UNIVERSITY OF THE PHILIPPINES

Master of Arts in Linguistics

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TRACING ANCESTRY AND DESCENT: A RECONSTRUCTION OF THE PROTO-BATANIC LANGUAGE

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UNIVERSITY OF THE PHILIPPINES

TRACING ANCESTRY AND DESCENT: A RECONSTRUCTION OF THE PROTO-BATANIC LANGUAGE

MARIA KRISTINA S. GALLEGO

A thesis submitted to the Office of the Graduate Program of the
College of Social Sciences and Philosophy in partial fulfillment
of the requirements for the degree of
Master of Arts in
Linguistics

MARCH 2014
DILIMAN, QUEZON CITY

This thesis attached hitherto, entitled TRACING ANCESTRY AND DESCENT:
A RECONSTRUCTION OF THE PROTO-BATANIC LANGUAGE,
prepared and submitted by MARIA KRISTINA S. GALLEGO in partial fulfillment
of the requirements for the degree of Master of Arts in Linguistics is hereby accepted.

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Nabasa ko na po ang tesis ni **Ms. MA. KRISTINA S. GALLEGO** na may pamagat na "Tracing Ancestry and Descent: A Reconstruction of Proto-Batanic" at inirerekomenda ko na po na maidepensa ito sa harap ng kanyang panel bilang bahagi ng pagsasakatuparan ng mga pangangailangan sa digring M.A. Linggwistiks.

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PANGALAN	SUMASANG-AYON	DI-SUMASANG-AYON
KT. PROP. JESUS FEDERICO C. HERNANDEZ **Tagapayo**		
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Kapasyahan ng Lupon: [✓] **Pumasa** [ ] **"Provisional Pass"** [ ] **Di-pumasa**
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Kalakip ang listahan ng mga rebisyong sinang-ayunan ng panel.

Ang mga rebisyon sa tesis ay kailangang padaanin muli sa mga kasapi ng panel upang matiyak na naisagawa lahat ang mungkahing pagbabago.

Sumasainyo,

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ABSTRACT

The apparent similarities shared by the Batanic languages of the Philippines and Taiwan point to the fairly recent break-up of the proto-language ancestral to this microgroup. Addressing the gaps in the previous reconstructions of Yang (2002) outlined in Chapter 2, this study revisits the features of Proto-Batanic via the Comparative Method, with particular focus on phonological and lexical reconstructions.

In Chapter 3, the sound inventories of the Batanic microgroup are presented, and in the subsequent chapter, the phonology of Proto-Batanic is discussed in relation to the reconstructions of Yang (2002). In particular, segmental and suprasegmental phonemes are reconstructed, and the syllable structure of the proto-language is given on the basis of the data at hand. Based on these reconstructions, the internal subgrouping of the Batanic languages is discussed in Chapter 5. It can be said that Itbayat is the most conservative of the Batanic languages, in that it retains all phonemes of Proto-Batanic. Yami forms a separate subgroup based on the conditioned merger of Proto-Batanic *y and *l to /l/, as well as the unconditioned shift of Proto-Batanic *ɣ to a uvular fricative /ʁ/, with the subsequent subgrouping of Iratay and Ivalino, based on the devoicing of the intermediate /v/ to /f/. Ivatan, composed of Ivasay, Isamorong, and Ibatan, form a distinct subgroup as well, based on the conditioned merger of Proto-Batanic *l and *d to /d/ in addition to the unconditioned shift of Proto-Batanic *ɣ to a glottal fricative /h/. Ibatan forms a much recent lower-order branch within Ivatan, as seen in the fortition of the intermediate /v/ to /b/ in all environments.

Finally, some speculations regarding the ancestry of Proto-Batanic are given. In particular, the probability of a Northern Philippine subgroup tying the Batanic microgroup with the languages of Central Luzon and Cordillera, as well as the microgroup's connection to its parent language, Proto-Philippines, is discussed. Based on linguistic, archaeological, and genetic evidence, it is argued that Batanes and Lan-yu were re-colonized by pre-Batanic speakers coming from Luzon, displacing the initial (perhaps non-Philippine/Malayo-Polynesian) settlers of the islands.

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I remember a day that ended with Dear Darla and Charlie Chan
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I came to realize that moments of respite cannot be found in places but in people.
And my flying fat Ate Mads and Jem:
Somewhere north is her little piece of Daylight;
It was thanks to her that it became a piece of my Daylight too.
And I was never really convinced I could write something like this;
I was only probably looking for someone to push me to go for it, and he did.

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My family. They would just laugh when I scream, "AYOKO NAAAA," as if saying,
"Yes, kiddo, we know. You've already said that a hundred times today."
They see all the madness leaking out, but one look from them and I know they understand.
For still believing the sun shines out my ass, and for letting me chase all my silly dreams, thank you.
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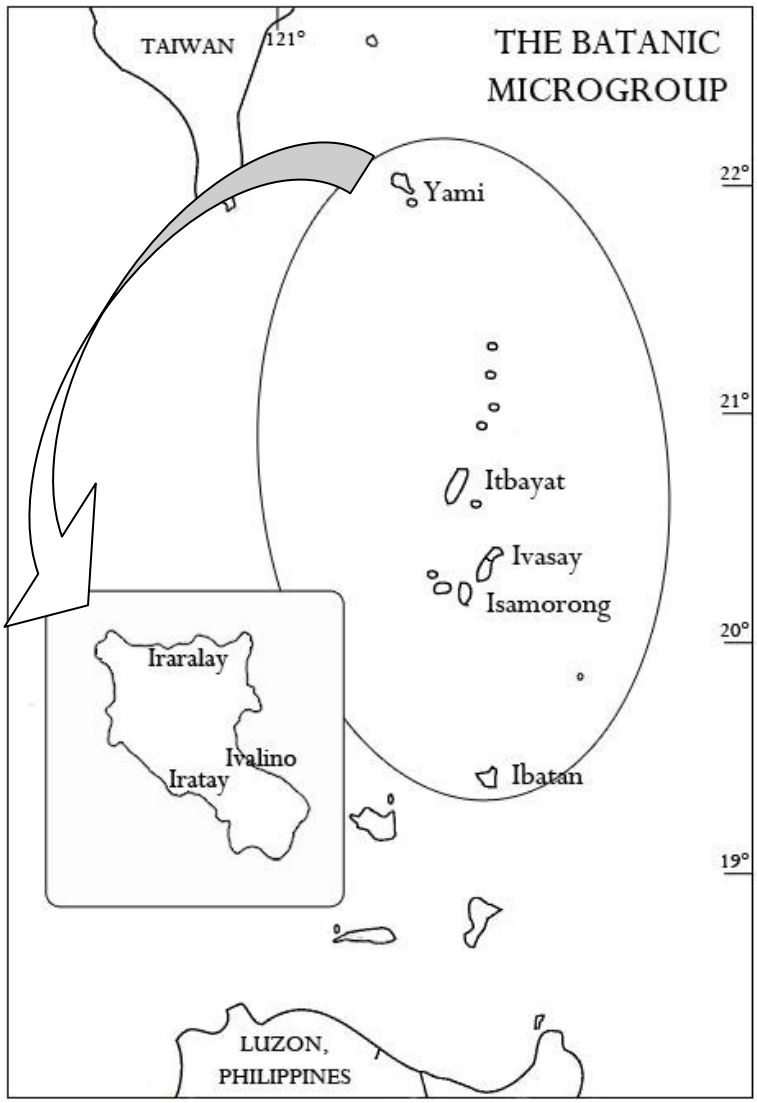


Figure 1: Location of the Batanic languages

1.1. Ivatanic, Vasayic, Bashiic, and Batanic: The microgroup

On the islands bordering the Philippines and Taiwan, a small and discrete group of languages within the Austronesian Family is spoken. Tsuchida, Yamada, and Moriguchi (1987) and Tsuchida, Constantino, Yamada, and Moriguchi (1989) identify four languages within the microgroup, namely (1) Yami of Lan-yu, Taiwan, (2) Itbayaten of Itbayat, Batanes, (3) Ivatan of Batan and Sabtang, Batanes (with its dialects Ivasay and Isamorong), and (4) Ibatan of Babuyan Claro, Cagayan. The location of the aforementioned languages is presented in Figure 1[1].

The microgroup is known by a number of names, such as Vasayic, Bashiic, and Batanic (Maree, 2007, p. xxi). All of these are based on the geographical location of the languages, in that *Bashiic* refers to the Bashi Channel bordering Taiwan and the Philippines (Blust, 1991, p. 77), *Vasayic* to the old place name Vasay, and *Batanic* to Batan, the main island of Batanes, Philippines. However, linguists working on the microgroup prefer certain nomenclature over others. For instance, Blust (1991) uses the term *Bashiic*, whereas Tsuchida, Yamada, and Moriguchi (1987), Tsuchida, Constantino, Yamada, and Moriguchi (1989), Yang (2002) and Ross (2005) prefer the term *Batanic*. Despite such differences in nomenclature, the terms appear to be interchangeable since the microgroup is by and large non-controversial in terms of the unique innovations knitting the members together. In fact, the languages, especially those spoken within the Philippine archipelago, appear so similar to each other that linguistic and lexicostatistical findings seem to group them as dialects rather than discrete languages altogether (Cottle and Cottle, 1958; Hidalgo and Hidalgo, 1971; Reid, 1966; and Ross, 2005). Historical and ethnographic records also support such claim, in

[1] Map of the Batanic languages modified from Yami culture (2010) and map of the Yami languages modified from Providence University (2008).

that genealogies can be directly traced among the Batanic-speaking populations (Maree, 2007, p. xxii). Li (2001) writes that the migration of Batanic-speaking populations started roughly 1000 years ago, demonstrating that the break-up of their ancestral proto-language has been fairly recent.

As a continuation of the aforementioned works, this study deals with the origin and development of the microgroup. Deriving from the terminology employed by Ross (2005) and Yang (2002), the term *Batanic* is used henceforth, illustrating how the ancestry of the languages is traced back to the Batanes Islands of the Philippines.

1.2. Objective and significance

Reconstructing Proto-Batanic (PB) is reasonably straightforward in that there are systematic and fairly unproblematic patterns and correspondences in the cognates shared by the daughter languages. Yang (2002) reconstructs Proto-Batanic using the Comparative Method, but gaps in the reconstructed proto-language can be observed, such as unaccounted sound correspondences as well as unexplained exceptions to sound changes (further discussed in Chapter 2). Deriving from the aforementioned study, this research presents a re-examination of Proto-Batanic phonemes and morphemes based on the following languages: (1) Yami, with its dialects Iraralay, Iratay, and Ivalino, (2) Itbayat, (3) Ivatan, with its dialects Ivasay and Isamorong, and (4) Ibatan. The internal subgrouping of the languages is also re-considered, in that there are currently a number of conflicting claims regarding the descent of the daughter languages, i.e. those made by Li (2000 and 2001), Yang (2002), and Moriguchi (2005).

Moreover, reconstructing Proto-Batanic is connected to several issues in Austronesian Linguistics such as the validity of Proto-Philippines (PPh) and the descent of the Malayo-Polynesian languages. In particular, debates regarding the validity of PPh seen in a number of works such as those of Reid (1982), Zorc (1986), Blust (1991 and 2005), and Ross (2005) (discussed further in Chapter 2), are revisited as the ancestry of Proto-Batanic to the putative PPh is traced.

By taking another look at the ancestry and descent of Proto-Batanic, another perspective regarding the development of the microgroup in relation to the whole Austronesian migration is added to the dialogue. Moreover, this study serves as a starting point for further researches dealing with cultural reconstructions, migration histories, and language contact among others.

1.3. Scope and limitations

Using the Comparative Method, a reconstruction of some aspects of the proto-language is given in addition to the internal subgrouping of the daughter languages within the microgroup. However, providing the exact date of divergence of these languages cannot be given as this lies beyond the scope of the method. In determining the relationship of the Batanic-speaking populations, moreover, the main line of evidence utilized is linguistic and additional support such as data from folklore and genetics need to be further examined. Finally, while some episodes in the migration and contact history of the Batanic populations are discussed, other factors influencing the development of the Batanic languages such as geography, history, and politics are yet to be explored.

1.4. Methodology

Attempting to sketch the ancestral state of a group of languages entails undoing the changes these languages underwent. Such method of retracing and undoing is quite feasible since these changes are not random and in fact follow systematic and regular patterns.

The reconstruction of a proto-language requires a comparative analysis of its assumed daughter languages, and such is the premise of the Comparative Method. In this section, a discussion regarding (1) the process of data elicitation, (2) the principles and procedure of the Comparative Method, and (3) the issues on the interpretation of proto-languages is presented.

1.4.1. The data

The Comparative Method lies on the systematic comparison of the vocabulary of the daughter languages. For the Batanic languages of the Philippines (i.e., Itbayat, Ivasay, Isamorong, and Ibatan), a 500-word list based on Paz and Constantino modified by Hernandez (see Appendix B) is utilized. This eliciting material, largely intended for comparative work, consists of words belonging to different domains (such as flora and fauna, kinship terms, body parts, as well as motion, telic, atelic, and epistemic verbs) presented in both English and Tagalog. For the Yami varieties Iraralay, Iratay, and Ivalino, the data are drawn from the extensive lexicographic work and sound recordings by the Providence University (2008).

Data elicitation in this study begins with finding informants for each language. Native speakers who grew up in the speech community were selected. Also, data elicitation is ideally accomplished in

situ, and such was done for Ivasay and Isamorong. However, the field work for this study was limited by various constraints, and data for Itbayat and Ibatan were elicited from informants based in Basco, Batanes instead. Additional details regarding the field work done for this study including the profile of the language informants are given in Appendix C.

In eliciting data, the informants were asked to give equivalents of Tagalog (or sometimes English) terms in their native language. Usually, data elicitation for each language was done in groups for immediate counter-checking. The words were then recorded and transcribed, and subsequent counter-checking was also done with other available informants.

1.4.2. The Comparative Method

The reconstruction of a proto-language through the use of the Comparative Method begins with fairly mechanical procedures that involve careful analysis and reliance on the universal tendencies of sound change. The analysis starts with the identification of data sets to be compared. That is, probable cognates are sorted and identified (forms with similar phonetic shape and meaning) in the daughter languages. Cognates demonstrate possible genetic affinity among the languages following the idea that such similarities have arisen not by chance or borrowing, but by inheritance from a putative ancestor. In selecting cognates, it is important to avoid "onomatopoeic forms, metaphors, compounds, or syntactic patterns" as such typically reflect similarities that may be due to independent development or universal tendencies (Harrison, 2003, p. 216).

(38)[2] 'bright'

Yami	marəˈrak
Itbayat	masəɣˈdaŋ
Ivasay	masəhˈdaŋ
Isamorong	maˈsəːdaŋ
Ibatan	maˈsəːdaŋ

As seen in the set of words for (38) 'bright' above, Itbayat, Ivasay, Isamorong, and Ibatan share probable cognates in that the words are fairly similar in form and meaning, only differing in terms of a single consonant. On the contrary, Yami exhibits a non-cognate, in that the term for 'bright' is entirely different in form.

From the set of probable cognates, sound correspondences are established by determining the patterns operating on the daughter languages. This follows the regularity assumption of the Comparative Method: "changes are not isolated and erratic but *regular*, in the sense that the same phoneme will develop identically under the same conditions in a particular language" (Fox, 1995, p. 65). This regularity assumption is the very foundation of the Comparative Method: sound laws operate with no exceptions, and evident deviations from these laws simply point to a yet undiscovered pattern. Thus, sound correspondences are regular and must be observed in most if not all of the cognate sets identified. From these set of patterns, proto-phonemes of the ancestral language are reconstructed. Occam's razor operates in such reconstructions, in that the simplest is

[2] Sample cognate sets are numbered based on how the items appear in Appendix A (a glossary of Proto-Batanic morphemes).

always the most preferred. As an example, in the data set for (88) 'eye' below, a fairly straightforward sound correspondence is seen:

(88) 'eye'

Yami	**m** a t a
Itbayat	**m** a t a
Ivasay	**m** a t a
Isamorong	**m** a t a
Ibatan	**m** a t a

That is, the [m-m-m-m-m] correspondence found in the first segment of the cognate set leads us to reconstruct a putative *m (starred forms mark reconstructed forms) that has preceded these contemporary forms. This is supported by other cognates exhibiting the same set of sound correspondence, as in (101) 'fish' and (187) 'nine' below.

(101) 'fish'

Yami	ʔ a **m** ʊ ŋ
Itbayat	ʔ a **m** ʊ ŋ
Ivasay	ʔ a **m** ʊ ŋ
Isamorong	ʔ a **m** ʊ ŋ
Ibatan	ʔ a **m** ʊ ŋ

(187) 'nine'

Yami	ʂ j a **m**
Itbayat	s a s j a **m**
Ivasay	ʂ j a **m**
Isamorong	s a s j a **m**
Ibatan	s a ʃ a **m**

However, correspondences are not usually as simple and straightforward. For instance, consider 'blood' in (31) below:

(31) 'blood'

Yami	ɽ a **l** a ʔ
Itbayat	r a **j** a ʔ
Ivasay	r a **j** a
Isamorong	r a **j** a
Ibatan	r a **j** a ʔ

In the cognate set for (31) 'blood, reconstructing *a is fairly simple, in that all the daughter languages show regular [a] correspondence. However, the medial consonant is much more problematic as the following correspondence is observed: [l-j-j-j-j]. The occurrence of this

correspondence in other cognate sets, as in (85) 'ember, hot coal' below, demonstrate the regularity of such correspondence.

(85) 'ember, hot coal'

Yami	ʔ i n m a **l** a[3]
Itbayat	h i n m a **j** a ʔ
Ivasay	ʔ i n m a **j** a
Isamorong	ʔ i n m a **j** a
Ibatan	ʔ i n m a **j** a

How then is such pattern approached? The phoneme *j may be reconstructed, and the [l] in Yami may be regarded as the reflex of this proto-phoneme. However, other existing sound correspondences such as (229) 'salty' below must also be considered.

