and *ɭ as used by Dahl stands for *n₂ instead of *N as used by Dyen. Dempwolff's *j and *v are written as *y and *w respectively, as originally suggested by Dyen. The small *h is adopted for *H, originally reconstructed by Dyen (Tsuchida's *H₁ and Dahl's 1981 *H₁), and H for Tsuchida's 1976 and Dahl's 1981 *H₂). PHN stands for Proto-Hesperonesian and PFN for Proto-Formosan.

PAN	PB	Takitudu	PAN	Modern Takitudu
*p	> *p > p		*pitu	> pitu? 'seven'
			*pig'aH	> pa-pia 'how many'
			*sepat	> paat 'four'
*t			*teluH	> tau 'three'
			*tene?un	> ma-tin?un 'to weave'
*c			*cuɭuh	> ma-tunu 'to roast'

23 Note the metathesis of /i/ and /ŋ/ in Ishbukun /tanja?/ < PAN *CaliŋaH.

A Comparative Study of Bunun Dialects

		*kucuH	> kutu	'head louse'
*t' > *c > c		*caŋit'	> taŋic	'to weep'
		*but'uR	> bucul	'bow (n.)'
		*t'ut'u	> cucu?	'breasts'
*k > *k > k		*kaRac	> kalat	'to bite'
		*kasu	> Ish ²⁴ kasu-n	'thou'
		*t'iku	> ciku?	'elbow'
*q > *q > q		*qabuH	> qabu	'ash'
		*utaq	> m-utaq	'to vomit'
*ʔ > *ʔ > ʔ		*ʔenem	> ʔa-ʔnum	'six'
			Ish ʔabnum ²⁵	
		*kaʔen	> m-aʔun	'to eat'
		*et'ʔa	> Tbn, Tvt ta-sʔa	'one'
		*teneʔun	> ma-tinʔun	'to weave'
*b > *b > b		*bulaɬ	> buan	'moon'
		*baqeRuH	> baqlu	'new'
		*daqis	> daqis	'face'
		*Danum	> danum	'water'
		*DemDem	> ma-dumdum	'dark'
		*ɬataD	> nata?	'outside'
		*d'alan	> daan	'road'
		*qud'aɬ	> qudan	'rain'
		*tud'uq	> tuduq	'to point at/outside, to show'
*g > *k > k	PHN	*gerger	> ku-kulkul	'to tremble'

24 Hereafter abbreviations for dialect names are as follows: Ttd, Takitudu; Tbh, Takibakha; Tbn, Takbanuað; Tvt, Takivatan; Ish, Ishbukun.

25 It is a problem to account for the occurrence of /b/ in the Ishbukun form /ʔabnum/ 'six' <PAN *ʔenem. There is a similar problem of /d/ in Ishbukun /cindum/ 'to weave' <PAN *teneʔun; see Li (1987) for a probable explanation.

*g' > *ϕ > ϕ	*[ŋ]ag'an > ŋaan	'name'
	*pig'aH > pa-pia	'how many'
	PHN *pag'ey > paað	'rice plant'
*R > *l > l	*qauR > qaul	'type of bamboo'
	*Rabi > Ish labi-an	'night'
*s > *s > s	*sapaR > ma-sapal	'to lay a mat'
	*siwa > siva?	'nine'
	*casiq > PFN *caqis > ma-taqis	'to sew'
	*tuqas > ma-si-tuqas	'elder sibling'
*S — *s > s	*Sapuy > sapuð	'fire'
	*cuSuR > ma-tusul	'to thread'
	*kuSkuS > kuskus	'fingernail'
	*Siup > ma-ʔiup	'to blow (with breath)'
	*huRet' > huluc	'clothes'
	*ha(n')t'aq > ma-hacaq	'to whet'
	*qumah > quma	'swidden field, farm'
	*HuRac > ʔulat ²⁷	'vein, blood vessel'
	*amaH > t-ama	'father'
	*kucuH > kutu	'head louse'
	*mata > mata?	'eye'
	*lima > h-ima?	'five'
	*kiRim > kilim	'to seek'
	*na[nʔ]aq > nanaq	'pus'
	*inaH > t-ina	'mother'
	*qa[nn']itu > qanitu?	'ghost'
	*qan'ud' > muŋ-qanu?	'to flow'
	*cuʔuh > ma-tunu	'to roast'
*h > *h — h/# —		
*H > *ϕ > ϕ		
*m > *m > m		
*n		
*n' — *n > n		
*l		

26 Condition not yet determined.

27 The initial /ʔ/ was developed, at a relatively late stage, before a vowel not preceded by any other consonant; it was not historically derived from PAN *H.

