

Recommendations for standardizing the Biatah spelling system

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1. What is a good spelling system?

An alphabet can be thought of as a CODE which is used to represent the pronunciation of words in a language. The rules of spelling determine the relationship between the symbols used in the code (letters) and the units they represent (sounds). Writing involves ENCODING the message: using the rules of spelling to transfer the sounds of the spoken word into the letters of the written word. Reading is a process of DECODING: interpreting the written form, using the same rules of spelling, to determine the pronunciation (and finally the meaning) of the message.

The goal of this code is ease of communication, rather than secrecy; therefore, a good system of spelling is one which makes both tasks, reading and writing, as easy as possible. In order to achieve this, a spelling system should have the following properties:

1. It must be SYSTEMATIC; that is, spelling must not be standardized on a word-by-word basis, but rather by establishing general principles for representing each sound. People should not have to memorize the spelling of individual words, but should be able to spell a word correctly if they know how to pronounce it.
2. It must be REGULAR; that is, the general principles which are adopted must be followed consistently in every word to which they apply, and not invoked merely where there is a danger of confusion between two similar words.

If these principles are followed, it will greatly help both the reader and the writer. In order to make the reader's task as easy as possible, it is important to use a spelling system which adequately represents all the differences in pronunciation that can make a difference in the meaning of a word. The cardinal rule which should be followed is this: words which are pronounced differently should be spelled differently; words which are pronounced the same should be spelled the same.

From the point of view of the writer, the most important feature of a good writing system is that spelling should be predictable. In other words, a native speaker of the language should not have to memorize the spelling of each individual word. Rather, he should be able to spell any word correctly simply by knowing how it is pronounced and understanding the spelling rules of the language. For this to be possible, those rules must be applied consistently; that is,

each sound must be written in the same way in every word where it occurs, and not marked only when it is necessary to distinguish a particular pair of words.

2. Contrast and ambiguity

Each language has its own set of sounds. A difference in pronunciation which is significant in one language may be irrelevant in another. For this reason, a spelling system which works well for one language may be inadequate to represent some other language.

The system of spelling which is most commonly used in writing the Biatah language is quite similar to that of Malay, except for the letters “e” and “ū”. However, it fails to distinguish certain features of pronunciation which are significant in Biatah. The result is that there are many instances of words which have the same spelling but different pronunciations and different meanings. A few examples are listed below; many others are given in the following sections.

First, we should clarify the pronunciation of some of the letters used in the following examples. As explained in section 3.2, the “e” in Biatah is always pronounced like the /e/ in the Malay word teh ‘tea’. In this paper I will use the symbol “ĕ” to represent the “ĕ-pepet” sound (or schwa), which is sometimes written as “ă”. The /ū/ sound is a high back unrounded vowel, represented as [u] in the International Phonetic Alphabet, and similar to the pronunciation of word-final /-a/ in Johore Malay (e.g. the final /-a/ in apa, saya, etc.). The /ō/ sound is a mid back unrounded vowel represented as [ɤ] in the International Phonetic Alphabet, and similar to the pronunciation of /o/ in many western and central Kadazan/Dusun dialects. Also note that a double vowel (aa) is used here to represent a single long vowel [ā], and should not be pronounced as *[a’a]; see section 3.1.2.

(1) **SPELLING PRONUNCIATION MEANING**

<u>raga</u>	raga	<i>broad, spacious</i>
	rĕga	<i>price</i>
	raga'	<i>basket</i>
	rĕga'	<i>drought</i>
<u>jara</u>	jara	<i>casting net</i>
	jĕra'	<i>tired; worn out</i>
	jĕra	<i>friend</i>
<u>raja</u>	raja	<i>king</i>
	rĕja'	<i>thorn; sharp-pointed</i>
	raja'	<i>dart</i>

<u>angan</u>	angan ěngan ěngaan (ěngān)	<i>pleased with, appreciate</i> <i>empty</i> <i>you (plural)</i>
<u>buan</u>	buan bu'an bu'aan	<i>tree species</i> <i>to drop</i> <i>bearing fruit</i>
<u>ju</u>	ju' juu' (jū')	<i>seven</i> <i>juice</i>
<u>ban</u>	ban baan (bān)	<i>dam, dike</i> <i>to charm, be charmed</i>
<u>bauh</u>	ba'uh bě'uh	<i>new</i> <i>eagle</i>
<u>nga</u>	ngga nga'	<i>with</i> <i>moment</i>