(229) 'salty'

Yami	p a **j** i t
Itbayat	p a **j** i t
Ivasay	p a **j** i t
Isamorong	p a **j** i t
Ibatan	p a **j** i t

[3] Tsuchida, *et. al* (1987: 61)

Is the pattern seen in (31) 'blood' and (85) 'ember, hot coal' an exception to the correspondence [j-j-j-j-j] seen in (229) 'salty' then? Faced with such complications, it is necessary to look into plausible sound laws operating in these seeming deviations.

Such reconstructions form the sound inventory of the proto-language. Having reconstructed proto-phonemes, lexical items may be reconstructed and inferences regarding the morphosyntax of the proto-language (via the reconstruction of affixes and other function words) can be made. Ultimately, it can be said that the Comparative Method makes it possible to reconstruct histories that go beyond the extent and limits of written records, making the method useful not only to historical linguistics but to other fields and disciplines as well.

1.4.2.1. Subgrouping

The Comparative Method is also used to determine which languages within a family are genetically closer, that is, those languages that underwent a further period of common descent. Subgrouping assumptions are based on what the linguist deems as innovations of the specific subgroup, and not on what are seen as retentions from the proto-language. Innovations (typically changes in the form, meaning, or function of specific items) are changes in a group of languages that deviate from what is reconstructed under the subgroup's proto-language. On the one hand, there are items in the daughter languages reflecting the reconstructed form under the proto-language, known as retentions, which provide little value in subgrouping languages together. On the other hand, unique innovations among a group of languages, i.e. changes that are not due to contact or parallel development, are central in subgrouping. These innovations demonstrate that the languages have

undergone common histories, thusly forming a smaller subgroup within the family which excludes the rest of the daughter languages not sharing the same set of innovations.

However, there are certain problems regarding subgrouping assumptions, specifically in determining innovations from retentions. For instance, consider the sample subgrouping presented in Figure 2 below:

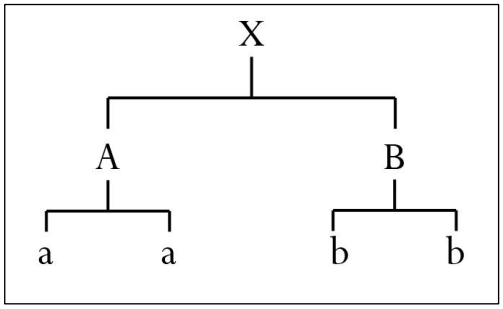


Figure 2: Sample subgrouping

Given two groups of languages, A and B under the larger group X, two different forms are seen: [a] and [b] respectively. Determining innovations from retentions is thus problematic, in that it is uncertain which form deviated and which stayed the same. There may also be a possibility that both [a] and [b] are innovations themselves. Therefore, it is necessary to examine further instances of change supporting this putative subgrouping. That is, "the more numerous are the changes shared by a set of languages, the more likely that set is to be a subgroup" (Harrison, 2003, p. 237).

Representing subgroups presents another problem in that innovations may not always form discrete bundles but rather manifest as waves spreading throughout the group. Thus, illustrating

subgrouping assumptions by means of the traditional genealogical tree distorts the actual history of the languages. Ross (1995), in his discussion of some issues in Austronesian linguistics, suggests that instead of family trees showing sharp splits, such instances of innovation-linked subgroups are better illustrated via a line representing linkages (pp. 45-46).

1.4.2.2. The limits of the Comparative Method

Relying on the regular tendencies of sound change, the Comparative Method requires the linguist to infer the most plausible sound changes the proto-language underwent. However, there is a fine line in determining plausible changes from those that are not. Harrison (2003) writes that "our notions regarding naturalness are grounded in nothing more than vague intuition and anecdote" (p. 236). Aside from this, the Comparative Method is constrained by the limitations set by the data and the method itself. Harrison (2003) outlines several limitations of the Comparative Method, briefly discussed below.

1.4.2.2.1. On linguistic objects

The Comparative Method strictly operates on the form-meaning pairings found in the lexicon of languages. Dealing with syntactic rules and paradigms is beyond the limits of the method, in that there can be no regularity assumption operating in these objects. It is argued that these rules, patterns, and templates follow universal principles, and similarities in such patterns are not indicative of genetic relatedness but are rather manifestations of the universal properties of languages. Lexicophonological objects, on the contrary, are arbitrary and symbolic, and finding similarities in these objects is evidence for genetic relatendess among a group of languages.

Thus, typological similarities cannot be used as evidence for genetic grouping. However, once genetic relatedness has been set (through the systematic comparison of the lexicon of the languages), it is possible to subsequently reconstruct these grammatical objects by means of other methods such as internal reconstruction (Harrison, 2003, pp. 225-226).

1.4.2.2.2. On time depth

The Comparative Method operates only within a specific time depth, and any reconstruction over 10,000 years is already far from plausible. This is because the longer the time, the more changes have operated, and "when the number of putative cognates and/or correspondence sets approaches a level that is not statistically significant (i.e., that might be attributable to chance), the comparative method has ceased to work" (Harrison, 2003, p. 230). If one wishes to infer the prehistory of the older speech communities, external evidence from other fields such as archaeology and genetics is but essential.

1.4.2.2.3. On diffusion and contact

The case of lexical diffusion presents a challenge for historical reconstructions and subgrouping, in that instances of deviation from the pattern are often treated as borrowings. Such instances are left unaccounted for, and in cases of large-scale diffusion, the inadequacies of the Comparative Method are highlighted. The fact that speech communities are not always isolated from others, assumptions regarding genetic affinities may be distorted. Ross (1996) writes about the phenomenon of *metatypy* observed in bilingualism. This involves the restructuring of a language to reflect features of another (possibly genetically unrelated) language. That is, "metatypised (restructured) language maintains

forms resembling those in its genetic relatives, but the meanings of these forms have changed. In the case of grammatical morphemes, this change in meaning often entails not only the restructuring of the paradigm to which the morpheme belongs, but also rearrangement of the morphosyntactic structures in which the members of the paradigm occur" (p. 182). By subscribing to Ross' *metatypy*, the previously untreated 'residue' of the Comparative Method is integrated into the whole theory.

In the end, perhaps the best thing that can be said about the Comparative Method, despite its limitations, is the fact that the discipline recognizes such limitations. By recognizing these constraints, the boundaries of the method can be crossed by seeking additional support from other methods and disciplines. From its beginnings with the neogrammarians of the 19th century, the Comparative Method persists as it is the only tool enabling linguists to construe genetic affinities among languages.

1.4.2.3. The Comparative Method in the Philippines

There are several studies in Philippine linguistics that utilize the Comparative Method in order to determine the genetic relationships of the Philippine languages. Among the most significant works in Philippine historical linguistics are the studies done by Conant (1908, 1911, and 1912), in which he identifies several sound laws in Philippine languages, i.e. the correspondences of the phonemes /f/ and /v/, the reflexes of the ancestral RGH consonant (reconstructed as *R in Proto-Austronesian), as well as the pepet law that governs the reflexes of *ə. Moreover, studies such as those of Blake (1906 and 1907), Lopez (1970), Charles (1974), Paz (1981), as well as Blust (1991 and 2005) deal with some aspects of Proto-Philippines, particularly on the reconstruction of some

phonemes and morphemes of the proto-language. Finally, within the Philippine family, reconstructions of several lower-order proto-languages were also done, such as those of Dyen (1970) on the relationship of Maranao and Tagalic, Reid (1974) on the Central Cordilleran subgroup, Zorc (1977) on the subgrouping and reconstruction of the Visayan languages, Blust (1991) on the Greater Central Philippine microgroup, Gallman (1997) on the subgrouping and reconstruction of Proto-South-East Mindanao, and Yang (2002) on the subgrouping and reconstruction of the Batanic languages. Some of these studies are further discussed in Chapter 2.

1.4.3. The proto-language

The Comparative Method described above leads to the reconstruction of a proto-language, i.e. the putative ancestral language representing the "mother" of different daughter languages. In Figure 3 for instance, languages X, Y, and Z are shown to be descended from a common ancestor, a proto-language.

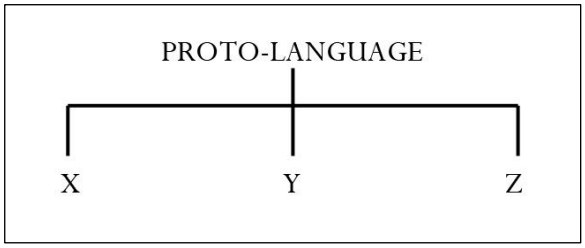


Figure 3: A proto-language and its daughter languages

When speaking of the reality of the proto-language, there are linguists who regard such reconstruction as merely a formula representing the sound correspondences found in a set of

related languages (Fox, 1995, p. 9). Such language may not have existed historically, and may only serve as intermediate stations towards the actual parent language (Pulgram, 1961, p. 18). On the contrary, there are those who regard proto-languages as an approximation of a real language spoken by earlier populations (Fox, 1995, p. 9). As the evolution of languages follows certain universal tendencies, the reality of reconstructions is substantiated. Moreover, in interpreting the validity and reality of the proto-language, data from other fields such as archaeology and anthropology provide additional support. Pulgram (1961) writes that only with such extra-linguistic evidence can the reality, i.e. the probability of existence, of the proto-language be ensured (p. 22).

Taking the position of the realist, proto-languages are interpreted as those languages spoken by ancestral communities. It is indeed impossible to reconstruct the entirety of a language, but no matter how incomplete these reconstructions are, reconstructed forms under these proto-languages can be taken as further evidence for recreating belief systems and social structures of ancestral communities, as well as determining the histories these populations underwent, going beyond the limits written records provide. For this study, the Comparative Method is applied to the Batanic languages and the putative Proto-Batanic is interpreted under the lenses of the realist, a language existing on a "historical plane … given historical significance and validity" (Fox, 1995, p. 13). From this reconstructed Proto-Batanic, the ancestry and descent of the Batanic-speaking populations in relation to the history and development of early Philippine and Malayo-Polynesian speakers is construed.

2

A REVIEW OF RELATED LITERATURE

The Batanic languages occupy an interesting position within the Malayo-Polynesian family. The fact that the languages form a very small and tightly knit microgroup, there are several studies dealing with the description, comparison, and historical development of these languages. In this section, a discussion of the relevant literature regarding the Batanic microgroup is given, namely (1) linguistic studies divided into those concerning the ancestry and history of the microgroup (diachronic) and those that deal with the description of the structure of the Batanic languages (synchronic) and (2) other relevant studies such as works on archaeology and genetics that deal with the history of the Austronesian-speaking communities.

2.1. Linguistic studies

The studies discussed here are divided into two: (1) diachronic studies dealing with the historical development of the Batanic languages, and (2) synchronic studies on the phonology and grammar of the aforementioned languages.

2.1.1. Diachronic studies

This section discusses studies concerning (1) the descent of the Batanic languages, and (2) the ancestry of the microgroup in relation to PPh.

2.1.1.1. On descent: Studies on the subgrouping and reconstruction of Proto-Batanic

Presented below are the different studies regarding the validity of the Batanic microgroup, as well as studies dealing with the internal subgrouping and reconstruction of Proto-Batanic.

2.1.1.1.1. On the validity of the Batanic microgroup

In dealing with the aforementioned historical reconstruction of Proto-Batanic, a number of studies refer to this proto-language without presenting a detailed reconstruction of its phonological system (Scheerer (1908), Li (2000 and 2001), Moriguchi (2005) and Ross (2005) for instance). Despite this, however, the genetic relationship of these languages with the rest of the Philippine and Malayo-Polynesian languages has already been established by various studies such as those of Scheerer (1908), Zorc (1977), Blust (1991), and Ross (2005).

Scheerer (1908) bases his classification largely on lexical evidence. He compares Batan with other Philippine languages from various microgroups, namely Ibanag, Ilokano, Ginaan, Bontok, Lepanto, Banawi, Tinggian, Kankanaey, Inibaloi, Pangasinan, Kapampangan, Tagalog, Bikol, Hiligaynon, Kalamian Tagbanua, Magindanao, Tiruray, Bagobo, and Joloano. 113 words were compared, and from this, he finds that 78% share similarities with one or more of the other languages compared.

From this, he concludes that the language indeed forms genetic affinity with the rest of the Philippine languages. Moreover, he notes that Batan forms a closer relationship with Ilokano and Ibanag, languages geographically closer to Batan. Such conclusion is based on the number of probable cognates shared by the aforementioned languages. Scheerer's approach in comparative analysis reflects the initial steps of the Comparative Method. However, he stops at cognate comparison and regards the data as enough evidence for genetic relatedness among the languages considered.

As lexical items may easily be borrowed due to contact, mere lexical similarities are not enough in establishing genetic relationship. Supporting evidence should come from established sound correspondences and unique innovations tying the whole group together.

Zorc (1977), in his study on the Bisayan dialects of the Philippines, presents a brief subgrouping hypothesis for the different Philippine languages based on previous studies. He notes, however, that such hypothesis is merely intuitive and requires further investigation. He groups Bashiic (Ivatan) languages with Sambal, Kapampangan, and North Mangyan under the North Extension of the Philippine languages based on the merger of PPh *y and *R to /y/. Such assumption may well be convincing, but a single phonological innovation supporting this claim is far from adequate. Blust (1991) writes that a similar merger can be observed in languages outside the Philippines, such as those of Southeast Barito in Borneo, Gayo and Lampung in Sumatra, and Sundanese in Java. Thus, although rare, such kind of innovation by itself has only limited subgrouping value (p. 106).

Corresponding lexical, grammatical, and semantic innovations are needed to substantiate this hypothesis.

Blust (1991 and 2005) recognizes Bashiic as a non-controversial microgroup, and places it under one of the fifteen microgroups within the Philippines. However, he mentions several disagreements regarding the position of the microgroup in relation to the other Philippine languages. For instance, Thomas and Healey (1962), based on lexicostatistical analysis, place it under one of the four branches of the Philippine Superstock coordinate with Ilongot, Baler Dumagat, and the Philippine Stock, whereas Zorc (1986) suggests a possible subgrouping of the microgroup with Sambalic, Kapampangan, and North Mangyan under Northern Philippines (following his 1977 hypothesis) on the basis of the merger of PPh *y and *R to /y/.

In his paper, Blust interprets the irregular reflex of PPh *R as /g/ in supposedly *r, l,* and *y* languages (i.e., those that reflect *R as r, l, or y respectively), known as the "stereotyped Philippine *g*", as evidence for his Greater Central Philippine (GCP) hypothesis. Also citing a number of unique lexical innovations, he claims that the lack of diversity in the Central Philippines and the instances of the stereotyped Philippine *g* are due to the expansion of the Greater Central Philippine microgroup. The merger PPh *R and *g > /g/ in the daughter languages is put forward as the main evidence for this phenomenon. However, it seems that Zorc's 1977 and 1986 proposal regarding the languages that underwent the merger PPh *R and *y > /y/ in some languages such as the Batanic network and Kapampangan, manifesting a parallel merger and diffusion, was not quite discussed. As there were also instances of irregular reflexes of PPh *R > /y/ in the so-called pure *g*

languages, it seems that an account of these instances is necessary as well. There is indeed a need to go back to the Northern Philippine hypothesis of Zorc (1977 and 1986) and analyze such in relation to the Greater Central Philippine hypothesis of Blust (1991). Revisiting these subgrouping hypotheses may shed light on the external relationship of the Batanic languages with the rest of the Philippine languages, as well as provide a clearer picture of the Philippine linguistic scenario via the phenomenon of contact-induced change and language leveling.

Finally, Ross (2005) discusses the relationship of the Batanic languages with Philippine and Malayo-Polynesian languages. Although the Batanic languages share similar features in phonology, morphology, and grammar with the rest of the Philippine languages, these features are not exclusively shared by the group and cannot be treated as basis for their subgrouping. Despite the Proto-Philippine lexical innovations presented by Zorc (1986) and Blust (2005), Ross (2005) remains skeptical regarding the validity of a larger Philippine subgroup as there is an apparent absence of phonological and morphosyntactic innovations attributed to the group. He thus claims that the Batanic languages do not closely subgroup with any languages under Malayo-Polynesian.

In discussing the external subgrouping of the Batanic languages, it is indeed imperative to examine possible connections with the other Philippine and Malayo-Polynesian languages. Despite the absence of phonological and morphosyntactic innovations, an established set of lexical innovations may indeed strongly argue for the validity of the Philippine subgroup. This issue is further discussed in §2.1.1.2.

2.1.1.1.2. On the internal subgrouping of the microgroup

The internal subgrouping of the Batanic languages and the migration of the Batanic-speaking populations are discussed in a number of studies such as those of Zorc (1977), Li (2000 and 2001), and Moriguchi (2005).

Zorc (1977), as discussed above, recognizes a Bashiic subgroup within the Philippines. He identifies three languages within the microgroup, namely Yami, Itbayaten, and Ivatanen. He proposes the following subgrouping:

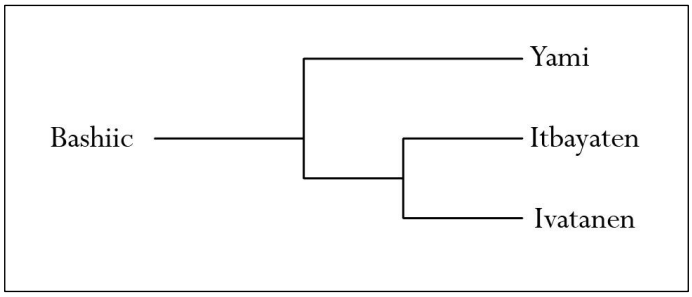


Figure 4: Subgrouping of the Batanic languages based on Zorc (1977, p. 41)

No details were given regarding the basis of his subgrouping, aside from his note that his subgrouping proposals are merely intuitive (p. 38). As Zorc notes, further research is needed to substantiate this claim (1977, p. 38).