		*tiaf	> tian	'belly'
*ŋ	> *ŋ > ŋ	*caliŋaH	> taiŋa	'ear'
		*lut'un	> nucun	'mortar'
*l	> *ϕ > ϕ	*kaliH	> ma-kai	'to dig'
		*caliŋaH	> taiŋa	'ear'
		PHN *t'alən	> caən (<assimilation a/u)	'torch'
*w	> *v > v	*walu	> vau?	'eight'
		*wiRiH	> ta-vili	'leftside'
*y	> *ð > ð	*macey	> matað	'to die'
		*pacey	> pa-patað	'to kill'
		PHN *Daya	> daða?	'up, inland'
		*qacey	> Tbn qatað	'liver'
		*quw[ae]y	> quað	'rattan'
*a	> *a > a	*(i)aku	> ð-aku-n	'I'
		*panaq	> m-anaq	'to shoot (with a bow)'
		*taRaH	> mal-ta-tala	'to wait'
		*kita	> -ta?	'we (inc.)'
*i	> *i > i	*ikuR	> Tbn, Tvt, Ish ?ikul	'tail'
		PHN *waRiH	> vali	'sun'
*u	> *u > u	*Rumaq	> lumaq	'house'
		*tuDuq	> tuduq-an	'to leak'
			kis-tuduq	'to drip'
		*batuH	> Tbn, Vvt, Ish batu	'stone'
		*Dusa	> dusa?	'two'
*e	— *u > u	*kaʔen	> m-aʔun	'to eat'
		*ʔenem	> ʔa-ʔnum	'six'
		*t'ept'ep	> si-cupcup	'to suck'
	*a > a	*teluH	> tau	'three'
	/*q— PFN	*qeluD	> qau?	'pillar'
	/—*q PHN	*iseq	> Ish ?isaX	'urine'
	PHN	*d'aReq	> dalaq	'earth'
	PHN	*t'alən	> caən (<assimilation a/u)	'torch'
	*i > i ²⁸	*teneʔun	> ma-tinʔun	'to weave'

28 Condition not yet determined.

As illustrated above, Bunun does not distinguish between PAN *t and *c (= *C) or between *n and *ɲ, two phonemic contrasts preserved only in some Formosan languages.

In addition, the following PAN phonemes have been merged in Bunun: *d, *D and *d' as /d/; *n, *n' and ɲ as /n/; *k and *g as /k/; *u and *e (partially) as /u/. PAN *e is occasionally derived as /a/ or /i/ in modern Bunun dialects.

Three phonemes have been completely lost, *g', *ɭ and *H (Dahl 1981's *H₂).

The loss of PAN *-H (and *-h also) in the word-final position left the Bunun cognates which contained the phoneme ending with an open vowel, whereas the PAN cognates which originally ended with an open vowel now end with a final glottal stop in modern Bunun. (Exception: PAN *lima > Bunun /ʔima/ 'hand') The Bunun evidence indicates that there was a phonemic contrast between the presence and absence of PAN *H (or *h).

Bunun also provides evidence for the existence of PAN *ʔ in the word-initial and medial position.

The glottal stop in modern Bunun is derived from these different sources:

PAN *ʔ (initial, medial)

PAN *∅ (final)

PB *b and *d (especially final, medially adjacent to a consonant)

Bunun reflexes for two PAN phonemes Dempwolff's *j and *v and Dyen's *y and *w are /ɔ̃/ and /v/ respectively in all positions. They seem to indicate that the proto-phonemes were fricatives rather than semivowels.

4. A Classification of Bunun Dialects

Two types of linguistic evidence, phonological and lexical, will be examined in our classification of Bunun dialects.

4.1 Phonological Evidence

As illustrated in Section 2, the two northern dialects, Takitudu and Takibakha, retain the contrast between Proto-Bunun *c and *s, whereas all the other dialects have merged them as /s/. That indicates a close relationship between Takitudu and Takibakha.