Forms of this type are “ambiguous”, since they must be read or pronounced in different ways at different times. But notice that the ambiguity of these forms is due entirely to the spelling system which is used. This is quite a different situation from the case of true homonyms, in which a single pronunciation may have two quite different meanings:

(2)	WORD	FIRST MEANING	SECOND MEANING
	jipŭh	<i>snake</i>	<i>tooth</i>
	bědŭh	<i>dry</i>	<i>soft-shelled turtle</i>
	bisa'	<i>wet</i>	<i>able to</i>
	da'an	<i>to tell</i>	<i>branch (of tree)</i>
	manak	<i>close family</i>	<i>to crave</i>

The ambiguity of homonyms is a natural feature of the language, indeed of all languages. However, spelling ambiguity of the kind illustrated in (1) is in a sense artificial, since it is simply the result of a decision about how to write the language.

Many Biatah people believe that this ambiguity in the spelling system does not matter, since a fluent speaker of the language can usually determine which of the possible readings is correct by looking at the context. In contexts where it is difficult to decide, the reader must stop and re-read the sentence several times. But in many cases, the correct reading is sufficiently predictable that fluent readers may not even be aware of any hesitation. However, even for fluent readers, this process of “disambiguation” makes reading slower and more difficult than it would be if the spelling system were unambiguous.

This problem is much more serious for people who read Biatah less fluently, e.g.: (1) people who have little education, and so do not read well in any language; (2) people who were never taught to read Biatah, being educated exclusively in English or Malay, and have not had much practice at it; and (3) younger people, or people who have grown up outside the Biatah language area, whose vocabulary and/or fluency in the language is somewhat limited. People in all of these groups will frequently encounter contexts in which they find it difficult or impossible to determine which word is intended. For them, the ambiguity of the spelling system makes reading Biatah a slow and difficult process, and may discourage them from even trying to use materials in their mother tongue.

3. Specific features which must be distinguished in Biatah

In this section I will discuss some of the sounds which are significant in Biatah but not represented in the present spelling system. In section 4, I will discuss a few of the options for how these sounds might be written, and present my recommendations.

3.1 Glottal stop

The glottal stop is a closure at the back of the throat which briefly stops the air from passing through. In Biatah, it may occur either at the end of a word or in the middle, between two vowels. When it occurs at the end of a word, the word is sometimes described by Biatah speakers as having a “sharp” ending.

3.1.1 Word-final position

The following chart lists several pairs of words whose pronunciation differs only in one feature: those on the right end in a glottal stop, while those on the left end in a plain (“open”) vowel. Under the present system, both members of each pair would have the same spelling. There appear to be a great number of such pairs; the following list is only a small sample:

(3) OPEN VOWEL		GLOTTAL STOP	
bisa	<i>potent; severe</i>	bisa'	<i>wet; able to</i>
guru	<i>teacher</i>	guru'	<i>sit</i>
dudu	<i>thunder</i>	dudu'	<i>noise; crowd</i>
bara	<i>group; plural</i>	bara'	<i>embers</i>
bisara	<i>court case</i>	bisara'	<i>to blossom</i>
raja	<i>king</i>	raja'	<i>dart</i>
jěra	<i>friend</i>	jěra'	<i>tired; worn out</i>
ngasa	<i>divination</i>	ngasa'	<i>to sharpen</i>
ayo	<i>accompany</i>	ayo'	<i>pig</i>

tupi	<i>hat</i>	tupi'	<i>pancake</i>
sapi	<i>cow</i>	sapi'	<i>to spoon-feed</i>
pědi	<i>unhusked rice</i>	pědi'	<i>salted fish</i>
tibudo	<i>to trick, make stupid</i>	tibudo'	<i>idol, carved figure</i>
sua	<i>drain hole</i>	sua'	<i>accompany</i>
rigu	<i>chameleon</i>	rigu'	<i>fine, detailed, minute</i>

It is not enough to mark the glottal stop only where there is a minimally contrastive pair of words; that is, where the glottal stop is the only thing which distinguishes one word from another, as in the examples above. There are many other words in the language for which, under the present system, it is impossible to predict whether or not there should be a glottal stop at the end. A few examples are given below:

(4)	OPEN VOWEL		GLOTTAL STOP	
	pěngu	<i>beetle species (stink bug)</i>	pangu'	<i>curse</i>
	sungi	<i>river</i>	pari'	<i>return</i>
	ribabe	<i>millipede</i>	mire'	<i>to split</i>
	těru	<i>afraid</i>	nundu'	<i>sleepy</i>
	ngga	<i>with</i>	kěna'	<i>good</i>
	rigo	<i>bottle gourd</i>	buko'	<i>bush knife</i>
	babũ	<i>yet, still</i>	běgũ'	<i>much</i>
	gura	<i>sugar</i>	juraa'	<i>tongue</i>

For beginning readers or those with a limited command of the language, there is no way to read or write these words correctly unless the glottal stop is marked consistently.

In Malay there is no contrast between the glottal stop and /k/ in word-final position; final /-k/ is pronounced as a glottal stop. Since the Biatah spelling system is in large measure patterned after Malay, it is important to remember that in Biatah, the glottal stop and /k/ do contrast in word-final position, as shown by examples like the following:

(5)	FINAL /k/		FINAL GLOTTAL STOP	
	sindũk	<i>near, close</i>	sindũ'	<i>mother</i>
	mabuk	<i>drunk; seasick</i>	mabu'	<i>shallow</i>
	rětak	<i>green bean</i>	rěta'	<i>drip; drizzle</i>
	tuak	<i>rice wine</i>	tua'	<i>uncle/aunt</i>
	turak	<i>to push</i>	tura'	<i>side, direction</i>
	jěrak	<i>barking deer</i>	jěra'	<i>exhausted</i>
	masak	<i>ripe</i>	masa'	<i>especially</i>

ubak	<i>head</i>	uba'	<i>undergrowth; thicket</i>
punok	<i>back (of a person)</i>	punoo'	<i>full</i>
përik	<i>silver mesh belt</i>	pari'	<i>return</i>

3.1.2 Word-medial position

The glottal stop may also appear between two vowels. There seem to be fewer minimally contrastive pairs of words which differ only in this feature. The contrast would be between a simple sequence of vowels (VV) and a sequence containing the same vowels separated by the glottal stop (V'V). When the two vowels are identical, the simple vowel sequence would be pronounced as a long vowel, as in the first five of the following examples:

(6)	VOWEL SEQUENCE	GLOTTAL STOP
	baat <i>heavy</i>	ba'at <i>boundary</i>
	daan <i>hang out to dry</i>	da'an <i>branch; to tell</i>
	pinyiraan <i>support</i>	pinyira'an <i>desire</i>
	buut <i>rotten</i>	bu'ut <i>trail</i>
	tũüd <i>send, deliver</i>	tũ'ũd <i>tree stump</i>
	riang <i>sugar cane grass</i>	ri'ang <i>hard</i>
	buan <i>tree species</i>	bu'an <i>to drop</i>

But once again, in addition to these minimally contrastive pairs, there are numerous other words where the presence vs. absence of the glottal stop cannot be predicted:

(7)	VOWEL SEQUENCE	GLOTTAL STOP
	maan <i>eat</i>	na'an <i>persons</i>
	nguu' <i>wash</i>	ku'u <i>you (sing.)</i>
	bëit <i>left side</i>	pë'it <i>bitter</i>
	muas <i>to wipe</i>	mu'aas <i>wail over dead</i>
	ruai <i>extremely</i>	bu'ai <i>crocodile</i>
	juan <i>distance</i>	pu'an <i>to know</i>
	tuan <i>Sir</i>	tu'aan <i>jungle</i>
	Bau <i>name of District</i>	ba'uh <i>new</i>
	rais <i>lath; bamboo roofing strip</i>	rë'is <i>state, country</i>
	mien <i>choose, select</i>	si'en <i>to weep, cry</i>
	gaũn <i>happy</i>	ta'ũn <i>of course</i>

In order for people to be able read and spell words like these correctly and without hesitation, the glottal stop must be marked wherever it occurs.

3.2 Vowel quality

The Biatah language uses eight distinct vowel sounds: /i, e, a, o, u, ũ, ě, ǒ/. As noted above, the e in Biatah is always pronounced like the /e/ in the Malay word teh ‘tea’. The symbol ě is used here to represent the “e-pepet” sound (or schwa). The /ũ/ sound is a high back unrounded vowel; and the /ǒ/ sound is a mid back unrounded vowel, similar to the pronunciation of /o/ in many western and central Kadazan/Dusun dialects. It appears to be quite rare in Biatah.