Li (2001), writing about the dispersal of the Formosan aborigines in Taiwan, proposes the following subgrouping:

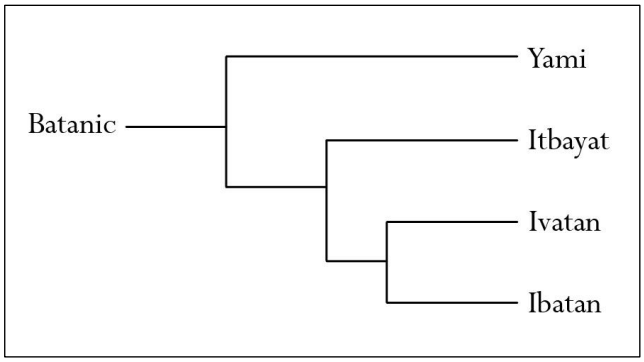


Figure 5: Subgrouping of the Batanic languages based on Li (2001, p. 277)

Li (2000) writes that Yami may possibly be closer to Itbayat than with the other Batanic languages based on some phonological innovations. However, he treats Itbayat, Ivatan, and Ibatan as genetically closer since Yami has been isolated from the rest of the microgroup for about 300 years (Li, 2000, p. 176). This isolation has given rise to innovations only seen in Yami, such as the retroflexion (i.e. retraction of the tongue tip) of some alveolar consonants as well as the merger of Proto-Batanic *y > l in certain environments. Looking into the geo-political location of the speech communities, it is indeed plausible to consider the Itbayat-Ivatan-Ibatan cluster, but linguistic evidence seems to point otherwise. In particular, it can be said that the phonological system of Itbayat is the most conservative of all the Batanic languages in that it retained the phonemes of Proto-Batanic (discussed in Chapter 4), and the other Batanic languages do not seem to share that same degree of conservatism. As with Zorc (1977), identifying bundles of innovations is the only way to substantiate this subgrouping assumption.

Moriguchi (2005) perhaps presents the most interesting subgrouping hypothesis in that his proposal greatly deviates with those discussed above. He groups Yami closer with Isamorong and Ibatan, and places Ivasay higher in the tree, as seen in Figure 6 below:

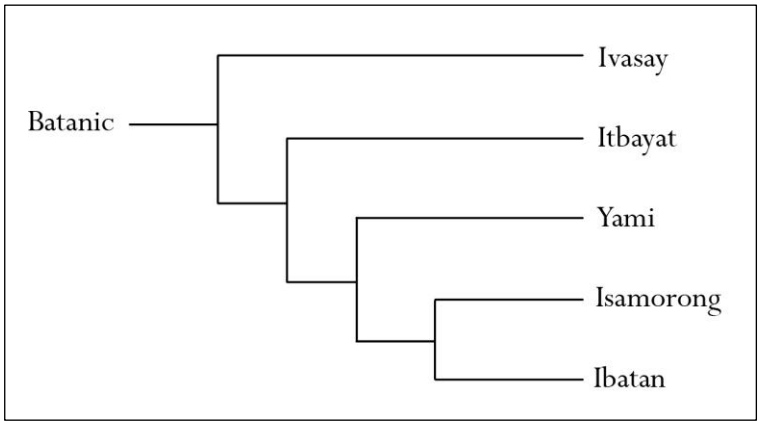


Figure 6: Subgrouping of the Batanic languages based on Moriguchi (2005, p. 252)

Moriguchi claims that such subgrouping hypothesis is based the fact that Ivasay do not seem to manifest the same sound correspondences shared by the rest of the Batanic languages. Looking into the cognates Moriguchi has cited in his study, it appears that the list is confined to very few sound changes, namely (1) the d-r correspondence seen in the Ivasay [danum] 'water' against the form [ranum] seen in the rest of the Batanic languages, and (2) the t-ʧ correspondence seen in [titu] 'dog' in Ivasay against [ʧitu] in all the others. It can be said that such instances of sound changes hold lesser subgrouping value in that these are fairly common changes seen in many languages even outside the microgroup. What cannot be found in Moriguchi's analysis are the more substantial innovations such as the merger of Proto-Batanic *h and *ɣ.

Moreover, he also treats the behavior of the negative marker *ji* as basis for subgrouping. In his analysis, he discusses the centrality of the shift of *ji* from a negative marker to an emphatic one, seen only in Sabtang Isamorongen, Ibatan, and Yami. This development of *ji* indeed presents an interesting conundrum, as Itbayat, Ivasay, and Batan Isamorongen do not share the same phenomenon. Moriguchi claims that Isamorongen, Ibatan, and Yami all share what he coined as the "fishermen's register" (2005, p. 254), in which there is a preference towards opposite or counter expressions to mean something in order to confuse or avoid evil spirits in the sea However, considering such as basis for subgrouping seems to be unreliable as this may have been a result of diffusion or retention. One may infer that the fishermen's register is actually a feature of Proto-Batanic, which has been lost in Itbayat and Ivasay.

Finally, Moriguchi presents the case of the term for male and female urination *opis* and *peteg*, as seen in Ivasay and Isamorong. Itbayat only uses the term *opis*, whereas Ibatan uses the term *peteg*. Yami uses the term *tachi*, a non-cognate of the aforementioned words. One can argue that the male and female distinction in urination is an innovation seen in Ivasay and Isamorong, and as some speakers migrated out of Batan and into Babuyan (Ibatan), the distinction has been lost and only the term *peteg* is retained. It can be said that this aforementioned lexical innovation together with other identified phonological innovations can be considered stronger evidence for subgrouping the Batanic languages (discussed further in Chapter 5).

2.1.1.1.3. On the reconstruction of Proto-Batanic

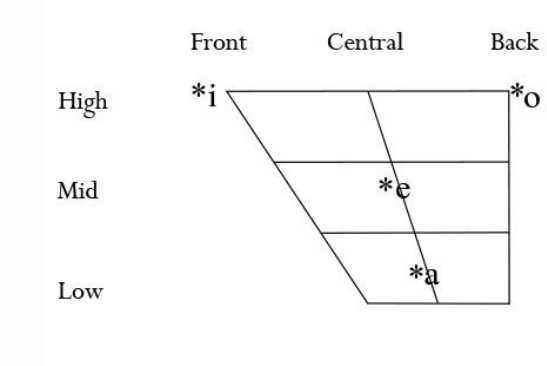
What can be observed from these conflicting subgrouping hypotheses is the lack of a prior reconstruction of the phonological system of Proto-Batanic. As phonological innovations, along with lexical, grammatical, and semantic innovations, provide strong support to any subgrouping assumption (Ross, 2005, p. 13), a reconstruction of the sound inventory of Proto-Batanic is imperative. With regard to the reconstruction of Proto-Batanic, the most relevant work would be that of Yang (2002), in which the reconstruction was done using the Comparative Method. She reconstructed nineteen consonants and four vowels, presented in Tables 1 and 2 below:

Table 1: The consonants of Proto-Batanic as proposed by Yang (2002)

	Bilabial	Alveolar	Palatal	Velar	Uvular	Glottal
Stop	*p *b	*t *d		*k *g		*q
Nasal	*m	*n		*N		
Trill		*r			*R	
Fricative		*s				*h
Approximant	*w[4]		*y			
Lateral Approximant		*l_1 *l_2		*L		

[4] Labio-velar

Table 2: The vowels of Proto-Batanic as proposed by Yang (2002)



In Yang's reconstructions, no mention of suprasegmentals can be found. Perhaps the most probable reason would be the data utilized. In her reconstruction, she made use of secondary data compiled by Tsuchida *et al.* (1987) on Imorod, Iraralay, Itbayat, Ivasay, Isamorong, and Babuyan, in which there is insufficient information regarding suprasegmentals.

Moreover, Yang discusses phonologically conditioned sound changes that operate among the daughter languages. For instance, *b is regularly reflected as /b/ in the daughter languages, and it typically changes to /v/ in word-initial and intervocalic positions (except in Ibatan). However, certain exceptions can be observed such as the cognate set for Proto-Batanic *bedbed 'to bind into a bundle', in which all Batanic languages except Itbayat manifest a word-initial /b/ instead of the expected /v/, i.e. [bədbəd] instead of [vədbəd], and these exceptions, although noted, are left unexplained.

There are also reconstructions which needs to be reconsidered, such as the liquids /*l_1, *l_2, *L, *r, and *R/. Reconstructing forms that do not manifest in the daughter languages is problematic as there is little evidence supporting the reality and validity of a proto-phoneme existing without any

direct reflex in at least one of the daughter languages. A review of the sound correspondences may reveal patterns that may have been previously overlooked.

In sketching the internal relationships among the Batanic languages, Yang makes use of Phonostatistics and COMPASS. Phonostatistic analysis utilizes statististical analysis to account for the phonological divergence of the languages studied, whereas COMPASS is concerned with the plausibility of the proposed phonemic correspondences. Yang proposes the following subgrouping:

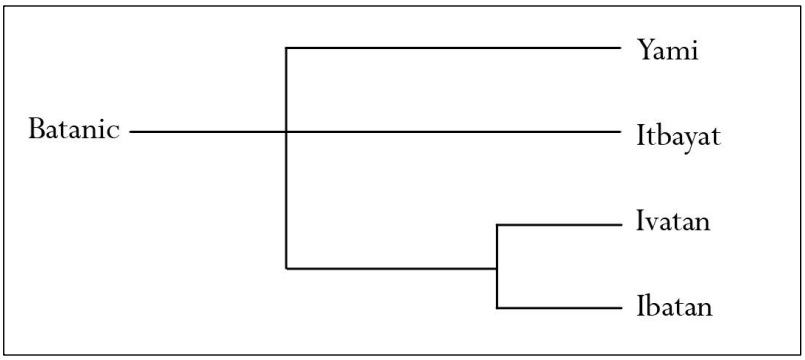


Figure 7: Subgrouping of the Batanic languages based on Yang (2002, p. 23)

Based on Yang's proposed subgrouping, Ivatan (Ivasay and Isamorong) and Ibatan are genetically closer, whereas Yami and Itbayat form separate and distinct branches. Differing with the subgrouping proposals discussed previously, Itbayat is claimed to form its distinct branch under the Batanic microgroup and is separate from the rest of the Batanic languages spoken within the Philippine archipelago, i.e. Ivasay, Isamorong, and Ibatan.

This study revisits the reconstructions outlined by Yang (2002). As already mentioned above, a re-analysis of the reconstructed features of Proto-Batanic is necessary in that another look at certain problematic proto-phonemes, the unaccounted exceptions to the sound changes presented, as well as some possible undetected borrowings (such as the Spanish loanword *baka* 'cow', reconstructed by Yang under Proto-Batanic as *baka) are presented. Also taken into account is the suprasegmental aspect of the proto-language, and the internal subgrouping of the microgroup is approached on the basis of shared innovations. Additionally, beyond the goal of Yang (2002) of reconstructing the phonological system of Proto-Batanic and mapping out the internal subgrouping of the daughter languages, this study also traces the ancestry of the Batanic microgroup, connecting with the study done by Ross (2005) regarding the position of the Batanic languages within Malayo-Polynesian.

2.1.1.2. On ancestry: The putative Proto-Philippines

Up to this point, it has been inferred that the Batanic languages are closely related to the other Philippine languages under the larger Proto-Philippines. Some studies dealing with this putative proto-language are presented below.

Charles (1974) reconstructs PPh phonemes, giving particular emphasis on the problems in these reconstructions such as (1) PPh medial consonant clusters, (2) the reflexes of PPh *b, *d, *j, and *R, (3) problems regarding the reconstruction of PPh *g and *r, and (4) subgrouping hypothesis based on the merger of *j and *R. A parallel study done by Paz (1981) deals with the reconstruction of PPh, presenting additional phonemes as well as a glossary of some PPh

morphemes. Finally, Blust (1991) gives a revision of the reconstructions made by Charles (1974). Presented below is a table comparing the proposed consonant inventories of PPh.

Table 3: A comparison of the different PPh reconstructions

Charles (1974) (17)	Paz (1981) (19)	Blust (1991) (20)
*p	*p	*p
*b	*b	*b
*t	*t	*t
*d	*d	*d
*k	*k	*k
*j	*r	*j
*q	*ʔ	*q
*s	*s	*s
*h	*h	*h
*m	*m	*m
*n	*n	*n
*ny		*ñ
*ng	*ŋ	*ŋ
*l	*l	*l
*R	*g̊	*R
*w	*w	*w
*y	*y	*y
	*g	*g
	*l̥	
	*d̥	
		*r
		*z

Charles (1974) does not define the phonetic features of his reconstructions, but Blust (1991) notes that Charles' reconstructed *q is most probably a pharyngeal stop, *j a palatalized velar stop, and

*R a uvular trill (p. 87). Following the aforementioned reconstructions, Blust (1991) proposes the addition of three consonants, particularly *z, which he describes as a palatal obstruent (p. 88). Moreover, Charles' and Blust's reconstructed *ny/*ñ, parallel with their proposed palatal consonants, is most probably a palatal nasal. Finally, Paz (1981) describes *ḍ as a back or alveolar consonant, *g̱ a fronted velar stop, *l̤ a back consonant, possibly somewhere within or beyond the velar region based on its sound correspondences, and finally *r as somewhat close to her reconstructed *l, an alveolar liquid (p. 31).

Some consonants are fairly straightforward, in that these proto-phonemes exhibit fairly regular sound correspondences among the daughter languages. Some reconstructions differ only in the symbols used. For instance, the reconstructed phoneme *j by Charles and Blust seem to exhibit the same sound correspondence as Paz' *r, that is, /g/ for Cordilleran languages and /d/ or /l/ for languages outside the Cordilleran microgroup. The same goes with *q and *ʔ, in which a correspondence of the glottal stop /ʔ/ in most of the daughter languages (except Agutaynon, reflecting the consonant typically as /k/) is observable. *R and *g̱ (also known as the RGH consonant) share similar sound correspondences as well, reflecting the consonant as /g, l, y, and d/ in different Philippine languages.

The three reconstructions are problematic in that there is a disagreement in the number of consonants under PPh. On the one hand, Charles (1974) is hesitant to reconstruct *r as the evidence pointing to its reconstruction can be traced back to Malay (p. 474). On the other hand,

Blust (1991) reconstructs the proto-phoneme, claiming that there is good evidence establishing the validity of this consonant (p. 87). Blust's *z, as well as Paz' *l̤ and *ḍ̤ are problematic as well, in that the reflexes of these proto-phonemes do not seem to form parallel correspondences in the other aforementioned works. Finally, *ny and *ñ of Charles (1974) and Blust (1991) respectively, although reflecting similar correspondences, do not correspond to any reconstruction proposed by Paz (1981).

The consonant inventory of PPh is not the only issue regarding the proto-language. What is a more pressing matter is the validity of PPh itself. Reid (1978) began expressing his doubts regarding the legitimacy of PPh in his work on the reconstruction of PPh construction markers. The pieces of evidence for PPh were, at that time, weak, and can be classified as Proto-Austronesian (PAn) or Proto-Malayo-Polynesian (PMP) retentions rather than PPh innovations (p. 33). He formalized his position regarding PPh in his subsequent work, which, according to him, started from the findings of his student, Mary Nutthal, regarding Bontok, a Central Cordilleran language, and its lack of PAn and PPh reflexes containing a medial nasal consonant. Reid (1982) re-examines such data sets, and concludes that Cordilleran languages (and possibly Bilic) do not share this phenomenon of nasal infixation. Thus, he groups the Bilic and some northern Philippine languages separately from the rest of the Philippine and Malayo-Polynesian languages (pp. 212-213).

The improbability of a single Philippine subgroup does seem logical if one looks at the subgrouping of the Austronesian languages, represented in Figure 8 below.

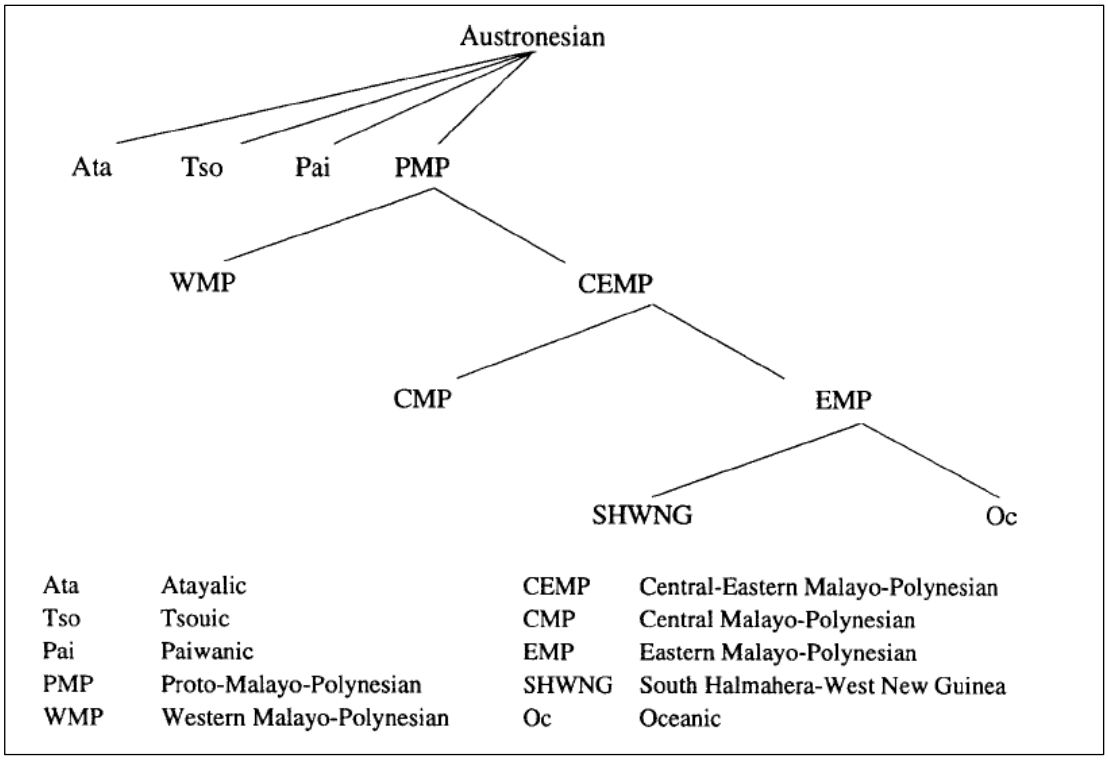


Figure 8: Blust's 1978 Austronesian family tree (in Tryon, 1995, p. 24)

While the right hand nodes of the family tree represent the migrant Austronesian languages sharing discrete ancestral languages, the left hand nodes or the stay-at-home languages, which according to Ross (1995) "diversified into a local linkage before separation occurred. In these cases, the dialects or languages of the "stay-at-homes" have no exclusively shared ancestor. Instead they share only an ancestor at the node above, with the language of the departed migrants" (p. 67). Thus, as the Philippine languages belong to Western Malayo-Polynesian (WMP), it is indeed logical to assume the languages of the Philippines diversified into a dialect linkage along with the other WMP languages without developing from a common proto-language. Works such as that of Ruhlen's 1987 subgrouping of WMP, wherein instead of a single Philippine subgroup, the Philippine languages were divided into Northern Philippines, Southern Philippines, Meso-Philippines, and

South Mindanao, coordinate with other WMP subgroups such as Chamorro, Palauan, and Yapese (in Tryon, 1995, pp. 27- 28) support the aforementioned claim.