There is also some evidence for a close relationship between the two central dialects, Takbanuað and Takivatan: Five interrogatives have the unexplained final /-q/ in their forms as noted earlier.

Compared with the other dialects, Ishbukun is unique in many ways:

- (1) Its /X/ corresponds to /q/ in all the other dialects.
- (2) Its *t has been palatalized before *i.
- (3) It is the only dialect which retains syllable- or word-final *-b and *-d.
- (4) PB *h has become /ʔ/ or lost.
- (5) PB *ʔ has been lost intervocally.
- (6) The voiced fricatives /v, ð/ tend to be devoiced word-finally, and the lateral /l/ tends to be devoiced in all positions.

There are quite a few cases of metathesis which has operated either on the Ishbukun forms alone or only on the forms of the other dialects in Bunun, as in:

<u>Ishbukun</u>	<u>Other Dialects</u>	
ta <u>ɲ</u> iaʔ	ta <u>ɲ</u> iaʔ	<PAN *cali <u>ɲ</u> aH 'ear'
Xu <u>sp</u> iɪ ²⁹	qu <u>ps</u> il ³⁰	'hair, feather'
ʔa <u>X</u> ɬuaʔ	q <u>a</u> luaʔ	'ant'
ɬaX <u>ð</u> as	la <u>q</u> sað in Ttb & Tvt	'pebbles'
	lu <u>q</u> sað in Tbh	
si <u>ɬ</u> af ³¹	li <u>s</u> av	'leaf'

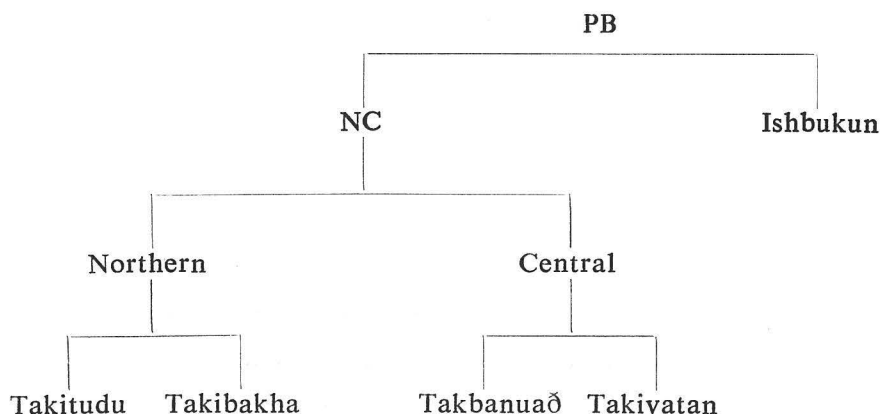
29 Takivatan as spoken in the village of Mayuan also has the form /quspil/.

30 The Takitudu word for 'animal hair' is /quin/.

31 The Ishbukun as spoken in the village of Luna has the form /lisav/. This indicates that the Takitumpuʔ form /siɬaf/ has undergone metathesis.

saṭiŋḁa?	saŋliḁa?	'plant sp., (<i>Urtica fissa</i> Pritzel)'
ḥiskud	silku? in Tbn & Tvt	'stick'
ma-Xsiam	ma-qsaim, ma-qsain	'slippery'
ma-Xausbu? ³²	ma-sauqbun	'heavy'

Based on the phonological evidence discussed above, we may state that Ishbukun was the first split from Proto-Bunun, and the subsequent split was between the northern and central dialect groups. A tree diagram for Bunun can be tentatively drawn as below:



4.2 Lexical Evidence

Lexical evidence for the earliest split of Ishbukun from Proto-Bunun is overwhelming. Of some 1,100 lexical items for all Bunun dialects collected in this study, the northern dialects exclusively share 113 cognates with the central dialects, while the southern, Ishbukun, shows unique lexical forms or non-existent for these:

	<u>Northern</u>	<u>Central</u>	<u>Ishbukun</u>	
1.	bunuk	bunuk	daas	'sand'
2.	vaŋlaḁ	vaŋlaḁ	—	'river'