Of the three “extra” vowel symbols, only the ũ is frequently used in most written Biatah materials. Both /a/ and /ě/ are written as a, and this single factor is responsible for an enormous amount of the ambiguity in the spelling system. The /ǒ/ sound is written as o; however, it occurs so rarely that the overall impact on ease of reading is not great.

3.2.1 /a/ vs. /ě/

As mentioned in the preceding paragraph, the distinction between /a/ and /ě/ in Biatah is extremely important, and the failure to distinguish these sounds in the spelling system must have a very serious effect on reading efficiency. A few examples of this contrast are given below:

(8)	/a/		/ě/	
	ba’uh	<i>new</i>	bě’uh	<i>eagle</i>
	daya’	<i>person</i>	děya’	<i>blood</i>
	payu	<i>promise</i>	pěyu	<i>deer</i>
	baras	<i>revenge, pay back</i>	běras	<i>uncooked rice</i>
	kabang	<i>step over</i>	kěbang	<i>peel; rind</i>
	bidayũh	<i>walk</i>	biděyũh	<i>Land Dayak</i>
	raja’	<i>dart</i>	rěja’	<i>thorn; sharp-pointed</i>
	jara	<i>casting net</i>	jěra	<i>friend</i>
	gandang	<i>leprosy</i>	gěndang	<i>drum</i>
	angan	<i>pleased with, appreciate</i>	ěngan	<i>empty</i>
	batang	<i>almost</i>	bětang	<i>tree trunk</i>
	baris	<i>row, line</i>	běris	<i>ritual dance</i>
	paris	<i>yearn, crave</i>	pěris	<i>taboo</i>
	sasang	<i>floating debris</i>	sěsang	<i>descendants</i>
	pasan	<i>drop, let go</i>	pěsan	<i>send a message</i>
	birambang	<i>copulate (vulg.)</i>	birěmbang	<i>butterfly</i>
	raru	<i>very, excessive</i>	rěru	<i>grain dropped during harvest</i>

Many more such minimal pairs could be listed here. Furthermore, there are literally thousands of words in which the choice between /a/ and /ǎ/ is not predictable under the present system. Even speakers with an excellent command of the language must fairly frequently encounter examples in which this specific type of ambiguity causes them to hesitate, at least momentarily. For less fluent speakers, or readers with less experience, this problem presents a major obstacle to efficient reading in Biatah.

3.2.2 /ǎ/

As mentioned above, the /ǎ/ sound is quite rare in Biatah. To a non-native speaker, the difference in pronunciation between /ũ/ and /ǎ/ may seem rather small; however, there appears to be at least one minimally contrastive pair, dũh ‘not’ vs. dǎh ‘question marker’. A few other words which contain this sound are: sitěbǎi ‘flute’; Dibǎn, Sigǎ ‘people’s names’; and ǎy ‘hello’.

3.3 Vowel length

The difference between long and short vowels is very important in Biatah. There seem to be a large number of minimally-contrastive pairs like the following:

(9)	SHORT		LONG	
	bas	<i>bus</i>	baas	<i>great, big</i>
	ju’	<i>seven</i>	juu’	<i>juice</i>
	ban	<i>dam, dike</i>	baan	<i>charm</i>
	ěngan	<i>empty</i>	ěngaan	<i>you (plural)</i>
	sěgan	<i>cram, pack down</i>	sěgaan	<i>downstairs</i>
	bua’	<i>fruit</i>	buaa’	<i>get well; cured</i>
	bu’an	<i>drop; throw down</i>	bu’aan	<i>bearing fruit</i>
	ata’	<i>we (including hearer)</i>	ataa’	<i>unripe</i>
	sěpa’	<i>section; cut</i>	sěpaa’	<i>outside</i>
	bai	<i>grandfather (short form)</i>	baai	<i>betel nut</i>
	mun	<i>like, as</i>	muun	<i>descend</i>
	dang	<i>enough (short form)</i>	daang	<i>animal</i>
	buang	<i>fence</i>	buaang	<i>bear (animal)</i>
	ta’ũn	<i>of course</i>	ta’ũun	<i>mote in eye</i>

Long vowels are normally written the same as short vowels in the current system, which is a significant problem. In addition to losing the distinction between pairs of words like those above, the failure to distinguish long from short creates a massive amount of ambiguity or uncertainty for a new reader: for every word which ends in a consonant (other than /-h/) or

semivowel, he needs to decide whether the vowel in the final syllable of the word should be read as long or short. Resolving this problem should significantly reduce the burden of disambiguation for a person reading Biatah.