Much has followed since the work of Reid (1982). Zorc (1986) presents counter-arguments regarding the non-existence of PPh, reconstructing lexical items uniquely found within the Philippine subgroup. Blust (1991 and 2005), moreover, puts forward the existence of PPh, in which he claims that the relatively low genetic diversity found in the Philippines is the result of the expansion of this proto-language. This expansion caused the extinction of several descendants of PMP, as well as the displacement of certain languages such as the pre-Chamorro speakers of the Marianas islands (2005, pp. 39-40). Reid himself changed his position regarding PPh and its relationship with other Malayo-Polynesian languages (in Tryon, 1995, p. 29). Presented below is his 1995 subgrouping of the Malayo-Polynesian languages.

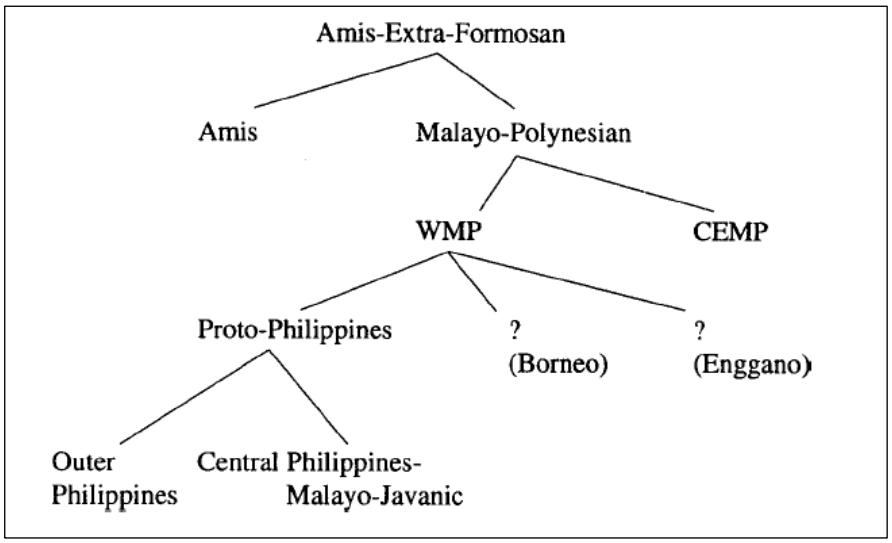


Figure 9: Reid's subgrouping of Malayo-Polynesian (in Tryon, 1995, p. 29)

Ross (2005), however, remains convinced that the Philippine languages do not share a common ancestor because of the lack of strong phonological innovations separating the Philippine subgroup from the rest of the Malayo-Polynesian languages. In his paper, he proposes that the Batanic languages form a small microgroup directly under PMP.

Re-examining the ancestry of the Batanic languages through the lexical innovations identified by Zorc (1986) and Blust (1991 and 2005) among others goes back to the issues raised by Ross (2005) regarding the features of Proto-Batanic in relation to PPh and PMP. Ross claims that Proto-Batanic reflects a number of features of PMP, and he relates this apparent conservatism of Proto-Batanic to its migration history. The possibility of a putative PPh presents a different perspective regarding the descent of Proto-Batanic, and such a possibility should not be overlooked in ascertaining the ancestry of this proto-language.

2.1.2. Synchronic studies

Synchronic studies such as those of Reid (1966) and Hidalgo and Hidalgo (1971) dealing with the syntax of Ivatan, Yamada (2002) on the description of Itbayat, Maree (2007) on the grammar of Ibatan, as well as the description of the Yami language provided by Providence University (2005) add further data to this study. Moreover, the works of Cottle and Cottle (1958) regarding the comparative synchronic phonology of the Batanic languages (with a brief historical discussion of the development of the palatals /ʧ/, /ʤ/, and /ɲ/) and Tsuchida, *et al.* (1987) provide further support on historical reconstructions.

2.2. Other relevant studies

Different fields such as archaeology and genetics offer extra-linguistic perspectives in the reconstruction of the past. For instance, various studies from the aforementioned fields are either corroborative or contradictory to the linguistic issue of the Austronesian expansion, in which the evident similarities shared by the languages of Taiwan and the Island Southeast Asia, and expanding east to the Pacific and west up to Madagascar point to a common linguistic ancestry. Such argument leads to the possibility of parallel cultural and biological origins of these Austronesian populations.

The fact that the languages spoken in Taiwan illustrate a great deal of diversity in comparison to those spoken outside the region leads linguists to propose an Out-of-Taiwan hypothesis regarding the Austronesian migration (Blust, 1985 and 1995; Tryon, 1995; and Li, 2011). This is contradictory to lexicostatistical findings locating the Austronesian homeland somewhere in New Guinea and the Bismarck Archipelago (Dyen, 1965). Such lexicostatistical evidence, however, is not quite reliable because of the serious methodological problems attributed to the method. Thus, findings based on the Comparative Method, i.e. the Out-of Taiwan hypothesis, remains the dominant view in linguistics.

This proposal coincides with the Neolithic archaeological evidence found in Taiwan and the Island Southeast Asia. Dated 3000 to 4000 BP, these assemblages consist of cord-marked pottery, stone adzes, and slate spear points (Taiwan), as well as red-slipped pottery (Philippines) (Bellwood, 1995, p. 107). Such artefacts recovered in the aforementioned regions are claimed to be the antecedent of the Lapita culture of Near Oceania which spread eastward to Polynesia (Bellwood, 1995, p. 107-

108). The expansion of the Lapita culture across Melanesia and Polynesia, characterized by distinctive pottery and shell ornaments, is said to be linked to the spread of the Austronesian languages in the region (Spriggs, 1995, p. 119).

On the contrary, other archaeological findings point to a different migration history of the Austronesian-speaking populations. Solheim (1984-1985), based on the blade-like stone tools of southern and central Philippines which can be traced back to eastern Indonesia, puts forward the Nusantao hypothesis (Nusantao meaning "people of the island homeland"), in which he claims that somewhere in Mindanao and northeastern Indonesia, a group of pre-Austronesian speaking people moved north through Visayas and southern Luzon around 5000 BC, with Proto-Austronesian developing as the trade language somewhere along the coasts of northern Luzon, southern Taiwan, and South China between 4500 and 5000 BP. The developing Austronesian languages outside Taiwan (i.e. Malayo-Polynesian) remained in contact through the Nusantao voyaging, expanding south back through Philippines and east to the Pacific. This hypothesis runs contrary to the proposed beginnings of the Austronesian expansion in South China, in which Bellwood (1984-1985) claims that it is these pre-Austronesians that brought agricultural economies such as rice and millet cultivation to Taiwan. Not discounting the fact that sea voyaging plays quite a role in the expansion of the population (thus the expansion of the Nusantao), the Nusantao hypothesis is no longer viable as the Neolithic assemblages in Batanes and Cagayan are found to be much older than those recovered in eastern Indonesia (Bellwood and Dizon, 2005, p. 29). Hence, it can be said that Bellwood's proposed chronological sequence of these Neolithic populations seem to coincide with the movement of the Austronesian-speakers supported mainly by linguistic evidence.

It is said that population movements such as those of the Austronesian speakers are driven by the outward expansion of agricultural homeland regions, thus the correlation between early centers of agriculture and the homelands of major language families (Bellwood, 1995). This is known as the farming/language dispersal hypothesis, stating that "prehistoric agriculture dispersed hand-in-hand with human genes and languages" (Diamond and Bellwood, 2003, p. 598).

If such claim is true, then genetic evidence is expected to match what linguistics and archaeology found so far. However, there is an apparent lack of consesus among the geneticists regarding the issue. Studies such as those of Kayser, *et al.* (2000), Chang, *et al.* (2002), Kimura, *et al.* (2002), Ohashi, *et al.* (2006), and Reguiero, *et al.* (2008) support the Out-of-Taiwan hypothesis, in which Austronesian-specific mutations are found to be shared by the Taiwanese aboriginals, the populations of Island Southeast Asia, and the people of Madagascar and Polynesia. However, other genetic evidence appears to paint to a completely different history. Oppenheimer (2004) claims that a group of specific mutations (i.e. Polynesian Motif), found in Polynesia, Micronesia, and Melanesia, is not found in Taiwanese and in most Southeast Asian populations. Based on such findings, Polynesian lineages are claimed to be attributed to Near Oceania, thereby disproving the view that the Austronesian migration started in Taiwan (Soares, *et al.,* 2011).

As findings from different fields continue to corroborate and contradict existing theories, the prehistory of the Austronesian population is slowly coming together with added material from genetics and archaeology. However, Bellwood (1984-1985) writes that "the basic data for discussing the prehistory of a linguistic category of mankind, such as the Austronesians, are derived

first and foremost from linguistics" (p. 108). Evidence based on the Comparative Method points to Taiwan as the area of highest linguistic diversity, thereby positing the region as the most probable homeland of Proto-Austronesian. The fact that languages can spread independent of the genetic and biological make-up of its speakers (Blust, in Gibbons, 2001, p. 1737), genetic studies such as those of Oppenheimer (2004) and Soares, *et al.* (2011) do not completely refute the existing hypothesis regarding the Austronesian migration. Moreover, Lee (2012) writes that while genetic evidence can be used to contradict existing theories, "issues of dating, sampling, and non-paternity have to be addressed before it can truly be used in conjunction with linguistics and archaeology" (p. 11). Linguistic data, backed up by evidence from both archaeology and genetics, still point to a massive population movement out of Taiwan. With Orchid Island and Batanes as the stepping stone of this Austronesian expansion, the reconstruction of the Proto-Batanic language adds to the synthesis of different fields regarding the whole issue of the Austronesian migration.

3

SOUND INVENTORIES OF THE BATANIC MICROGROUP

This chapter presents a discussion of the phonological inventories of the Batanic microgroup. The distribution of each phoneme and their allophonic occurrences are examined. Segmental phonemes are divided into two: consonants and vowels. The distribution of the sounds is based on the segment's position within the word (i.e. initial, medial, and final). The nature of the syllable (i.e. open or closed) is also taken into account. Suprasegmental features are also analyzed. It has been observed that stress, typically characterized by pitch, intensity, and length, is significant in the Batanic microgroup. Its phonemic status as a suprasegmental phoneme is established by means of minimal pairs. Finally, some phonotactic constraints and a number of significant phonological processes are also discussed.

3.1. Iraralay

Iraralay has 25 phonemes namely, /p, b, t, ɖ, k, g, ʔ, m, n, ŋ, v, ʂ, ʁ, ʧ, ʤ ʈ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/. /ɖ, ʈ, and ʂ/ are retroflex consonants, whereas /ʁ/ is a uvular fricative. /ŋ/ is a velar nasal, /ʧ and ʤ/ are affricates, and /w and j/ are glides. /ˈ/ represents stress, a suprasegmental phoneme.

3.1.1. Consonants

The Iraralay consonants are grouped in terms of manner of articulation, i.e. stops, nasals, fricatives, affricates, liquids, and glides.

3.1.1.1. The stops /p, b, t, ɖ, k, g, and ʔ/

	Initial	Medial	Final
/p/	[pʊʂˈŋɪ] 'cheek'	[ˈʔaːpəʈəː] 'few'	[taʲɪˈnəp] 'dream'
/b/	[bʊˈbʊw] 'feather'	[təbˈtəb] 'dull (knife)'	[kʊˈjab] 'evening'
/t/	[tʊˈwaŋ] 'bone'	[ˈʔəːtək] 'brain'	[pat] 'four'
/ɖ/	[ɖʊŋ] 'humid'	[ʔarˈɖa] 'wave'	[pəˈʂəɖ] 'navel'
/k/	[kʊˈtʊ] 'louse'	[məʲaˈkaj] 'man'	[ʔaˈvak] 'middle'
/g/	[gaˈnɪːnam] 'sweet'	[tagˈraŋ] 'rib'	[ˈʔʊːpag] 'pound'
/ʔ/	[ʔaˈjʊʔ] 'river'	[ʔaʔaˈʈaw] 'spider'	[vaˈtʊʔ] 'stone'

3.1.1.2. The nasals /m, n, and ŋ/

The alveolar nasal /n/ tends to be palatalized to [ɲ] when it occurs beside a high vowel /ɪ/, as in [ˈʂaːɲɪb] ‘often’.

	Initial	Medial	Final
/m/	[mɪʔ] 'to go'	[ʔaˈmʊŋ] 'fish'	[nəm] 'six'
/n/	[nəˈnət] 'stretch'	[tətəʁˈnan] 'throat'	[ʔʊˈvan] 'gray hair'
/ŋ/	[ŋʊˈʂʊ] 'voice'	[ˈtaːŋən] 'pillow'	[mavaˈʷəŋ] 'black'

3.1.1.3. The fricatives / v, ʂ, and ʁ/

The voiced, labiodental fricative /v/ does not occur word-finally whereas the uvular fricative /ʁ/ cannot be found word-initially. In the word-final position, the /ʁ/ tends to be dropped. A subsequent compensatory lengthening applies, as in [ˈʈaːkəː] < [ˈʈaːkəʁ] ‘big’. Intervocalically, the consonant also tends to be syncopated, in which a succeeding process of glide epenthesis applies, as in [ʈaˈʷəm] < [ʈaˈʁəm] ‘deep’.

	Initial	Medial	Final
/v/	[vaʁaˈwʊʔ] 'ant'	[mavaˈʷəŋ] 'black'	-
/ʂ/	[ʂʊˈʂʊʔ] 'breast'	[pʊʂˈŋɪ] 'cheek'	[ʔɪˈʈaʂ] 'later'
/ʁ/	-	[tətəʁˈnan] 'throat'	[taŋˈgaʁ] 'to go up'

3.1.1.4. The affricates /ʧ and ʤ/

The affricates cannot be found word-finally.

	Initial	Medial	Final
/ʧ/	[ʧɪgˈlaŋ] 'hard'	[ʧɪˈʧɪt] 'foam'	-
/ʤ/	[ʤaʔ] 'here'	[ˈʔaʤəj] 'to bring'	-

3.1.1.5. The liquids / ɽ, r, and l/

The retroflex /ɽ/ and the alveolar /l/ cannot be found word-finally. The lateral /l/, moreover, tends to be palatalized when preceding the high vowel /ɪ/, as in [lʲɪˈmaʔ] 'hand'.

	Initial	Medial	Final
/ɽ/	[ɽəkˈməː] 'cold (weather)'	[ʂɪˈɽəm] 'dark'	-
/r/	[rʊˈgʊʔ] 'forehead'	[tʊratʊˈraʔ] 'frog'	[ʔaˈmər] 'cold (weather)'
/l/	[lapɪˈjək] 'bird'	[ʧɪgˈlaŋ] 'hard'	-

3.1.1.6. The glides /w and j/

	Initial	Medial	Final
/w/	[waˈnan] 'right'	[taˈwʊʔ] 'person'	[ʔaˈpaw] 'light (weight)'
/j/	[jaˈmən] 'we'	[ʔʊˈjʊŋ] 'tall'	[lʊˈtʊj] 'belly'

3.1.2. Vowels

The vowels of Iraralay can be found in all environments (i.e. both in closed and open syllables). The mid, central vowel /ə/ can be found word-finally, in which it is lengthened after the apocope of the uvular fricative /ʁ/.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[ˈʔaːŋɪt] 'sky'	[pɪˈtʊʔ] 'seven'	[pɪˈlʲɪ] 'to choose'
/ʊ/	[maˈnʊk] 'chicken'	[tʊˈmɪɖ̥] 'chin'	[ˈʂɪːkʊ] 'elbow'
/ə/	[naˈnəɖ̥] 'fly (insect)'	[ˈʔaːpəʈəː] 'few'	[kakˈtəː] 'sibling'
/a/	[ʈapˈpan] 'sole'	[ˈʔaːməɖ̥] 'smooth'	[kaˈka] 'elder sibling'

3.1.3. Stress

Stress is phonemic in Iraralay, as attested by the minimal pair presented below (Providence University, 2005).