32 Note the irregular correspondence of the final consonants.

A Comparative Study of Bunun Dialects

3.	bitvaq	bitvaq ³³	bilva	'thunder'
4.	disdis	disdis	kabusbus	'drizzle'
5.	qilqil	qilqil	tunuX, kałapatan	'cliff'
6.	kukua?	kukua?	?ivut-að	'worm'
7.	kalkal	kalkal	kaun	'bark of tree' ³⁴
8.	dauqtac	dauqtas	katkat	'burned rice'
9.	daqpuut	daqpuut	maXaf	'pepper'
10.	pani?	pani?	pułauX	'plume, feather'
11.	qamutic	qamutis	?ałuaθ	'mouse'
12.	puhut	puhut	puktu?	'squirrel'
13.	qaliŋdis	qaliŋdis	sałiŋ Xanuað	'dragonfly'
14.	qatibiŋ	qatibiŋ	łanłitað	'small mosquito'
15.	hubuŋ	hubuŋ ³⁵	łutbu?	'body'
16.	kaav	kaav	Xupdas	'forehead'
17.	?usaq	?usaq	baXbaX	'tears'
18.	hituŋ	hituŋ	— ³⁶	'dry earwax'
19.	paqas	paqas	— ³⁷	'white eye secretion'
20.	vuvu	vuvu	?un?un	'spine'
21.	qiduc	qidus	tabus	'the hollow part outside the heart'
22.	pudul	pudul	taki?un?un	'kidney'

33 Takbanuað as spoken in village of Shuāng-lúŋ also has the form /bilva/, which is probably a loan from Ishbukun.

34 Ishbukun has no corresponding form for /kalkal/. Its /kaun/ refers to 'bark of tree' and 'animal skin,' while /kahuŋ/ in the other dialects refers only to 'animal skin.'

35 Takbanuað as spoken in Wàŋg-shiāŋ also use the form /lutbu?/, which is probably a loan from Ishbukun.

36 While Ishbukun has only one lexical form /tuXif/ 'earwax', all the other dialects distinguish between /tuqiv/ 'wet earwax' and /hituŋ/ 'dry earwax.'

37 Ishbukun has only one form /paXłan/, while the other dialects have both /paqlan/ 'colored eye secretion' and /paqas/ 'white eye secretion.'

Paul Jen-kuei Li

23.	qumun	qumun	Xaputuŋ	'heart'
24.	haqas	haqas	Xanuaθ	'scar'
25.	nibu	nibu	samuðuy	'testicles'
26a.	?isdul	?isdul	?isaX	'urine'
26b.	misdul	misdul	misaX	'to urinate'
27.	qaduŋ	qaduŋ	tuus	'mole, black skin spots'
28.	qucuun ³⁸	qasuin	?iksun	'heel'
29.	kitnus	kitnus, kis?aŋ ³⁹	tunus	'fart'
30.	binanau?að	binanau?að	piŋaθ	'woman'
31.	qidasu	qidasu	— ⁴⁰	'paddle'
32.	habul	habul	ɦu?u?	'burning charcoal'
33.	kaus	kaus	pusut	'native cloth'
34.	huluc	hulus	pinainuk	'clothes'
35.	vanas	vanas	siuɦ	'window'
36.	via	via	siŋXaiɦ?	'long knife'
37.	da-daus	(da-) daus	suXnuŋ	'pocket knife'
38.	p(a)i?anan	p(a)i?anan	patutukan	'handle of scythe or knife'
39.	qi-na-pi?	qi-na-pi?	kininsapi?	'rope'
40.	qapuŋ	qapuŋ	tukban	'winnowing basket'
41.	qalup	qalup	ɦuup	'bag'
42.	tumpu?	tumpu?	tu?uɦan	'axe'
43.	sinbaluŋ	sinbaluŋ	sinɦum	'wall'
44.	tahamis	tahamis	—	'large jar'
45.	tislum	tislum	paɦasukut	'cage'