3.4 Consonant clusters

There is a great deal of inconsistency in current practice when it comes to writing words which contain a cluster consisting of a nasal consonant (/m/, /n/, /ny/ or /ng/) followed by a stop. (We will consider here only clusters which occur at the beginning or middle of a word. Clusters which are pronounced at the end of words like deen [dē^dn] ‘durian’; or kasong [kaso^kng] ‘dog’ do not need to be written, since they are always predictable.)

Since initial and medial clusters are often pronounced as simple nasal consonants, there is a tendency (especially in short, frequently used words) to write them as simple nasals; this tendency is illustrated below:

(10)	WORD	MEANING	COMMON MISSPELLING
	mbit	<i>to take</i>	mit
	ěndu	<i>day</i>	anu
	ndu	<i>gather; do</i>	nu
	ndai	<i>do; make</i>	nai
	ndũg	<i>to arrive, reach; until</i>	nũg
	mbũh	<i>already</i>	mũh
	ndi’	<i>one</i>	ni
	sěmbu	<i>above</i>	samu
	tambũ’	<i>only; single</i>	tamũ

However, it is important to write the stops (/b/, /d/ and /g/) in these words. Even when it is not pronounced, the presence of the stop changes the quality of the following vowel from nasal to oral. In each of the following pairs of words, the final vowel of the word on the left is strongly nasalized (i.e., some air is allowed to pass through the nose), while the final vowel of the word on the right is pronounced with air passing only through the mouth:

(11)	tana’	<i>land</i>	tanda’	<i>dance</i>
	mee’	<i>not satisfied</i>	mbee’	<i>wash hands</i>
	sina’	<i>jealous, envy</i>	sinda’	<i>knife</i>
	mangah	<i>fierce</i>	mangah	<i>stay for the night</i>
	sama’	<i>father</i>	sěmba	<i>older uncle/aunt</i>
	mamuh	<i>bathe</i>	sěmbu	<i>above</i>
	tamũh	<i>fertilizer</i>	těmbũ’	<i>single; only</i>

This difference is even clearer when the word ends in a nasal consonant. In this case, the final nasal is slightly preploded (at least for many speakers) following an oral vowel, but not following a nasal vowel, as in [tambaŋg] ‘fare’ vs. [tamang] ‘bomoh’. (As noted above, the stops which are inserted in forms like those on the right below need not be written, since they are completely predictable.)

(12)	tamang	<i>bomoh</i>	tambaŋg	<i>fare</i>
	tungang	<i>able to</i>	tunggaŋg	<i>to pour out</i>
	tumang	<i>orphan</i>	tumbaŋg	<i>topple over</i>
	(bi)tūngūn	<i>fruit species</i>	tūnggū ^{dn}	<i>straight, upright</i>
	kēnang	<i>back-side</i>	kēndaŋg	<i>bird species (magpie ?)</i>
	kēmang	<i>kind of ghost</i>	kēmbaŋg	<i>swell up</i>
	samūn	<i>together with</i>	sēmbū ^{dn}	<i>string of beads</i>

Minimally contrastive pairs like these are not uncommon in two-syllable words; but even in one-syllable words, the presence of the stop may be important in distinguishing two words, e.g.:

(13)	mba'/mbaa'	<i>do not!</i>	ma'	<i>father (short form)</i>
	mee'	<i>not satisfied</i>	mbee'	<i>wash hands</i>
	ngga	<i>with</i>	nga'	<i>moment</i>

Moreover, if the stop is not written in these clusters, there is no way to predict whether or not a stop should be pronounced in words like the following:

(14)	NASAL PLUS STOP			SIMPLE NASAL		
	COMMON SPELLING	PRONUNCIATION	MEANING	COMMON SPELLING	PRONUNCIATION	MEANING
	ma	mbaa'	<i>do not!</i>	ma	ma'	<i>father (contr.)</i>
	mit	mbit	<i>to take</i>	mun	mun	<i>as, like</i>
	anu	ēndu	<i>day</i>	anū	anū'	<i>that</i>
	nai	ndai	<i>do; make</i>	mai	mai	<i>eight</i>
	nūg	ndūg	<i>to arrive</i>	nūm	nūm	<i>six</i>
	mūh	mbūh	<i>already</i>	meh	meh	<i>-lah!</i>
	ni	ndi'	<i>one</i>	na	naa'	<i>put</i>
	nga	ngga	<i>with</i>	nga	nga'	<i>moment</i>
	nu	ndu	<i>gather; do</i>	nang	nang	<i>say</i>

Therefore it is important to be consistent in writing the stops in all nasal + stop clusters.

4. Recommendations for representing these distinctions

In this section I will discuss a few of the options available for representing the significant contrasts discussed above. It is important to remember that all of these options represent a change from current practice, and so will seem strange, perhaps “foreign”, to many people. Changes in spelling are always difficult and uncomfortable. However, sometimes they are necessary to ensure that the language continues to be readable by its speakers. What is crucial is that all parties who are interested in producing written materials in Biatah should agree on a single set of solutions to the problems described above, and use them consistently.

4.1 Glottal stop

Languages in this area of the world have made use of several different characters to represent the glottal stop, notably the apostrophe (’), hyphen (-) and the letter “q”. These three possibilities are illustrated and compared below:

(15)	ba’uh	baquh	ba-uh	<i>new</i>
	ma’ad	maqad	ma-ad	<i>climb up</i>
	buko’	bukoq	buko-	<i>bush knife</i>
	pari’	pariq	pari-	<i>return</i>
	rě’i	rěqi	rě-i	<i>ginger</i>

The apostrophe (’) has the advantage of being familiar to Malaysians because it was formerly used in the Malay spelling system (e.g. ma’af), and is still seen in many older books. Moreover, it is easy to print, type and write, and found on all typewriters and computers. It’s chief disadvantage is that it looks like a mark of punctuation. When a word which ends in a glottal stop occurs at the end of a quote, there is the danger of confusion. This is illustrated in the following sentences:

- (16) John said, “In Malay we say ‘aku’, but ‘aku’ is the correct Biatah pronunciation.”
 John said, “In Malay we say ‘aku’, but in Biatah we say ‘aku’.”

A second disadvantage of the apostrophe is that it may feel like an “extra” mark, carrying less weight than a “real” letter. For this reason, it is more likely to be omitted. Whatever symbol is used to represent the glottal stop, it must be used consistently and cannot be considered “optional”.

The hyphen is also universally available and easy to use. However, the danger of confusion with other uses of the hyphen is even greater than with the apostrophe. Moreover, it looks very strange in word-final position. Most languages that use this symbol for the

glottal stop use it only in the middle of a word. Another symbol, e.g. “q” or the apostrophe is used at the end of words. The use of two different symbols for the same sound puts a slightly greater burden on the person learning to read, but is definitely better than not writing the sound at all.

The letter “q” is used in a number of languages in the Philippines and elsewhere, and has been used in some publications of the Dewan Bahasa. It has the advantage of being a “normal” letter, thus less likely to be omitted and less apt to give people the feeling that the written language looks “strange” or untidy. Moreover, there is no danger of confusion with punctuation marks etc. The chief disadvantage of this choice is that it is unfamiliar to most people in Malaysia. Furthermore, most people educated in Malay or English would tend to pronounce the “q” as /k/ at first, though they could easily be taught that it has a different pronunciation in Biatah.

If we could start from scratch, the best choice would clearly be the “q”. However, given the local and national context in which Biatah is spoken, I recommend that the apostrophe be adopted to represent the glottal stop.