Penultima	Ultima
[maˈpɪŋsan] 'organized'	[mapɪŋˈsan] 'tasty'

3.2. Iratay

Iratay has 25 phonemes namely, /p, b, t, ɖ, k, g, ʔ, m, n, ŋ, f, ʂ, ʁ, ʧ, ʤ, ʈ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/. /f/ is a voiceless, labiodental, fricative.

3.2.1. Consonants

Below are the consonants of Iratay.

3.2.1.1. The stops /p, b, t, ɖ, k, g, and ʔ/

	Initial	Medial	Final
/p/	[paˈkaw] 'shoulder'	[kʊˈpad] 'bitter'	[taʲɪˈnəp] 'dream'
/b/	[bʊˈbʊw] 'feather'	[təbˈtəb] 'dull (knife)'	[kʊˈjab] 'evening'
/t/	[tʊˈwaŋ] 'bone'	[ˈʔəːtək] 'brain'	[pat] 'four'
/ɖ/	[ɖʊŋ] 'humid'	[ʔarˈɖa] 'wave'	[pəˈʂəɖ] 'navel'
/k/	[kʊˈtʊ] 'louse'	[məʲaˈkaj] 'man'	[ʔaˈvak] 'middle'
/g/	[gaˈnɪːnam] 'sweet'	[ˈraːgaw] 'neck'	[ˈʔʊːpag] 'pound'
/ʔ/	[ʔaˈjʊʔ] 'river'	[ʔaʔaˈʈaw] 'spider'	[vaˈtʊʔ] 'stone'

3.2.1.2. The nasals /m, n, and ŋ/

The alveolar nasal /n/ has an allophone [ɲ] occurring contiguous with a high vowel /ɪ/, as in [ˈʂaːɲɪb] ‘often’.

	Initial	Medial	Final
/m/	[mɪʔ] 'to go'	[ʔaˈmʊŋ] 'fish'	[nəm] 'six'
/n/	[nəˈnət] 'stretch'	[tətəʁˈnan] 'throat'	[ʔʊˈvan] 'gray hair'
/ŋ/	[ŋʊˈʂʊ] 'voice'	[ˈtaːŋən] 'pillow'	[mavaˈʷəŋ] 'black'

3.2.1.3. The fricatives / f, ʂ, and ʁ/

Similar to the Iraralay dialect, the voiced, uvular, fricative /ʁ/ in Iratay tends to be deleted intervocalically and word-finally, as in [ʔaˈʷəʂ] < [ʔaˈʁəʂ] ‘to ask’ and [kəˈtəː] < [kəˈtəʁ] ‘sibling’ respectively. The uvular consonant is not found word-initially, whereas the labiodental /f/ is not found word-finally. The latter consonant occurs in free variation with its voiced counterpart [v].

	Initial	Medial	Final
/f/	[faʷaˈwʊʔ] 'ant'	[mafʊˈtaʔ] 'blind'	-
/ʂ/	[ʂʊˈʂʊʔ] 'breast'	[pʊʂˈŋɪ] 'cheek'	[ʔɪˈʈaʂ] 'later'
/ʁ/	-	[maˈʁəːma] 'soft'	[taŋˈgaʁ] 'to go up'

3.2.1.4. The affricates /ʧ and ʤ/

The affricates /ʧ/ and /ʤ/ are not found in the word-final position.

	Initial	Medial	Final
/ʧ/	[ʧɪgˈlaŋ] 'hard'	[ʧɪˈʧɪt] 'foam'	-
/ʤ/	[ʤaʔ] 'here'	[ˈʔaʤəj] 'to bring'	-

3.2.1.5. The liquids / ɽ, r, and l/

The retroflex /ɽ/ and the alveolar /l/ cannot be found word-finally. Moreover, palatalization of the lateral /l/ can be observed when it precedes the high vowel /ɪ/, as in [pɪˈlʲɪ] 'to choose'.

	Initial	Medial	Final
/ɽ/	[ɽəkˈməʁ] 'cold (weather)'	[ʂɪˈɽəm] 'dark'	-
/r/	[rʊˈgʊʔ] 'forehead'	[tʊratʊˈraʔ] 'frog'	[ʔaˈmər] 'cold (weather)'
/l/	[lapɪˈjək] 'bird'	[ʧɪgˈlaŋ] 'hard'	-

3.2.1.6. The glides /w and j/

	Initial	Medial	Final
/w/	[waˈʷʊ] 'eight'	[taˈwʊʔ] 'person'	[ʔaˈpaw] 'light (weight)'
/j/	[jaˈmən] 'we'	[ʔʊˈjʊŋ] 'tall'	[lʊˈtʊj] 'belly'

3.2.2. Vowels

The vowels in Iratay are found in all environments.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[ˈʔaːŋɪt] 'sky'	[pɪˈtʊʔ] 'seven'	[pɪˈʲɪ] 'to choose'
/ʊ/	[maˈnʊk] 'chicken'	[tʊˈmɪɖ] 'chin'	[ˈʂɪːkʊ] 'elbow'
/ə/	[naˈnəɖ] 'fly (insect)'	[ˈʔaːpəɽəʁ] 'few'	[kəˈtəː] 'sibling'
/a/	[ɽapˈpan] 'sole'	[ˈʔaːməɖ] 'smooth'	[kaˈka] 'elder sibling'

3.2.3. Stress

Similar to Iraralay, stress is phonemic in Iratay, as attested by the same set of minimal pair given previously in Section 3.1.3.

3.3. Ivalino

There are 25 phonemes in Ivalino, namely, /p, b, t, ɖ, k, g, ʔ, m, n, ŋ, f, ʂ, ʁ, ʧ, ʤ, ɽ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/.

3.3.1. Consonants

This section presents the consonants of Ivalino.

3.3.1.1. The stops /p, b, t, ɖ, k, g, and ʔ/

	Initial	Medial	Final
/p/	[paˈkaw] 'shoulder'	[kʊˈpad] 'bitter'	[taʲɪˈnəp] 'dream'
/b/	[bʊˈbʊw] 'feather'	[təbˈtəb] 'dull (knife)'	[kʊˈjab] 'evening'
/t/	[tʊˈwaŋ] 'bone'	[mafʊˈtaʔ] 'blind'	[pat] 'four'
/ɖ/	[ɖʊŋ] 'humid'	[ʔarˈɖa] 'wave'	[pəˈʂəɖ] 'navel'
/k/	[kʊˈtʊ] 'louse'	[məʲaˈkaj] 'man'	[ʔaˈfak] 'middle'
/g/	[gaˈnɪːnam] 'sweet'	[ˈraːgaw] 'neck'	[ʔʊˈpag] 'pound'
/ʔ/	[ʔaˈjʊʔ] 'river'	[ʂaˈʔʊɖ] 'to weave'	[vaˈtʊʔ] 'stone'

3.3.1.2. The nasals /m, n, and ŋ/

The alveolar nasal /n/ becomes a palatal [ɲ] beside a high vowel /ɪ/, as in [ˈʂaːɲɪb] ‘often’.

	Initial	Medial	Final
/m/	[mɪːʔ] 'to go'	[ʔaˈmʊŋ] 'fish'	[nəm] 'six'
/n/	[nəˈnət] 'stretch'	[tətəʁˈnan] 'throat'	[ʔʊˈfan] 'gray hair'
/ŋ/	[ŋʊˈʂʊ] 'voice'	[ˈtaːŋən] 'pillow'	[maˈfaːʷəŋ] 'black'

3.3.1.3. The fricatives / f, ʂ, and ʁ/

As with Iraralay and Iratay, Ivalino share the same phonological processes, as in the deletion of the voiced, uvular, fricative /ʁ/. Some examples include [feˈkəː] < [feˈkəʁ] 'ankle', and [faːˈwʊʔ] < [faʁaˈwʊʔ] 'ant'. In the second example, the syncope of the uvular consonant, as well as the subsequent fusion of the remaining identical vowels can be observed. Thus, the remaining medial vowel [a] appears lengthened in compensation for the deleted consonant.

	Initial	Medial	Final
/f/	[faːˈwʊʔ] 'ant'	[mafʊˈtaʔ] 'blind'	-
/ʂ/	[ʂʊˈʂʊʔ] 'breast'	[pʊʂˈŋɪ] 'cheek'	[ʔɪˈʈaʂ] 'later'
/ʁ/	-	[maˈʁəːma] 'soft'	[taŋˈgaʁ] 'to go up'

3.3.1.4. The affricates /ʧ and ʤ/

As with the other Yami varieties, the affricates in Ivalino cannot be found word-finally.

	Initial	Medial	Final
/ʧ/	[ʧɪgˈlaŋ] 'hard'	[ʧɪˈʧɪt] 'foam'	-
/ʤ/	[ʤaʔ] 'here'	[ʔaˈʤəj] 'to bring'	-

3.3.1.5. The liquids / ʈ, r, and l/

The retroflex /ʈ/ and the alveolar /l/ is not found word-finally. Palatalization of /l/ is also observed when it precedes /ɪ/, as in [kʊˈlʲɪt] 'bark (tree)'.

	Initial	Medial	Final
/ɽ/	[ɽəkˈməʁ] 'cold (weather)'	[ʂɪˈɽəm] 'dark'	-
/r/	[rʊˈgʊʔ] 'forehead'	[tʊratʊˈra] 'frog'	[ʔaˈmər] 'cold (weather)'
/l/	[lapˈpɪːk] 'bird'	[ʧɪgˈlaŋ] 'hard'	-

3.3.1.6. The glides /w and j/

	Initial	Medial	Final
/w/	[waˈwʊ] 'eight'	[taˈwʊʔ] 'person'	[ʔaˈpaw] 'light (weight)'
/j/	[jaˈmən] 'we'	[ʔʊˈjʊŋ] 'tall'	[lʊˈtʊj] 'belly'

3.3.2. Vowels

The distribution of the vowels in Ivalino is shown below.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[ˈʔaːŋɪt] 'sky'	[pɪˈtʊʔ] 'seven'	[pɪˈʲɪ] 'to choose'
/ʊ/	[maˈnʊk] 'chicken'	[tʊˈmɪɖ] 'chin'	[ˈʂɪːkʊ] 'elbow'
/ə/	[naˈnəɖ] 'fly (insect)'	[ˈʔaːpəɽəʁ] 'few'	[kəˈtəː] 'sibling'
/a/	[ɽapˈpan] 'sole'	[ˈʔaːməɖ] 'smooth'	[kaˈka] 'elder sibling'

3.3.3. Stress

As with Iratay and Iraralay, stress is also phonemic in this Yami variety, as seen in the minimal pair presented in Section 3.1.3.

3.4. Itbayat

Itbayat has a total of 26 phonemes, namely /p, b, t, d, k, g, ʔ, m, n, ɲ, ŋ, v, s, ɣ, h, ʧ, ʤ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/. /ɲ/ is a palatal nasal, and /ɣ/ is a voiced, velar, fricative.

3.4.1. Consonants

This section presents the consonants of Itbayat.

3.4.1.1. The stops /p, b, t, d, k, g, and ʔ/

	Initial	Medial	Final
/p/	[paˈkʊʏ] 'shoulder'	[makpaˈhad] 'bitter'	[tajˈnəp] 'dream'
/b/	[baˈlah] 'dumb/mute'	[ʔaʏˈbək] 'dust'	[maʏanəbˈnəb] 'cold'
/t/	[tʊˈhaŋ] 'bone'	[ˈʔʊːtək] 'brain'	[ˈʔaːpat] 'four'
/d/	[dʊ] 'at'	[ʔapˈdʊʔ] 'bile'	[tʊˈhʊd] 'knee'
/k/	[kʊˈtʊʔ] 'louse'	[maɣaˈkaj] 'man'	[jʊˈvʊk] 'middle'
/g/	[guˈjʊŋ] 'fly'	[vaˈgaw] 'neck'	[taˈwag] 'to call'
/ʔ/	[ˈʔʊːtək] 'brain'	[paˈʔa] 'thigh'	[paˈnaʔ] 'bow'

3.4.1.2. The nasals /m, n, ɲ, and ŋ/

	Initial	Medial	Final
/m/	[maˈŋaj] 'to go'	[ʔaˈmʊŋ] 'fish'	[ʔaʔˈnəm] 'six'
/n/	[naˈnaʔ] 'pus'	[matəˈnəŋ] 'firstborn'	[ʔʊˈvan] 'gray hair'
/ɲ/	[ɲɪˈpən] 'teeth'	[talɪˈɲaʔ] 'ear'	[ʔʊˈrɪɲ] 'charcoal' (Yamada, 2002, p. 193)
/ŋ/	[ŋaˈɣaj] 'spittle'	[mɪʧʊˈŋʊh] 'how'	[mavaˈwʊŋ] 'black'

3.4.1.3. The fricatives / v, ʂ, ɣ, and h /

The labiodental fricative /v/ does not occur word-finally.

	Initial	Medial	Final
/v/	[vɪnɪˈhaj] 'animal'	[ʔaˈvʊʔ] 'ashes'	-
/s/	[sʊˈsʊ] 'breast'	[vaɣʊˈsaʔ] 'eggplant'	[ʔɪˈpʊs] 'cockroach'
/ɣ/	[ɣaˈɲɪt] 'sky'	[ʔaɣˈbək] 'dust'	[kakˈtəɣ] 'sibling'
/h/	[haŋˈtaj] 'nest'	[mahapˈɣa] 'sleepy'	[majaˈjʊh] 'to run'

3.4.1.4. The affricates /ʧ and ʤ/

	Initial	Medial	Final
/ʧ/	[ʧaŋʊrˈjaːwɪʔ] 'now'	[sɪˈʧʊh] 'elbow'	[abˈtɪtʧ] 'a sting; stung part' (Yamada, 2002, p. 46)
/ʤ/	[ʤɪsˈʤɪs] 'scrubbing off' (Yamada, 2002, p. 123)	[saˈʤɪt] 'hook' (Yamada, 2002, p. 231)	[vɪˈvɪʤ] 'mouth'

3.4.1.5. The liquids /r and l/

	Initial	Medial	Final
/r/	[raˈjaʔ] 'blood'	[maraˈwət] 'bad'	[taˈwʊr] 'heart'
/l/	[ˈlɪːmaʔ] 'hand'	[ʔatˈlʊ] 'three'	[marˈjal] 'bright'

3.4.1.6. The glides /w and j/

	Initial	Medial	Final
/w/	[wawaˈɣʊʔ] 'eight'	[manawˈdɪʔ] 'last'	[mahˈpaw] 'light'
/j/	[jaˈkən] 'I'	[majʊˈkaj] 'awake'	[nɪˈjʊj] 'coconut'

3.4.2. Vowels

All the vowels in Itbayat occur in closed and open syllables, except for the mid central vowel /ə/ which is not observed to occur word-finally.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[mapaˈjɪt] 'salty'	[ˈʔɪːjaʔ] 'he/she'	[mɪvɪˈlɪ] 'to return'
/ʊ/	[maˈnʊk] 'chicken'	[ʔʊˈɣəd] 'worm'	[ʔɪmɪˈjʊ] 'ye'
/ə/	[təɣˈnan] 'throat'	[pjandəˈrak] 'daytime'	-
/a/	[mavɪˈhaj] 'alive'	[maraˈwət] 'bad'	[bʊˈwaːja] 'crocodile'

3.4.3. Stress

Stress is phonemic in Itbayat, as attested by the minimal pairs shown below (Yamada, 2002, p. 7). In the language, stress is associated with vowel lengthening in open, penultimate syllables as in [ˈtʊːkʊd] 'a kind of yam'.

Penultima	Ultima
[ˈtʊːkʊd] 'a kind of yam'	[tʊˈkʊd] 'support'

3.5. Ivasay

There are 24 phonemes in Ivasay, namely /p, b, t, d, k, g, ʔ, m, n, ɲ, ŋ, v, s, h, ʧ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/.

3.5.1. Consonants

Below are the consonants of Ivasay.

3.5.1.1. The stops /p, b, t, d, k, g, and ʔ/

	Initial	Medial	Final
/p/	[paˈkʊx] 'shoulder'	[makˈpad] 'bitter'	[taˈjɪːnəp] 'dream'
/b/	[ˈbʊːbʊx] 'feather'	[ʔaxˈbək] 'dust'	[mahanəbˈnəb] 'cold'
/t/	[tʊˈhaŋ] 'bone'	[ˈʔʊːtak] 'brain'	[ˈʔaːpat] 'four'
/d/	[dʊ] 'at'	[ʔapˈdʊʔ] 'bile'	[tʊd] 'knee'
/k/	[kʊˈtʊ] 'louse'	[mahaˈkaj] 'man'	[hʊˈvʊk] 'middle'
/g/	[ˈgʊːjʊŋ] 'fly'	[laˈgaw] 'neck'	[taˈwag] 'to call'
/ʔ/	[ˈʔʊːtak] 'brain'	[vaʔˈnan] 'to sneeze'	[ˈpaːnaʔ] 'bow'

3.5.1.2. The nasals /m, n, ɲ, and ŋ/

The palatal /ɲ/ is not found in the word-final position.

	Initial	Medial	Final
/m/	[maˈŋaj] 'to go'	[ʔaˈmʊŋ] 'fish'	[ˈʔaːnəm] 'six'
/n/	[naˈna] 'pus'	[matəˈnəŋ] 'firstborn'	[ʔʊˈvan] 'gray hair'
/ɲ/	[ɲɪˈpən] 'teeth'	[tadɪˈɲa] 'ear'	-
/ŋ/	[ŋaˈxaj] 'spittle'	[majˈpaːŋʊʔ] 'how'	[mavaˈxəŋ] 'black'

3.5.1.3. The fricatives / v, s, and h/

In Ivasay, the glottal fricative /h/ has an allophone [x], a voiceless velar fricative. This allophone is typically seen in the coda position of the syllable, as in [ʔaxˈbək] ‘dust’ and [kakˈtəx] ‘sibling’. The labiodental /v/ does not occur word-finally.