38 There is assimilation of the vowel in the final syllable to the preceding in the northern dialects.

39 Takivatan of the central dialects has the different form /kis?aŋ/.

40 The Ishbukun form /Xatu?/ 'boat, paddle' corresponds to /qatu?/ 'boat, box' in the other dialects.

A Comparative Study of Bunun Dialects

46.	ma-tapha?	ma-tapha?	ma-taplan	'to broil'
47.	ma-patuc	ma-patus	ma-pacin	'to start a fire'
48.	luklac	luklas	la?laf	'to shout'
49.	pusbai	pusbai	pudanun	'to chase away'
50.	ma-tumaqi	ma-tumaqi ⁴¹	ma-papaX	'to chew'
51.	ma-tuqlu	ma-tuqlu	ma-tukub	'to cover a pan'
52.	mu-siqsiq	mu-siqsiq	sasapsis	'to diarrhea'
53.	ma-pa?anak	ma-pa?anak	paXaunun	'to have fight'
54a.	paka-hau?	paka-hau?	pacicitlaX	'to quarrel'
54b.	ma-hau?	ma-hau?	Xunun	'to scold'
55.	bahi?	tahu-bahi?	ma-cilku?aθ	'nightmare'
56.	mu-kumbu?	mu-kumbu?	—	'to enter'
57.	ma-lavi?	ma-lavi? ⁴²	kanta?un	'to follow'
58.	ma-paska?	ma-paska?	—	to send, to deliver'
59.	tan?a	tan?a	ta?aða	'to hear'
60.	ma-vuqvuv	ma-vuqvuv	?idu?du?	'to shake'
61.	palu-qaqtun	qaqtun	pa?andu	'to meet'
62.	ma-cakbit	ma-sakbit	miXdi	'to hurt'
63.	si-butbut	si-butbut	sibuntus	'to pull'
64.	ma-liŋku	ma-liŋku ⁴³	ma-ciŋku?	'to roll'
65.	tusauc	tusaus	kaXuðas	'to sing'
66.	mu-luŋqu	ma-luŋqu	—	'to sit down'
67.	?um?um-un	?um?um-un	si?umut	'to smother'
68.	baðbað	baðbað	pa?inutu?	'to speak'

41 Speakers from Wàng-shiāng use the form /ma-papaq/, which was probably a loan from Ishbukun.

42 Takivatan uses the form /ma-lansan/ which is different from all the other dialects.

43 Takivatan uses the form /ma-liŋsun/ which is different from all the other dialects.

69.	vivi?vi?	vivi?vi?	— ⁴⁴	'to tremble'
70.	ma-mumu	ma-mumu	ma-subu	'to wrap (a baby)'
71.	ma-dikla	ma-dikla	ma-kuaŋ	'bad'
72.	mi-numa	mi-numa	mu-buʔa	'to break'
73.	ma-niŋðav	ma-niŋðav	ma-saniŋsiŋ	'clean (place)'
74.	ma-niŋ?ac	ma-niŋ?as	ma-saniŋsiŋ	'clean (water)'
75.	ma-tlu?	ma-tlu? ⁴⁵	ma-daipʔu?	'muddy'
76.	ma-sansan	ma-sansan	ma-taŋsi	'straight'
77.	ma-qmut	ma-qmut	—	'dark'
78.	ma-kumbu?	ma-kumbu?	?iŋadaX	'deep'
79.	ma-cunuq	ma-sunuq	ma-Xaitas	'to dislike'
80.	qalipacav	qalipasav ⁴⁶	sinainunu	'dizzy'
81.	ma-hiav	ma-hiav	ma-Xasmaf	'fast'
82.	ma-nahip	ma-nahip	—	'happy'
83.	ma-ðaipuq	ma-ðaipuq	ma-ðaum	'soft'
84.	ma-daqvas	ma-daqvas	?iXuXu?	'high'
85.	ma-ŋai?	ma-ŋai?	ma-kasa?	'lazy'
86.	ma-duqpus	ma-duqpus	ma-duʔu?	'long (object)'
87.	ma-lbuntu?	ma-lbuntu?	taʔ-manaut	'long (time)'
88.	?ambubuut	?ambubuut	?andidip	'pregnant'
89.	ma-qincav	ma-qinsav	ma-niŋsaX	'smooth'
90.	ma-qaipi?	ma-qaipi?	ma-Xapðan	'flat, not round'
91.	mi-halaŋ	mi-halaŋ	ma-daXpa?	'sick'
92.	ma-ŋað?aq	ma-ŋað?aq	ma-ŋabðan	'broad, wide'
93.	ma-daŋqac	ma-daŋqas	ma-diul	'red'
94.	ma-qmut	ma-qmut	ʔabi-an	'night'