4.2 Vowel length

The two most viable options for marking long vowels are (1) using a diacritic, e.g. “ā”; and (2) using a sequence of two identical vowels (“aa”), as is done in Kadazan and Sabah Murut. A third option which might be considered is to insert a colon after each long vowel (a:). These three options are illustrated in the following examples:

(17)	DIACRITIC	DOUBLE VOWEL	COLON	MEANING
	mān	maan	ma:n	<i>eat</i>
	dēn	deen	de:n	<i>durian</i>
	ngīk	ngiik	ngi:k	<i>thresh rice (with feet)</i>
	mōs	mboos	mbo:s	<i>to wrap; packet</i>
	ngū'	nguu'	ngu:'	<i>wash</i>
	sū'	sūū'	sū:'	<i>small</i>

The diacritic mark “ā” seems to have some advantage in terms of familiarity for older speakers, and was used (sporadically) in the dictionary by Datuk William Nais. However, it has the disadvantages characteristic of all diacritic marks: (1) they require more effort to write or type, and (2) people tend to omit them more often than not. Two additional problems arise if a diacritic symbol is also used for the /ū/ sound. First, there will be the difficulty of putting two marks over the same letter in many words, e.g.:

(18)	b [̄] ũ'	bũũ'	<i>swollen</i>
	s [̄] ũ'	sũũ'	<i>small</i>
	t [̄] ũd	tũũd	<i>send, deliver</i>
	d [̄] ũm	dũũm	<i>remainder; what is left</i>
	ũm	ũũm	<i>pangolin; scaly ant-eater</i>
	j [̄] ũk	jũũk	<i>afraid</i>
	ta [̄] ũn	ta'ũũn	<i>mote in eye</i>

Second, the possibility of two different diacritics appearing over the same letter (“ũ” vs. “ū”) would require both readers and writers to expend greater time and effort to distinguish the two. Informal testing of this option shows that even fluent readers have quite a bit of difficulty in distinguishing pairs of words like yũn [yũn] ‘place’ vs. yūn [yuun] ‘middle’. Conversely, when writing by hand, many Biatah people now mark the “ū” sound with a simple straight line over the “u” for ease and speed. This practice would, of course, lead to great confusion if the straight line is used to mark vowel length; writers would need to use a great deal of care to keep the two marks distinct.

For these reasons, the use of double letters seems to be the clearly preferable way to mark vowel length. The main disadvantage of this approach is that, under the present system, a sequence of identical two vowels is used where there is a glottal stop. Thus people who are used to reading with the old system might at first try to pronounce maan ‘eat’ as [ma’an], etc. However, if glottal stop is written consistently as discussed in the preceding section, it should take only a few minutes for people to adjust to this change. Moreover, this option is already used (inconsistently) in words like muun ‘descend’, and ęngaan ‘you (pl.)’, where minimal pairs are especially likely to lead to confusion.

4.3 Vowel quality

Since the Roman alphabet contains only five vowel symbols (a,e,i,o,u), there are two basic choices for writing the “extra” vowels /ũ/, /ę/ and /õ/. One option is to use a diacritic mark, such as the “saucer” (˘) which was used in the Biatah mission schools, and is currently used for /ũ/. The other option is to choose completely new symbols for these sounds, that is, to introduce new letters into the alphabet.

The advantage of using the “saucer” (˘) over regular vowel letters is that these marks are already familiar to many Biatah speakers, especially older speakers. The /ũ/ symbol has come to be recognized as one of the distinguishing marks of written Biatah. Moreover, if they are used consistently, such marks can enhance the visual distinctiveness of word shapes, allowing for faster reading. On the other hand, as noted above, there are always serious

disadvantages when diacritics are used. The main disadvantage is that, since they are more difficult to write or type, people tend to leave them off. This can lead to a great deal of confusion. (For example, this is why most non-Bidëyüh people refer to the language as “Bidayuh” rather than “Bidëyüh”.) The “saucer” symbol (˘) is not available on most typewriters. Moreover, since both /ũ/ and /ě/ occur very frequently in Biatah, there would be a large number of these “extra” marks on a page, and people might object that the language looks too “messy” or “exotic” in this form.

The second option would be to choose completely new symbols for the extra vowel sounds, such as phonetic symbols or “barred” letters. However, few Biatah speakers seem willing to use such foreign-looking characters to write their language.

Given the fact that the symbol “ũ” is firmly established to represent the high back vowel /ũ/, there seems to be little point in trying to change this practice. And since the /ǒ/ sound occurs so rarely, the use of the diacritic mark for this sound is not a serious problem. The major issue then is how to represent the /ě/ sound, which under the current system is not distinguished from /a/.