	Initial	Medial	Final
/v/	[vɪˈɲaj] 'animal'	[ʔaˈvʊʔ] 'ashes'	-
/s/	[ˈsʊːsʊ] 'breast'	[vahʊˈsaʔ] 'eggplant'	[ʔɪˈpəs] 'cockroach'
/h/	[ˈhɪːpag] 'sister-in-law'	[madʊˈhʊʔ] 'sleepy'	[tʊˈrʊh] 'to give'

3.5.1.4. The affricate /ʧ/

The affricate /ʧ/ is not observed to occur word-finally.

	Initial	Medial	Final
/ʧ/	[ʧaŋʊrˈjaw] 'now'	[sɪˈʧʊʔ] 'elbow'	-

3.5.1.5. The liquids /r and l/

The trill /r/ is not found word-finally.

	Initial	Medial	Final
/r/	[raˈja] 'blood'	[maraˈhət] 'bad'	-
/l/	[lajˈlaj] 'upper garment'	[magʊˈlaŋ] 'thin'	[ˈʔʊːŋʊl] 'to moan'

3.5.1.6. The glides /w and j/

	Initial	Medial	Final
/w/	[wawaˈhʊ] 'eight'	[nanawˈdɪ] 'last'	[maʔˈpaw] 'light'
/j/	[jaˈkən] 'I'	[majʊˈkaj] 'awake'	[ɲʊj] 'coconut'

3.5.2. Vowels

All vowels in Ivasay occur in all environments, i.e. open and closed syllables.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[mapaˈjɪt] 'salty'	[ʔɪˈja] 'he/she'	[panɪˈʧɪ] 'species of bats'
/ʊ/	[maˈnʊk] 'chicken'	[ʔʊˈhəd] 'worm'	[dʊ] 'at'
/ə/	[tətəxˈnan] 'throat'	[ʔandəˈlak] 'tomorrow'	[makajˈʧə] 'to sleep'
/a/	[maˈvjaj] 'alive'	[maraˈhət] 'bad'	[ˈbwaːja] 'crocodile'

3.5.3. Stress

Stress in Ivasay is phonemic, as established by the following minimal pair.

Penultima	Ultima
[ˈkaːwa] 'vat'	[kaˈwa] 'rock'

3.6. Isamorong

Isamorong has 25 phonemes, namely /p, b, t, d, k, g, ʔ, m, n, ɲ, ŋ, v, s, h, ʧ, ʤ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/.

3.6.1. Consonants

Presented below are the consonants of Isamorong.

3.6.1.1. The stops /p, b, t, d, k, g, and ʔ/

The glottal stop /ʔ/ does not seem to occur word-medially in Isamorong as it historically underwent deletion in the aforementioned position (discussed in Chapter 4).

	Initial	Medial	Final
/p/	[paˈkʊh] 'shoulder'	[makˈpad] 'bitter'	[tajajˈnəp] 'dream'
/b/	[ˈbʊːbʊh] 'feather'	[ʔahˈbək] 'dust'	[manahəbˈnəb] 'cold'
/t/	[tʊˈhaŋ] 'bone'	[ʔʊˈtək] 'brain'	[tʃaˈpat] 'four'
/d/	[dʊ] 'at'	[ʔapˈdʊʔ] 'bile'	[tʊːd] 'knee'
/k/	[kʊˈtʊʔ] 'louse'	[mahaˈkaj] 'man'	[hʊˈvʊk] 'middle'
/g/	[ˈgʊːjʊŋ] 'fly'	[laˈgaw] 'neck'	[taˈwag] 'to call'
/ʔ/	[ʔʊˈtək] 'brain'	-	[paˈnaʔ] 'bow'

3.6.1.2. The nasals /m, n, ɲ, and ŋ/

The palatal nasal /ɲ/ does not occur word-finally.

	Initial	Medial	Final
/m/	[maˈŋaj] 'to go'	[ʔaˈmʊŋ] 'fish'	[ˈʧaːnəm] 'six'
/n/	[nʊˈhaw] 'pus'	[matənˈnəŋ] 'firstborn'	[ʔʊˈvan] 'gray hair'
/ɲ/	[ɲɪˈpən] 'teeth'	[tadɪˈɲaʔ] 'ear'	-
/ŋ/	[ŋaˈhaj] 'spittle'	[ˈnaːŋʊʔ] 'how'	[mavaˈhəŋ] 'black'

3.6.1.3. The fricatives / v, s, and h/

The glottal fricative /h/ in Isamorong is allophonic with the velar fricative [x], typically occurring in the coda position of the syllable, as in [ʔaxˈbək] ‘dust’ and [kakˈtəx] ‘sibling’. Moreover, the labiodental /v/ does not occur word-finally.

	Initial	Medial	Final
/v/	[vɪˈɲaj] 'animal'	[ʔaˈvʊʔ] 'ashes'	-
/s/	[sʊˈsʊʔ] 'breast'	[vahʊˈsaʔ] 'eggplant'	[ʔɪˈpəs] 'cockroach'
/h/	[haˈkay] 'father'	[ˈmaːdʊhʊʔ] 'sleepy'	[tʊˈrʊh] 'to give'

3.6.1.4. The affricates /ʧ and ʤ/

The affricates in Isamorong cannot be found word-finally.

	Initial	Medial	Final
/ʧ/	[ʧaŋʊˈrɪʔ] 'now'	[sɪˈʧʊ] 'elbow'	-
/ʤ/	[ʤɪsɪˈʤɪs] 'to rub'	[saʤɪˈtən] 'to hang on; to hook something'	-

3.6.1.5. The liquids /r, and l/

	Initial	Medial	Final
/r/	[raˈja] 'blood'	[maraˈhət] 'bad'	[kahˈbər] 'vagina'
/l/	[lajˈlaj] 'upper garment'	[magʊˈlaŋ] 'thin'	[kʊmˈbwal] 'to boil'

3.6.1.6. The glides /w and y/

	Initial	Medial	Final
/w/	[wawaˈhʊ] 'eight'	[naˈnawʤɪʔ] 'last'	[ˈmaːpaw] 'light'
/j/	[jaˈkən] 'I'	[majʊˈkaj] 'awake'	[ɲʊj] 'coconut'

3.6.2. Vowels

All vowels are observed in all environments, except the mid, central vowel /ə/, which is not observed word-finally.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[mapaˈjɪt] 'salty'	[ʔɪˈmʊ] 'he/she'	[dʊˈwatʃɪ] 'worm'
/ʊ/	[maˈnʊk] 'chicken'	[ʔʊˈhəd] 'worm'	[sɪˈnʊ] 'who'
/ə/	[təhˈnan] 'throat'	[ʔanˈdəːlak] 'tomorrow'	-
/a/	[maˈvɪjaj] 'alive'	[maraˈhət] 'bad'	[vʊwaˈja] 'crocodile'

3.6.3. Stress

As seen in the minimal pair below (similar to the pair presented in Ivasay), stress is phonemic in Isamorong.

Penultima	Ultima
[ˈkaːwa] 'vat'	[kaˈwa] 'rock'

3.7. Ibatan

Ibatan has 24 phonemes: /p, b, t, d, k, g, ʔ, m, n, ɲ, ŋ, s, h, ʧ, ʤ, r, l, w, j, ɪ, ʊ, ə, a, and ˈ/.

3.7.1. Consonants

Below are the consonants of Ibatan.

3.7.1.1. The stops /p, b, t, d, k, g, and ʔ/

	Initial	Medial	Final
/p/	[paˈkʊh] 'shoulder'	[ˈmakpad] 'bitter'	[taˈjɪːnəp] 'dream'
/b/	[ˈbʊːbʊh] 'feather'	[ʔaxˈbək] 'dust'	[mahaˈnəbnəb] 'cold'
/t/	[tʊˈhaŋ] 'bone'	[ˈʔʊːtɛk] 'brain'	[ˈʔaːpat] 'four'
/d/	[dʊʔ] 'at'	[ˈʔapdʊʔ] 'bile'	[tʊd] 'knee'
/k/	[kaˈtʊʔ] 'louse'	[maxaˈkaj] 'man'	[bʊˈhʊk] 'middle'
/g/	[ˈgʊːjʊŋ] 'fly'	[laˈgaw] 'neck'	[taˈwag] 'to call'
/ʔ/	[ˈʔʊːtɛk] 'brain'	[kaʔanaˈkan] 'sibling's child'	[ˈpaːnaʔ] 'bow'

3.7.1.2. The nasals /m, n, ɲ, and ŋ/

As with Ivasay and Isamorong, the palatal nasal /ɲ/ in Ibatan cannot be found word-finally.

	Initial	Medial	Final
/m/	[maˈŋaj] 'to go'	[ˈʔaːmʊŋ] 'fish'	[ʔɪnˈnəm] 'six'
/n/	[ˈnaːnaʔ] 'pus'	[matʊˈnəŋ] 'firstborn'	[ʔʊˈban] 'gray hair'
/ɲ/	[ɲɪˈpən] 'teeth'	[taˈʤɪŋŋaʔ] 'ear'	-
/ŋ/	[ŋaˈhaj] 'spittle'	[majˈpaːŋʊʔ] 'how'	[mabaˈhəŋ] 'black'

3.7.1.3. The fricatives /s and h/

In Ibatan, the glottal fricative /h/ is allophonic with the velar fricative [x], seen to occur in the coda position of the syllable, as in [ʔaxˈbək] ‘dust’ and [kakˈtəx] ‘sibling’.

	Initial	Medial	Final
/s/	[ˈsʊːsʊʔ] 'breast'	[baˈhʊːsaʔ] 'eggplant'	[ʔɪpˈpəs] 'cockroach'
/h/	[ˈhɪːpag] 'sister-in-law'	[ˈmaːdʊhʊʔ] 'sleepy'	[ʔɪˈtʊːrʊh] 'to give'

3.7.1.4. The affricates /ʧ and ʤ/

The affricates in Ibatan, as with the Ivasay and Isamorong, do not occur word-finally.

	Initial	Medial	Final
/ʧ/	[ʧaˈŋuːrɪʔ] 'now'	[ˈsɪːʧuʔ] 'elbow'	-
/ʤ/	[ʤa] 'to him/her' (Maree, 2007, p. 21)	[maʧɪsaˈʤɪt] 'to hang on; to hook something'	-

3.7.1.5. The liquids /r and l/

	Initial	Medial	Final
/r/	[raˈjaʔ] 'blood'	[maraˈhət] 'bad'	[ˈpɪːgar] 'fin'
/l/	[ˈlajlaj] 'upper garment'	[magʊˈlaŋ] 'thin'	[ŋʊlˈŋʊl] 'to moan'

3.7.1.6. The glides /w and j/

	Initial	Medial	Final
/w/	[wawaˈhʊʔ] 'eight'	[naˈnawʤɪʔ] 'last'	[ˈmaːpaw] 'light'
/j/	[jaˈkən] 'I'	[majʊˈkaj] 'awake'	[ɲʊj] 'coconut'

3.7.2. Vowels

Except in the mid, central vowel /ə/ which does not seem to occur word-finally, all vowels in Ibatan occur in all environments.

	Medial (Closed)	Medial (Open)	Final
/ɪ/	[magaˈɲɪt] 'salty'	[ˈʔɪːjaʔ] 'he/she'	[ˈdawrɪ] 'there'
/ʊ/	[maˈnʊk] 'chicken'	[ʔʊˈhɛd] 'worm'	[ˈtaːbʊ] 'all'
/ə/	[ˈtəxnan] 'throat'	[ʔanˈdəːlak] 'tomorrow'	-
/a/	[bjaj] 'alive'	[maraˈhət] 'bad'	[ˈdʊːʤa] 'here'

3.7.3. Stress

Stress is phonemic in Ibatan, as attested by the minimal pair shown below (Maree, 2007, p. 20).

Penultima	Ultima
[ˈbaːro] 'feather palm'	[baˈro] 'young man'

3.8. Phonotactics

The phonotactics of a language govern permissible sound sequences in a word. For instance, some consonants are influenced by the phonetic features of the high vowel /ɪ/ in the Batanic languages. Specifically, the velars /k, g, and ŋ/ rarely occur adjacent to the aforementioned vowel, as these consonants historically underwent palatalization, respectively becoming the palatals /ʧ/, /ʤ/, and /ɲ/ (discussed in Section 3.9 and Chapter 4). Currently, the velars are not as restricted because of the existence of forms not following the aforementioned distribution (Cottle and Cottle, 1958, p. 25). Based on this observation then, the aforementioned palatals, although already considered phonemic, do not occur in all environments, especially in the word-final position.

The phoneme /v/ is also restricted in terms of its position in the word, as it is never observed to occur word-finally. In Ibatan, moreover, the consonant is not observed to occur at all. In the Yami varieties Iratay and Ivalino, the labiodental fricative is reflected as the voiceless consonant /f/ (discussed further in Chapter 4).

Geminates, i.e. two similar consonants occurring adjacent to each other, are allowed in the Batanic languages. The following examples are illustrative.

Iraralay[5]	/ɽap.ˈpan/	'sole'
Iratay	/ɽap.ˈpan/	'sole'
Ivalino	/ɽap.ˈpan/	'sole'
Itbayat	/paŋ.ˈŋaʔ /	'twin'
Ivasay	/ tat.ˈʧaj/	'arm'
Isamorong	/ paj.kar.ra.ˈnən /	'to split'
Ibatan	/ ʔɪp.ˈpət/	'worm'

3.9. Some phonological processes

This section presents three common phonological processes observable in the Batanic languages, namely palatalization, lenition, and deletion.

3.9.1. Palatalization

As a form of assimilation, the velars /k, g, and ŋ/, as well as the alveolars /t, d, and n/ assimilate to the palatal feature of the adjacent vowel /ɪ/, thus giving rise to the palatals [ʧ, ʤ, and ɲ]. Thus, In Itbayat, for example, [mɪ- + kamkam] 'to clear forest' becomes [mɪʧamkam], [ɪ- + golpi] 'to do abruptly' becomes [ʔɪʤolpɪ], and [mɪ- + ŋaɣaj] 'to salivate' becomes [mɪɲaɣaj] (Tsuchida, *et al.*,

[5] Data sets and tables presented henceforth are color-coded to specify the grouping of dialects into respective languages, i.e. Iraralay, Iratay, and Ivalino are grouped together under Yami, Itbayat forms a separate language by itself, Ivasay and Isamorong are grouped together under Ivatan, and Ibatan forms a separate language as well.

1987, p. 13). This is also true in Ibatan, as seen in the variation of the forms [dɪra] 'theirs' and [ʤɪra] (Maree, 2007, p. 21). In rule form, this process is represented as:

$$\begin{pmatrix} t, k \\ d, g \\ n, ŋ \end{pmatrix} \rightarrow \begin{pmatrix} ʧ \\ ʤ \\ ɲ \end{pmatrix} \quad / \quad \begin{Bmatrix} \_\ ɪ\ (C) \\ ɪ\ \_\ V \end{Bmatrix}$$

In the Yami varieties Iraralay, Iratay, and Ivalino, moreover, palatalization can also be seen in the lateral consonant /l/, as seen in the previous sections.

3.9.2. Lenition

The lenition or weakening of the alveolar stop /d/ to the rhotic [r] is a common process in the Batanic languages. For instance, [tadəm] 'sharp edge' is typically pronounced as [tarəm]. The bilabial stop /b/ also tends to weaken to the fricative [v] when occurring intervocalically, as seen in [ʔanɪb + -ən] 'to respect' becoming [ʔanɪvən] in Itbayat (Tsuchida *et al.*, 1987, p. 13). This process is historically related to the development of the phoneme /v/, further discussed in Chapter 4.

3.9.3. Deletion

A kind of lenition, deletion is the loss of certain segments within a word. A common process resulting after affixation, vowels tend to be dropped, as seen in the Ibatan words [ʔagtal + -om-] 'to play' becoming [gomtal] and [ʔanohəd + -an] 'to believe/obey' becoming [ʔanohdan] (Maree, 2007, p. 26-27). In Itbayat, moreover, word-initial consonant clusters are observed, resulting from the

deletion of the intervening vowel, as in the words [pnospos] 'rope' from [pɪnospos], [tnatʃɪ] 'stored content in pig's intestines' from [tɪnatʃɪ], and [tʃnoŋkoŋan] 'keel of boat' from [tʃɪnoŋkoŋan] (Tsuchida, *et al.*, 1987, p. 13). Such consonant clusters however are not observable in the data at hand.

In Iraralay, Iratay, and Ivalino, the uvular fricative [ʁ] is typically deleted intervocalically and word-finally. Thus, there is a subsequent process of fusion occurring after this deletion, as in the Ivalino word [faːˈwʊʔ] < [faʁaˈwʊʔ] 'ant'. As already discussed previously, after the syncope of the uvular consonant, the remaining identical vowels fused, hence appearing lengthened.

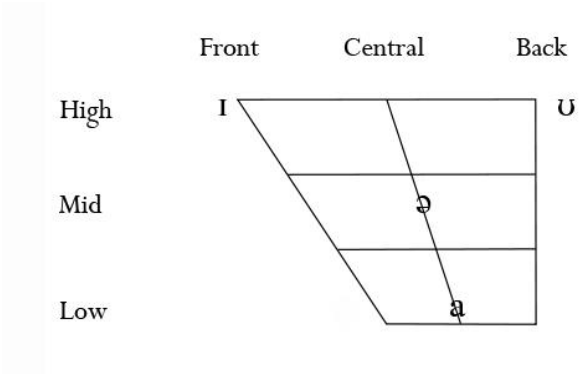
3.10. Summary

Presented below is a summary of the phonemes found in the Batanic languages. In Table 4, the sounds that appear in the left of each column are voiceless sounds while those found in the right are the voiced counterparts.