44 Ishbukun has the lexical form/ kikiʔkiʔ/ 'to tremble, near death' which appears in all dialects.

45 The Takivatan form for 'muddy' is /ma-kluʔ/.

46 The Takbanuað form for 'dizzy' is /qanipasav/.

95.	laqbiŋ	laqbiŋ	kutun	'tomorrow'
96.	ʔu	ʔu	ʔuŋ	'yes'
97.	ciin	siin	ʔat	'and'
98.	di	di	sain	'this'
99.	ta-vanan	vanan	ta-naskaun	'rightside'
100.	kumbuʔ	kumbuʔ	ŋada	'inside'
101.	tamuŋ ⁴⁷	tamuŋ	—	'shadow'
102.	qumbu	qumbu ⁴⁸	—	'smoke'
103.	tusðuq	tusðuq ⁴⁹	ʔaʔak	'cave, hole'
104.	tunʔkunbuʔan	tunʔkumbuʔan ⁵⁰	—	'tunnel'
105.	mu-lʔu	ma-lʔu	ʔunXuʔ	'to rest'
106.	puaq	puaq	minuʔ	'flower'
107.	daʔuc	daʔus	—	'rice bran'
108.	suliʔað	suliʔað	—	'banyan'
109.	ciqalað ⁵¹	siqalað	—	'sparrow'
110.	pitpit	pitpit	pasi-miʔmiʔ	'eyelash'
111.	mu-mudan	(mu-)mudan	XudXud	'neck'
112.	tipin	tipin	ŋuʔʔa	'pan'
	tipiŋ	tipiŋ	—	
113.	ma-kai	ma-kai	—	'to dig'

That is, the northern and southern dialects exclusively share about 10% of the total vocabulary stock.

The central and southern dialects exclusively share only a few cognates against the northern dialects:

47 The Takibakha form for 'shade' is /qilaŋan/.

48 The Takivatan form for 'smoke' is /tibu/.

49 The Takbanuað does not have /tusðuq/.

50 The Takivatan form for 'tunnel' is /tunʔkunʔbuan/.

51 The Takibakha form for 'sparrow' is /qalucin/.

	<u>Northern</u>	<u>Central</u>	<u>Southern</u>	
1.	mumulac	paka?un	pakaun	'mulberry'
2.	visvis	?ikul	?ikuł	'tail'
3.	kuhaav	kukuav	kukuaf	'bird sp.'
4.	lalai	tukias	tukias	'cicada'
5.	vain	pinasaq	pinasaX	'thigh'
6.	saita?	saslu ⁵²	saslu	'sweat'
7.	ququm	hubuq	?ubuX	'baby'
8.	qucuŋ ⁵³	qunhuŋ	Xunuŋ	'charcoal'
9.	ti?ama? ⁵⁴	tavuk	tavuk	'straps'
10.	qitu?	pa-tilas-an	pa-ciłas-an	'granary'
11.	pakiuŋ	tunqa? ⁵⁵	tunXa?	'a big porcelain jar'
12.	qamu	buquł ⁵⁶	buXuł	'rice cake'
13.	tal-tuc ⁵⁷	tal-hisuq	tał-?isuX	'to bathe'
14.	kanicnic	(?i) hapav ⁵⁸	?i?apaf	'shallow'
15.	lakda?	batu?	batu?	'stone'
16.	tunqa?	siiq	siiX	'gourd'
17.	luŋhav	luak	luak	'hole'
18.	ququnan	dalqam	dałXam	'molar'
19.	ququnu?	—	—	'door'
20.	—	sumsum	sumsum	'sorghum'

As noted in the footnotes, some of the items above are not genuinely

52 Takivatan uses /saita?/, the same as the northern dialects.

53 Takibakha uses /qunhuŋ/, the same as the central dialects.

54 Takibakha uses /tavuk/, the same as the central dialects.

55 Takivatan uses /pakiuŋ/, the same as the northern dialects.

56 Takivatan uses /qamu/, the same as the northern dialects.

57 Takibakha as spoken in the village of Tán-nán uses the form /talhicuq/, a cognate with the central and southern dialects.

58 Takbanuað spoken in Wàng-shiāng uses the form /kanisnis/, a cognate with the northern dialects.

exclusively shared cognates by the central and southern dialects.