The symbol “ǎ” is favored by most older speakers, and was used in the dictionary by Datuk William Nais. My own preliminary phonological analysis of Biatah suggests that /ě/ should be identified with /ǒ/. A third option would be to use the “ě” symbol, as in the old Bahasa Malaysia spelling system. These three options are compared below:

(19)	/ǎ/	/ě/	/ǒ/	<i>Gloss</i>
	pǎdi	pědi	pǒdi	<i>rice plant</i>
	bǎras	běras	bǒras	<i>uncooked rice</i>
	dǎya'	děya'	dǒya'	<i>blood</i>
	pǎyu	pěyu	pǒyu	<i>deer</i>
	tǎmbit	těmbit	tǒmbit	<i>take</i>
	ǎndu	ěndu	ǒndu	<i>day</i>
	rǎja'	rěja'	rǒja'	<i>thorn; sharp-pointed</i>
	rǎmin	rěmin	rǒmin	<i>house</i>
	bǎtang	bětang	bǒtang	<i>tree trunk</i>
	bidǎyüh	biděyüh	bidǒyüh	<i>Land Dayak</i>
	pǎris	pěris	pǒris	<i>taboo</i>
	sǎsang	sěsang	sǒsang	<i>descendents</i>
	birǎmbang	birěmbang	birǒmbang	<i>butterfly</i>

Of these three options, I feel that “ǎ” is the weakest choice because of the strong tendency for people to omit diacritic marks. If the diacritic is omitted from this symbol, the critical

distinction between /ě/ and /a/ is lost. With “ě” or “ō”, this problem does not arise because of an interesting pattern in the sound system of Biatah. It appears that the /ě/ sound never occurs in the last syllable of a word, while the sounds /e/ and /o/ occur only in the last syllable, except in recent loan words such as dosa ‘sin’, shorga ‘heaven’, beron ‘airplane’ (from local Malay belon), etc. Thus if “ě” or “ō” is used for the /ě/ sound in a non-final syllable and the diacritic is omitted, it will not lead to confusion.

As for the choice between “ě” and “ō”, I would recommend “ě” for at least two reasons. First, this symbol will be more familiar to younger, Malay-educated speakers of Biatah (as well as to non-Biatah speakers) because of its use in the old Bahasa Malaysia spelling system. Second, the use of “ō” or “o” for /ě/ in pre-final syllables would be confusing to speakers of the Penrissen dialect.

Another option which should be considered is to use the letter “e” for the /ě/ sound, as is currently done in Bahasa Malaysia. This approach should be especially natural and helpful for younger Biatah speakers, who were educated in Malay (and indeed, many younger speakers currently use this option in their own writing).

This approach would have the added advantage of reducing the number of diacritic marks needed, because of the fact noted above concerning the distribution of the sounds /e/ and /o/ in native Biatah words. Since these sounds occur almost exclusively in the last syllable of the word, while the /ě/ sound never occurs in the last syllable, we could use the same letter, “e”, to represent two different sounds without confusion. It could be pronounced /e/ in the last syllable of a word, and /ě/ in any other syllable. In those rare forms in which the sound /e/ occurs in a non-final syllable, we would need a diacritic (e.g. “é”) to distinguish this sound from /ě/. Some examples are given below:

(20)	PRONUNCIATION	POSSIBLE SPELLING	MEANING
	mite’	mite’	<i>ask for</i>
	ujen	ujen	<i>rain</i>
	pědi	pedi	<i>rice</i>
	rěmin	remin	<i>house</i>
	děya’	deya’	<i>blood</i>
	beron	béron	<i>airplane</i>
	penyēt	pényet	<i>flattened (local Malay?)</i>

Using the letter “e” for both /e/ and /ě/ would place some additional burden on people trying to learn to read Biatah; they would have to learn two different sounds for the same letter, and how to tell which is the correct pronunciation in any given syllable. But since the rule governing this choice is extremely simple and regular, this should not create a major

However, the final decision will be made by Biatah speakers themselves. It is crucial that the various concerned parties try to reach a consensus about the form of the written language before any large large volume of material is published. Many languages in many different countries have found themselves struggling with two or three competing “official” spelling systems, simply because different government agencies, denominations, cultural organizations etc. could not agree on how to represent certain sounds in that language.

This is a situation to be avoided at all costs. After a period of informal discussion and consultation, it would be desirable to reach some kind of formal agreement about these questions, possibly by organizing a special conference involving all interested parties.