Table 4: Phonemic consonants of the Batanic languages

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	p b		t d		ɖ		k g		ʔ
Nasal	m		n			ɲ	ŋ		
Tap					ɾ				
Trill			r						
Fricative		f v	s		ʂ		ɣ	ʁ	h
Affricate				ʧ ʤ					
Approximant	w[6]					j			
Lateral Approximant			l						

Table 5: Phonemic vowels of the Batanic languages



The members of the Batanic microgroup all have a 4-vowel system, namely /ɪ, ʊ, ə, and a/. Stress is also phonemic in these languages. It can then be said that all members of the microgroup are typologically similar in terms of their vowel and suprasegmental system.

[6] Labio-velar

The differences in these languages lie on the status and number of consonants. Itbayat has 26, Iraralay, Iratay, Ivalino, and Isamorong have 25, and Ivasay and Ibatan both have 24. There are 14 phonemic consonants shared by the members of the microgroup, namely /p, b, t, k, g, ʔ, m, n, ŋ, r, ʧ, w, j, and l/. The remaining consonants /ɖ, ɲ, f, ʂ, ɣ, ʁ, ʤ, v, and ʈ/ serve as the *shibboleths* of the languages. To put it simply, the (non-)existence of these consonants serve as the distinctive feature of each language.

Specifically, /ɣ/ can only be found in Itbayat (see Figure 10[7]), and the uvular /ʁ/ is exclusive to the Yami dialects (see Figure 11).

[7] Map of the Batanic languages seen in Figures 10 to 15 modified from Yami culture (2010).

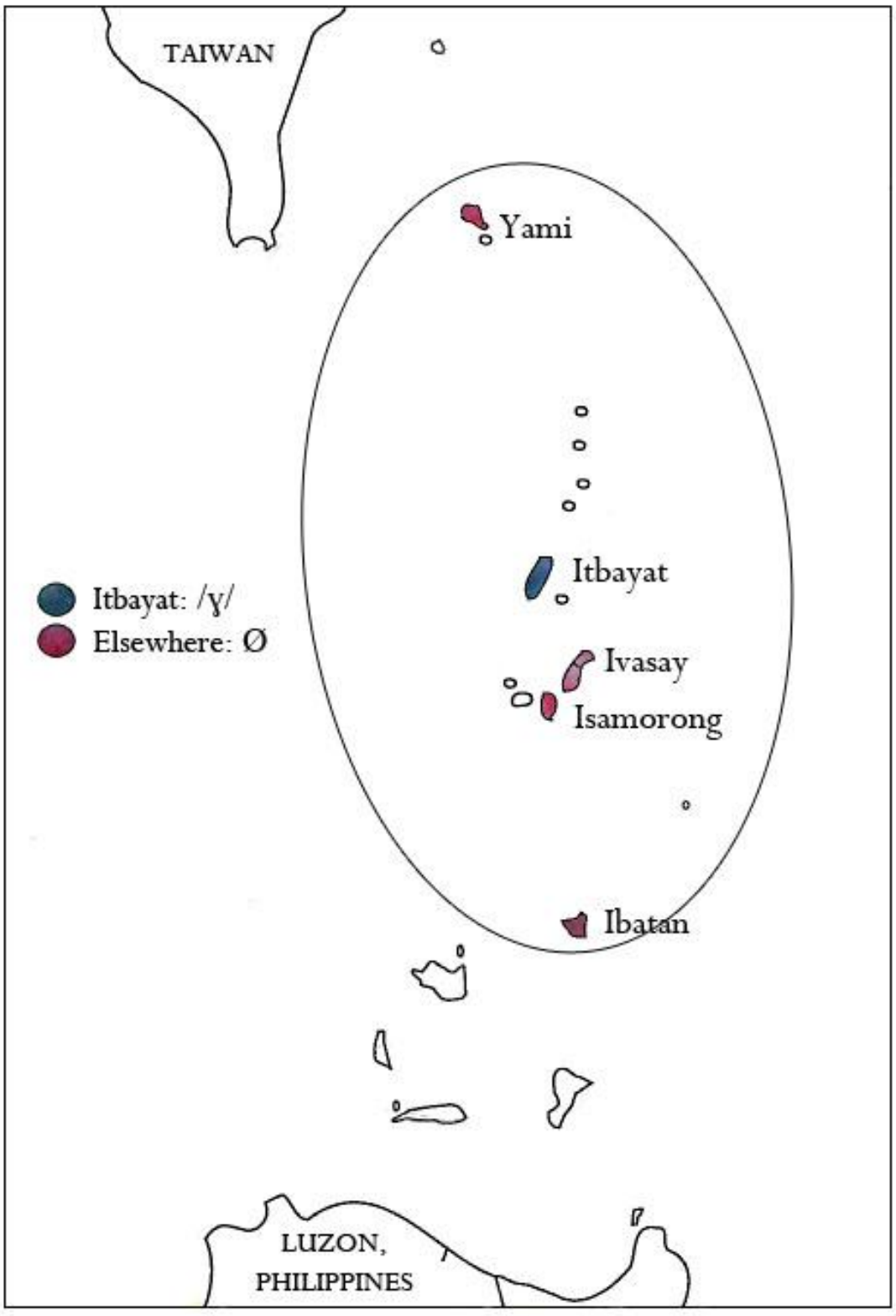


Figure 10: Distribution of /ɣ/

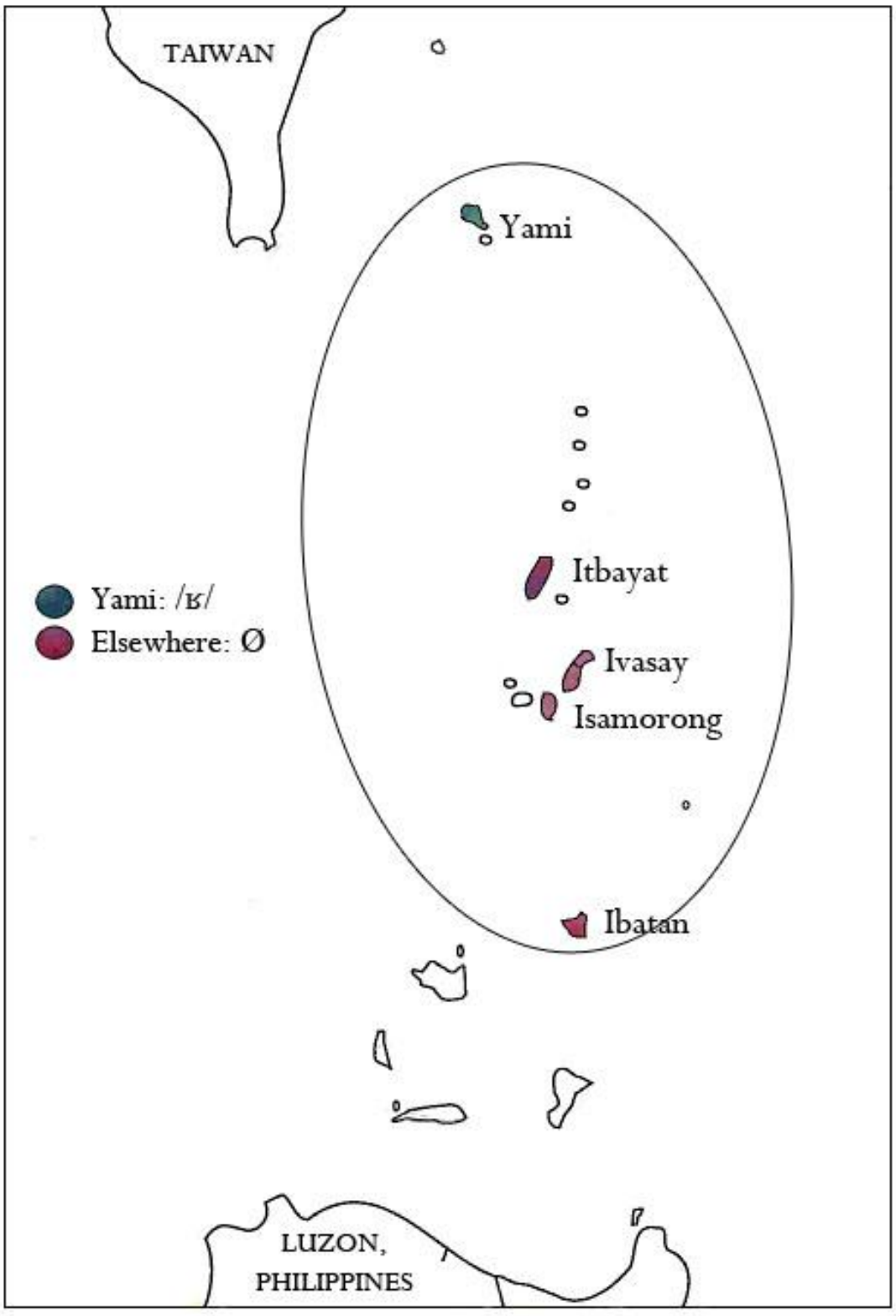


Figure 11: Distribution of /ʁ/

Illustrated in Figure 12 below, Ivasay does not have the consonant /ʤ/.

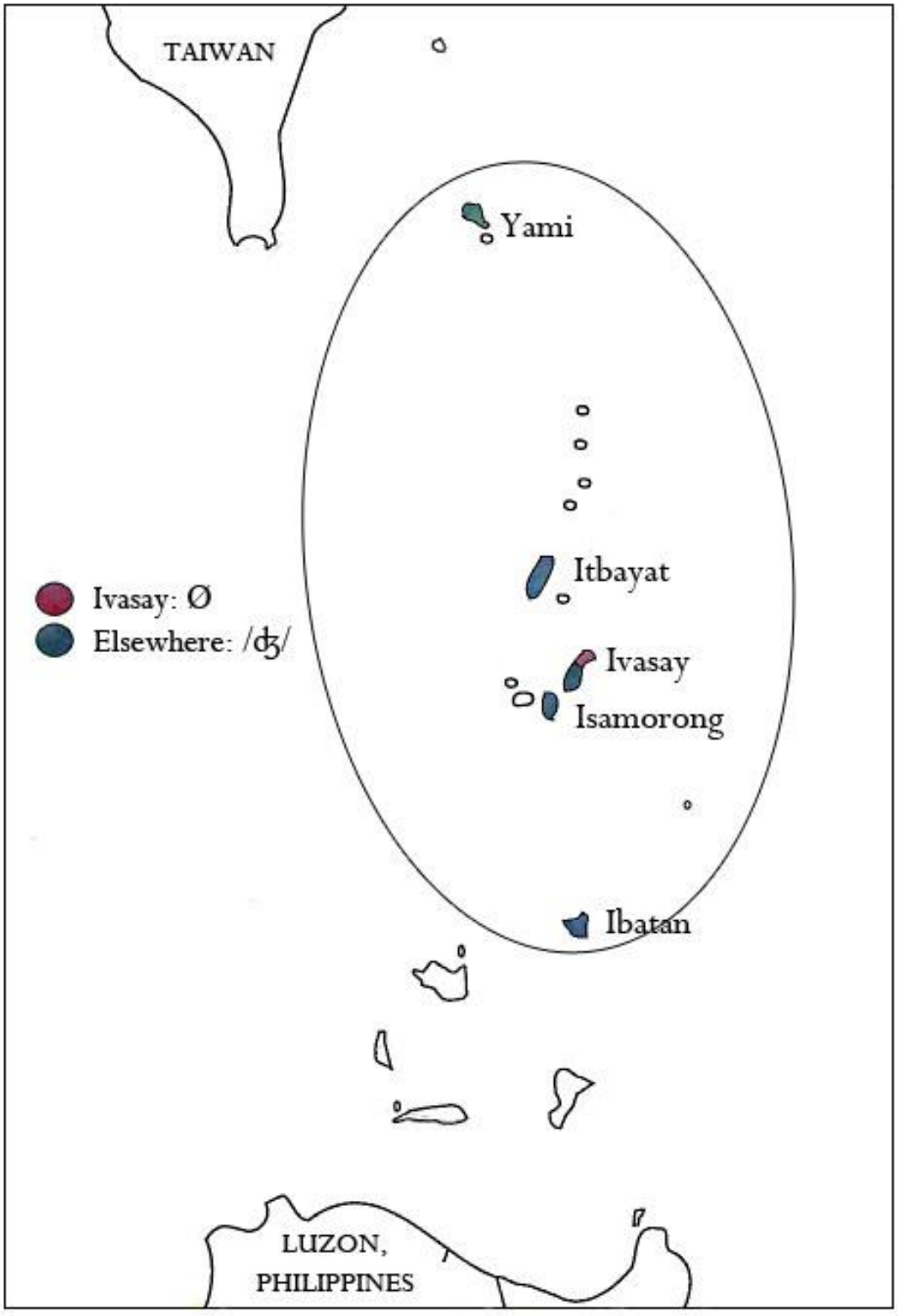


Figure 12: Distribution of /ʤ/

In Ibatan, the voiced labiodental fricative is not observed, as mapped in Figure 13 below.

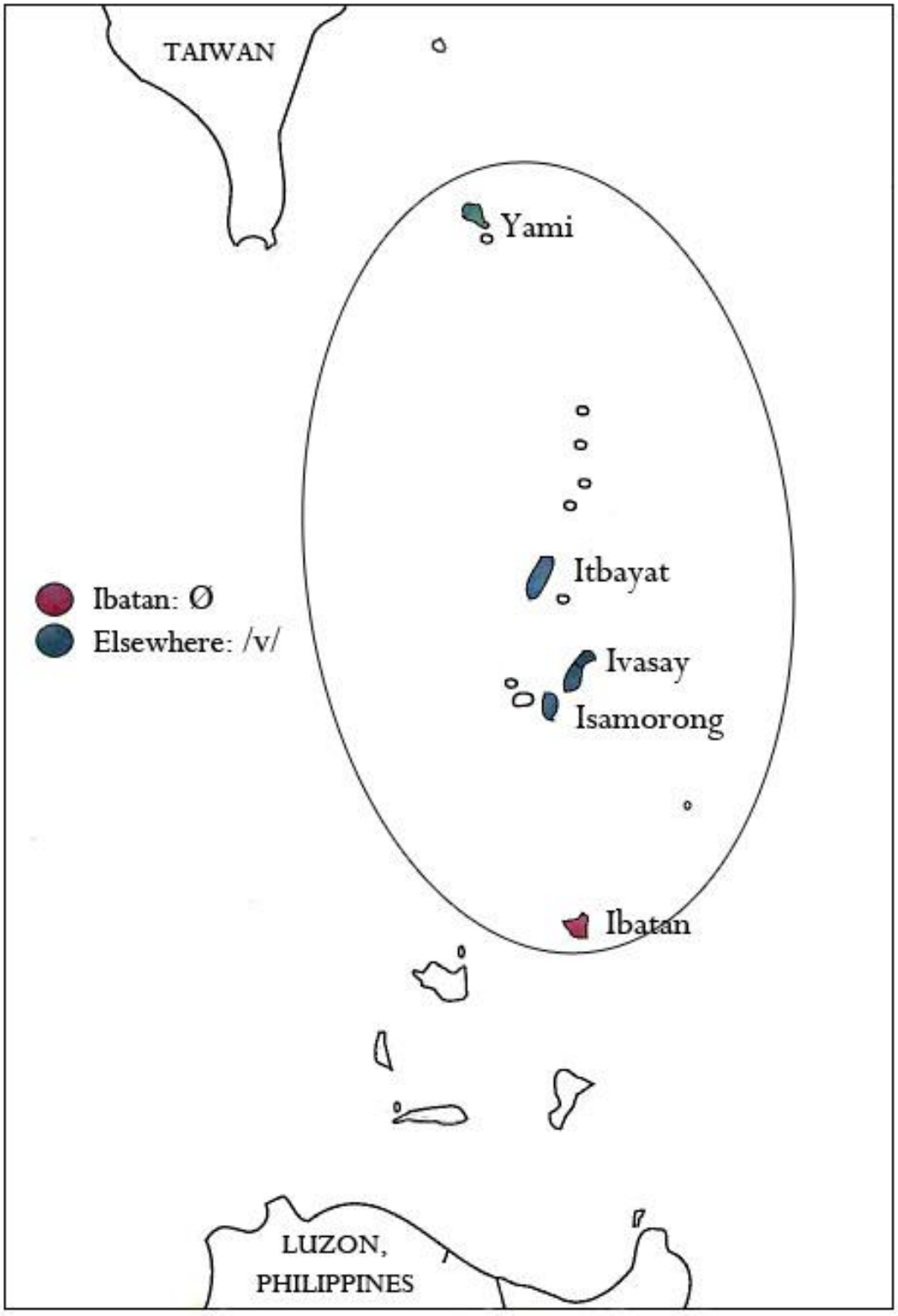


Figure 13: Distribution of /v/

As seen in Figure 14, the retroflex consonants can only be found in Yami.