There are even fewer cognates exclusively shared by the northern and southern dialects:

<u>Northern</u>	<u>Central</u>	<u>Southern</u>	
1. kavial	qavit	kavial	'snake sp.'
2. balan	kanum	baɭan	'chest'
3. tismuq	saubu? ⁵⁹	cismuX	'to swell'
4. tipul	puʔi ⁶⁰	cipuɭ	'corn'
	lamuqu		
5. tuqnað	tuqnu ⁶¹	tuXnaθ	'kernel of fruit'
	katus		

Apparently there must have been mutual borrowing between dialects, especially between the northern and central dialects, and between the central and southern dialects. Borrowing between the northern and southern dialects is less common due to geographical distance.

There is some lexical evidence for the close relationship between the two northern dialects, and between the two central dialects. All the three subgroups (northern, central and southern) have some different lexical forms as below:

<u>Northern</u>	<u>Central</u>	<u>Southern</u>	
1. qaipuan	nibu	lulubunun	'egg'
2. mumudan	qaunqaun	XudXud	'neck'
3. suksuk	qaiun	tuXu?	'hip'
4. puu	kuti?	Xabis	'vulva'
5. kavun	kaul ⁶²	minavu?	'scythe'

59 Takivatan uses /tismuq/, a cognate with the northern and southern dialects.

60 Takbanuað uses the form /puʔi/, while Takivatan uses /lamuqu/.

61 Takbanuað uses the form /tuqnu/, while Takivatan uses /katus/.

62 Takivatan speakers from Tamalung (the village of Di-li) use the form /kavun/, which was probably a loan from Takibakha spoken in the same village.

- | | | | |
|----------------------------|-------------------------|--------------|-----------|
| 6. kavivila? ⁶³ | pis-tanaqnaq | pis-ta-tava? | 'to play' |
| | paqainan | | |
| 7. ma-lilia | tiŋdaŋkul | cis-da-daan | 'to run' |
| 8. ʔis-tina | pisi-nibu ⁶⁴ | maulubnu | 'hen' |
| | pasi-nibu | | |
| 9. kavuŋ | kavl | minavu? | 'scythe' |

In short, lexical evidence agrees with phonological evidence in sub-classifying the Bunun dialects. Ishbukun is more distantly related to the other Bunun dialects, hence it was the first split from Proto-Bunun. The subsequent split was between the northern and central dialects. There is a little more phonological and lexical evidence for a close relationship between the two northern dialects than that for the two central dialects.

Appendix. Bunun Dialects Included in This Study

<u>Major Dialects</u>	<u>Native Names</u>	<u>Location</u>	<u>Informants</u>
1. Takituduh	Ququað	南投縣仁愛鄉萬豐村曲冰	吳傳旺、何進丁 洪明發、廖福德
2. Takituduh	Buqið	南投縣仁愛鄉法治村武界	何金禮、陳阿銀
3. Takituduh	Takiqatu?	南投縣仁愛鄉中正村過坑	黃麗春、黃以郎
4. Takibakha	Laiʔaðuan	南投縣信義鄉潭南村	谷安文、谷憲明
5. Takibakha	Tamaluʔan	南投縣信義鄉地利村	米金水、何春梅
6. Takbanuað	Isigan	南投縣信義鄉雙龍村	申萬居
7. Takbanuað	Pistibuan	南投縣信義鄉望美村望鄉	全靜茹、全樹堂
8. Takivatan	Tamalun	南投縣信義鄉地利村	全紹仁
9. Takivatan	Takibahuʔan	花蓮縣萬榮鄉馬遠村	馬連淡、馬木居
10. Ishbukun	Takitumpu?	南投縣信義鄉東埔村	伍文傳、伍秀美
11. Ishbukun	Luna	南投縣信義鄉羅娜村	王阿甘、史豐原 王連勝

63 Takibakha uses the form /paqainan/, different from Takitudu /kavivila?/.

64 Takbanuað uses the form /pisinubu/, while Takivatan uses the form /pasinibu/.

References

Dahl, Otto

- 1976 Proto-Austronesian. Scandinavian Institute of Asian Studies Monograph Series No. 15. Lund.
1981 Early Phonetic and Phonemic Changes in Austronesian. Oslo: Institute for Comparative Research in Human Culture.

Dempwolff, Otto

- 1934-38 Vergleichendle Lautlehre des austronesischen Wortschatzes. Berlin.

Duris, Antoine

- 1987 Lexique Bunun-Français. Lexique de la Langue Bunun en Usage a Ma-hoan avec Traduction Française. Mimeographed, pp. 20+223.
1988 Vocabulaire Français-Bunun. Mimeographed, pp. 4+270.

Dyen, Isidore

- 1971 The Austronesian languages and Proto-Austronesian. In Thomas Sebeok, ed. Current Trends in Linguistics 8:5-54. The Hague: Mouton.

Flahutez, Marcel

- 1970 Dictionnaire Français-Bunun. Mimeographed, pp. 2+252.

Jeng, Heng-hsiung 鄭恒雄

- 1971 A Bunun English Dictionary. Mimeographed, pp. 7+147.
1977 Topic and Focus in Bunun. Institute of History and Philology, Academia Sinica, Special Publication, No. 72, pp. 9+304. Taipei.

Li, Paul Jen-kuei 李壬癸

- 1986 Linguistic variations of different age groups in some Formosan languages. In Paul Geraghty, Lois Carrington and S. A. Wurm, eds. FOCAL II: Papers from the Fourth International Conference on Austronesian Linguistics, 33-50. *Pacific Linguistics*, C-94.

- 1987 The preglottalised stops in Bunun. In Donald C. Laycock and Werner Winter, eds. *A World of Language: Papers Presented to Professor S. A. Wurm on His 65th Birthday*, 381-387. *Pacific Linguistics*, 100.
- Ogawa, Naoyoshi and Erin Asai 小川尚義、浅井惠倫
- 1935 The Myths and Traditions of the Formosan Native Tribes. Taihoku. Tsuchida, Shigeru 土田滋
- 1976 Reconstruction of Proto-Tsouic Phonology. Tokyo: Study of Languages & Cultures of Asia & Africa, Monograph Series No. 5.
- Wang, William S.-Y. (ed.) 王士元
- 1977 The Lexicon in Phonological Change. The Hague and Paris: Mouton.

摘 要

本文的主旨是布農方言的比較研究。布農有五個方言群：第一、Takitudu，第二、Takibakha，第三、Takbanuað，第四、Takivatan，第五、Ishbukun。對於第一個方言群作者做了三個調查點，其他方言群各做了兩個調查點，總共做了十一個方言調查點，蒐集了約一千一百個詞彙作為比較研究的基本材料。（請參見附錄中所列舉各調查點的方言群、土著名稱、地理位置及發音人。）若根據日本學者淺井惠倫（小川，淺井 1935: 585）的分類，第一、二方言群應屬於北部方言（舊稱カンタバシ蕃、卓社蕃、卡社蕃），第三、四方言群屬於中部方言（舊稱丹蕃、嚨蕃），第五方言群屬於南部方言（舊稱郡蕃）。

全文共分四節：一、前言，二、古布農語的擬測，三、從古南島語到古布農語到現代方言，四、布農方言的分類。

古布農語的系統如下：

輔音：

p t k q ?
b d
c
s h
v ð
l
m n ŋ

元音：

i u

比較研究的結果，我們發現在音韻系統上北部方言最為存古（保存塞擦音 c 與擦音 s 的分別），南部方言最為創新（含多種音變）。

雖有部分音韻的證據支持淺井的分類，但他的三大方言群之間的親疏關係又如何？本文提出了音韻和詞彙兩種證據來證明南部方言最早從古布農語分出來，隨後北部與中部方言才分裂。在音韻方面，南部方言有多種音韻變化，包括 *q > X, *h > ? 或消失、*? 在元音間的消失、*t 在 *i 前的顎化、v, ð, l 的清化等等。此外，南部方言（或其他各方言）不少的詞形有換位（metathesis）音變的現象。在詞彙方面，總共約 1,100 個詞項中，除去三大方言群共有的同源詞外，北部與中部方言共有 113 個同源詞，而南部方言卻不同源或獨缺；中部與南部方言共有的同源詞僅 20 個；北

部與南部方言共有的同源詞更少，還不到 10 個。因此，詞彙的現象與音韻的現象一致：南部方言較歧異或孤立。北部的兩個方言的分裂年代相當晚，因為兩者都有共同的音韻和詞彙的特徵。中部的兩個方言雖也有共同的特徵，但例證並不太多，因此它們分裂的年代比起北部的兩個方言應該稍早。

布農方言之間一定有不少的借字，有的容易判斷，有的卻難以定論。因為北部與南部方言在地理上的距離，它們之間的借字較少。