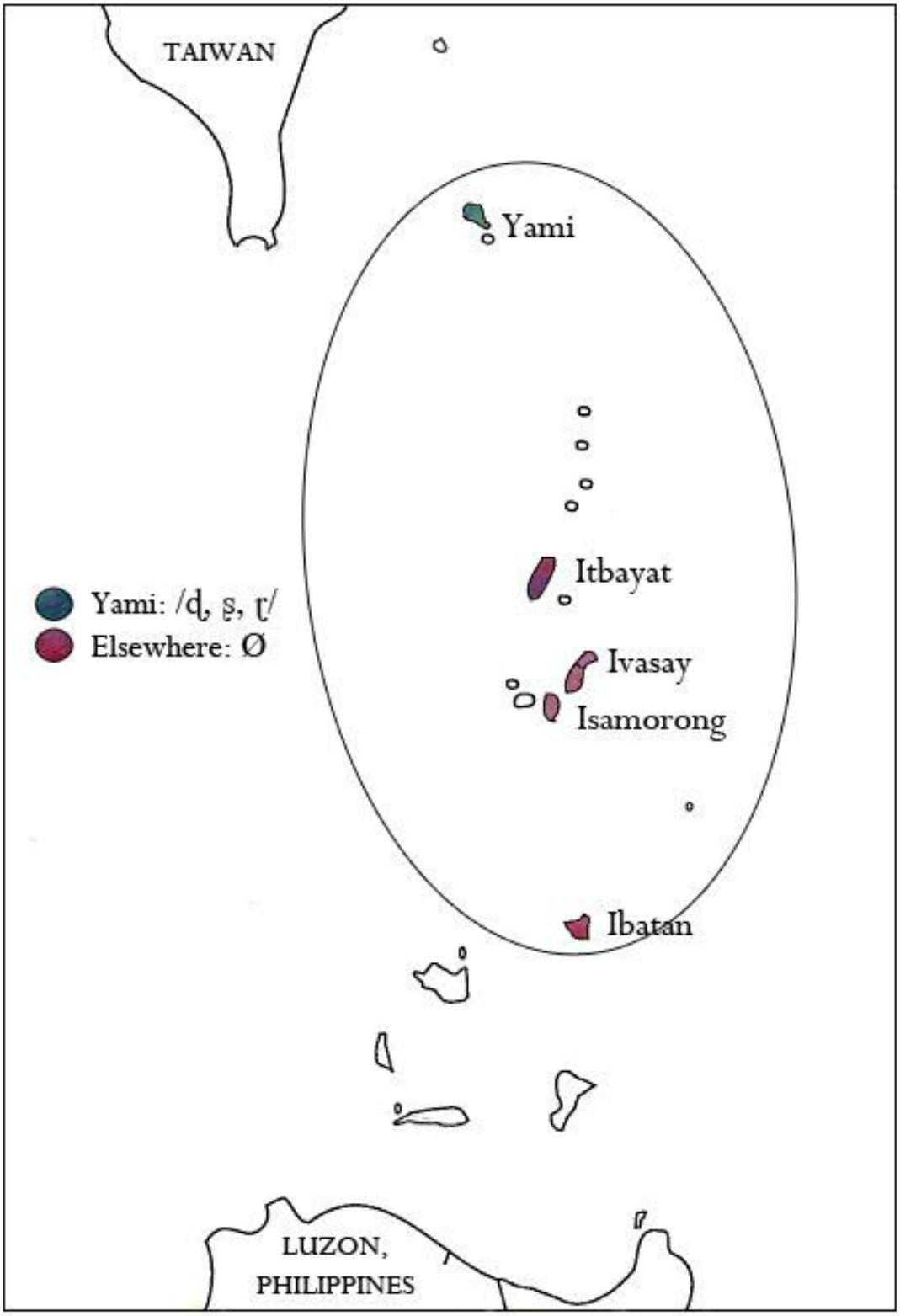


Figure 14: Distribution of /ɖ, ʂ, and ɽ/

Finally, the nasal /ɲ/ is not phonemic in the Yami dialects, as mapped in Figure 15.

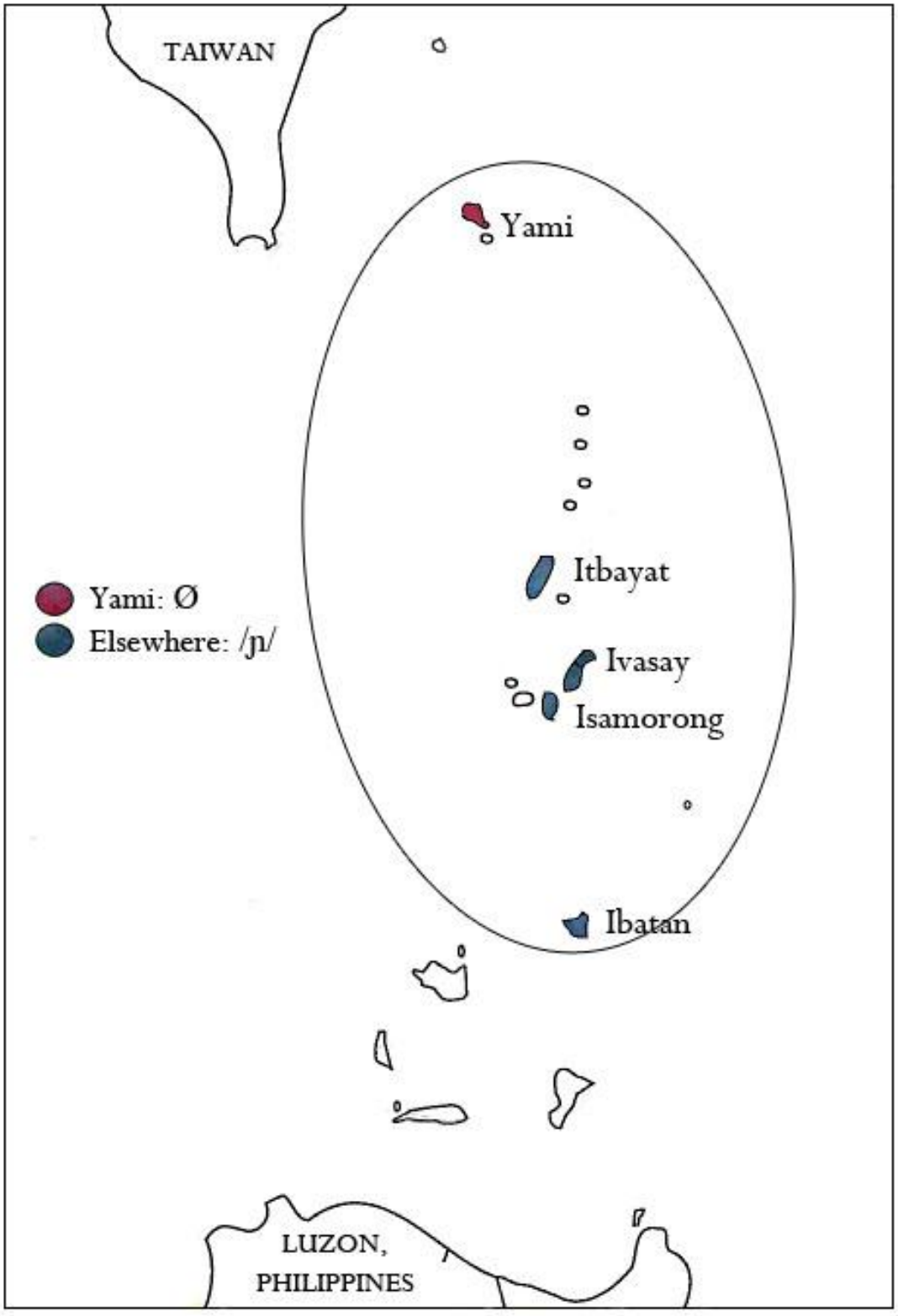


Figure 15: Distribution of /ɲ/

4

THE PHONOLOGY OF PROTO-BATANIC

As seen in the previous chapter, the Batanic languages share common features in terms of phonology. Comparing the sound inventories and the probable cognate sets of the languages, systematic sound correspondences within the microgroup are evident. Following the Comparative Method outlined in Chapter 1, a reconstruction of the phonology of Proto-Batanic is presented. In this chapter, a discussion of the following is presented: (1) the reconstruction of Proto-Batanic segmental and suprasegmental phonemes, (2) the Proto-Batanic syllable structure, and (3) the sound changes that may have applied in the development of the proto-language.

4.1. The proto-phonemes

The sound inventory of Proto-Batanic can be divided into segmental and suprasegmental phonemes. Segmental phonemes are further divided into consonants and vowels. Stress, a suprasegmental phoneme, is reconstructed under Proto-Batanic as well.

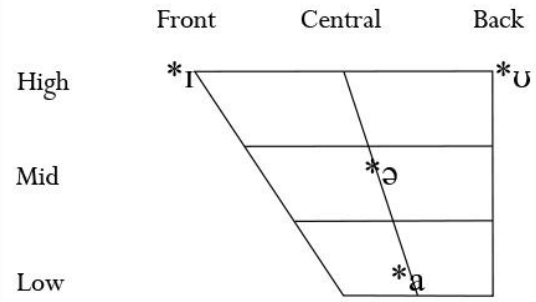
4.1.1. Segmentals

Presented in Tables 6 and 7 below is the modification of the reconstructions proposed by Yang (2002). 21 phonemic segments (17 consonants and 4 vowels) are reconstructed under Proto-Batanic. Unless specified, the segments regularly occur in word-initial, medial, and final positions.

Table 6: Consonants of Proto-Batanic

	Bilabial	Alveolar	Palatal	Velar	Glottal
Stop	*p *b	*t *d		*k *g	*ʔ
Nasal	*m	*n		*ŋ	
Trill		*r			
Fricative		*s		*ɣ	*h
Approximant	*w[8]		*y[9]		
Lateral Approximant		*l			

Table 7: Vowels of Proto-Batanic



[8] Labio-velar

[9] The form *y is reconstructed for the palatal glide instead of *j to avoid confusion with the reconstructed PPh *j, a palatalized velar stop based on Charles (1974) and Blust (1991).

4.1.1.1. The stops /*p, *b, *t, *d, *k, *g, *ʔ/

Proto-Batanic *p is reflected as /p/ in the daughter languages in all environments.

*p	cheek	navel	shrimp	fire	roof	night
PB	*pʊsˈŋɪ	*pʊˈsəd	*hɪˈpʊn	*haˈpʊy	*ʔaˈtəp	*ʔaˈɣəp
Iraralay	pʊʂˈŋɪ	pəˈʂəɖ	ʔɪˈpʊn	ʔaˈpʊj	ʔaˈtəp	ʔaˈʷəp
Iratay	pʊʂˈŋɪ	pəˈʂəɖ	ʔɪˈpʊn	ʔaˈpʊj	ʔaˈtəp	ʔaˈʷəp
Ivalino	pʊʂˈŋɪ	pəˈʂəɖ	ʔɪˈpʊn	ʔaˈpʊj	ʔaˈtəp	ʔaˈwəp
Itbayat	pɪsˈɲɪʔ	pəˈsəd	hɪˈpʊn	haˈpʊj	ʔaˈtəp	ʔaˈɣəp
Ivasay	pɪsˈŋɪ	pəˈsəd	ʔɪˈpən	ʔaˈpʊj	ʔaˈtəp	maˈhəp
Isamorong	pɪsˈɲɪʔ	pʊˈsəd	ʔɪˈpʊn	ʔaˈpʊj	ʔaˈtəp	maˈhəp
Ibatan	ˈpɪsɲɪʔ	pʊˈsəd	ʔɪˈpʊn	ʔaˈpʊj	ʔaˈtəp	maˈhəp

Proto-Batanic *b is regularly reflected as /b/ in the word-final position. However, *b tends to change to the labiodental fricative /v/ when it occurs in word-initial and intervocalic positions, as in Proto-Batanic *baˈsaʔ ‘wet’ and *mabaˈɣəŋ ‘black’ below. For the Yami varieties Iratay and Ivalino, moreover, the voiced fricative /v/ has shifted to the voiceless /f/, a sound change seen among the younger generation (Providence University, 2005). Thus, the following is observed in the aforementioned dialects: *b > v > f.

*b	wet	fur	woman	black	often	smoke
PB	*baˈsaʔ	*bʊɣˈbʊɣ	*mabaˈkəs	*mabaˈɣəŋ	*saˈnɪb	*ʔaˈɣʊb
Iraralay	vaˈʂa	bʊˈbʊw	mavaˈkəʂ	mavaˈʷəŋ	ˈʂaːɲɪb	ʔaˈʷʊb
Iratay	vaˈʂa	bʊˈbʊw	mavaˈkəʂ	mavaˈʷəŋ	ˈʂaːɲɪb	ʔaˈʷʊb
Ivalino	faˈʂa	bʊˈbʊw	mafaˈkəʂ	maˈfaːʷəŋ	ˈʂaːɲɪb	ʔaˈʷʊb
Itbayat	vaˈsaʔ	vʊɣˈbʊɣ	mavaˈkəs	mavaˈwʊŋ	(ma)saˈnɪb	ʔaˈɣʊb
Ivasay	vaˈsaʔ	ˈbʊːbʊh	mavaˈkəs	mavaˈhəŋ	(ma)saˈnɪb	ʔaˈhʊb
Isamorong	vaˈsaʔ	ˈbʊːbʊh	mavaˈkəs	mavaˈhəŋ	(ma)saˈɲɪb	ʔaˈhʊb
Ibatan	baˈsaʔ	ˈbʊːbʊh	mabaˈkəs	mabaˈhəŋ	-	ʔaˈhʊb

There are exceptions to the conditioned weakening of *b, however. Consider another cognate set from Tsuchida, *et al.* (1987):

*b	to pull out [10]
PB	*bʊtbʊt
Yami	bʊtbʊt
Itbayat	vʊtbʊt
Ivasay	bʊtbʊt
Isamorong	bʊtbʊt
Ibatan	bʊtbʊt

[10] Tsuchida, *et. al* (1987: 102)

For the cognate set for *bʊɣˈbʊɣ ‘fur’, the word-initial *b was retained in all of the Batanic languages (except in Itbayat) instead of the expected fricative /v/. Also, for the word *bʊtbʊt ‘to pull out’, such is also the case. The word-initial bilabial stop retains its form possibly because of the presence of another word-medial bilabial stop. For *bʊɣˈbʊɣ, since there was a consonant-cluster within the word, the word-medial *b is retained, thus preventing the fricativization of the word-initial *b. Even with subsequent reduction (in which the word-medial *ɣ was deleted in most of the Batanic languages), the word-medial bilabial stop persists. Thus, it can be said that such examples are cases of exceptions affecting seemingly reduplicated syllables.

Ibatan presents an interesting scenario regarding the development of *b, as the consonant is retained as /b/ in all environments. Based on this, it is hypothesized that *b underwent the following development in the language: Proto-Batanic *b > v > b, in which Ibatan manifests this secondary shift completely.

Based on linguistic and ethnographic evidence, the separation of Ibatan has been fairly recent, occurring about a hundred years after the separation of Yami from the microgroup (Li, 2001, p. 277). The change of PB *b > v in the Batanic languages could not have happened after the separation of Yami, as the language manifests this innovation. The change is seen in all the Batanic languages, and the absence of the fricative in Ibatan is explained by a secondary shift to /b/, possibly because of the continuous contact with Ilokano, a neighboring language also spoken in Babuyan Claro (Maree, 2007, pp. xxiii-xxv).

Proto-Batanic *t is regularly retained in the daughter languages in all positions, except before the vowel /ɪ/. In this environment, as seen in the word *tɪˈlʊʔ ‘earwax’, *t tends to change to the affricate /ʧ/. Ivasay and Itbayat appear to have a tendency to retain the original form *t as seen in the cognate set below.

*t	bone	earwax	eye	louse	flatulence	four
PB	*tʊˈɣaŋ	*tɪˈlʊʔ	*maˈta	*kʊˈtʊ	*ʔaˈtʊt	*ˈʔaːpat
Iraralay	tʊˈwaŋ	ʧɪˈlʊʔ	maˈta	kʊˈtʊ	ˈʔaːtʊt	pat
Iratay	tʊˈwaŋ	ʧɪˈlʊʔ	maˈta	kʊˈtʊ	ˈʔaːtʊt	pat
Ivalino	tʊˈwaŋ	ʧɪˈlʊʔ	maˈta	kʊˈtʊ	ˈʔaːtʊt	pat
Itbayat	tʊˈhaŋ	tɪˈlʊʔ	maˈtaʔ	kʊˈtʊʔ	ʔaˈtʊt	ˈʔaːpat
Ivasay	tʊˈhaŋ	tɪˈdʊ	maˈtaʔ	kʊˈtʊ	ʔaˈtʊt	ˈʔaːpat
Isamorong	tʊˈhaŋ	tʃɪˈdʊʔ	maˈta	kʊˈtʊʔ	ʔaˈtut	(ʧ)aˈpat
Ibatan	tʊˈhaŋ	ˈʧɪːdʊʔ	ˈmaːtaʔ	kaˈtʊʔ	ʔatˈtʊt	ˈʔaːpat

Proto-Batanic *d is retained in Itbayat, Ivasay, Isamorong, and Ibatan as /d/, whereas it becomes the retroflex /ɖ/ in Iraralay, Iratay, and Ivalino. Word-initially, as seen in *ɖaˈnʊm ‘water’, *d tends to be rhotacized. Occurring contiguous with the vowel /ɪ/, moreover, the sound tends to change to the affricate /ʤ/ (except in Itbayat and Ivasay).

*d	water	here	old	nose	knee	navel
PB	*ɖaˈnʊm	*ɖɪˈyaʔ	*ʔaˈdan	*mʊmʊhˈdan	*tʊˈhʊd	*pʊˈsəd
Iraralay	ɽaˈnʊm	ʤaʔ	ʔaˈɖan	mʊmʊˈɖan	ʔʊˈtʊɖ	pəˈʂəɖ
Iratay	ɽaˈnʊm	ʤaʔ	ʔaˈɖan	mʊmʊˈɖan	ʔʊˈtʊɖ	pəˈʂəɖ
Ivalino	ɽaˈnʊm	ʤaʔ	ʔaˈɖan	mʊmʊˈɖan	ʔʊˈtʊɖ	pəˈʂəɖ
Itbayat	ranʊm	dɪˈjaʔ	ʔaˈdan	mʊhˈdan	tʊˈhʊd	pəˈsəd
Ivasay	daˈnʊm	ˈdjaː(ja)	ʔaˈdan	mʊmʊˈdan	tʊd	pəˈsəd
Isamorong	raˈnʊm	ˈʤaː(ja)	ʔaˈdan	mʊmʊˈdad	tʊːd	pʊˈsəd
Ibatan	raˈnʊm	(ˈdʊː)ʤa	ʔaˈdan	mamʊˈdan	tʊd	pʊˈsəd

Proto-Batanic *k is retained as /k/ in all the daughter languages. However, when it occurs contiguous with the vowel /ɪ/, the sound tends to undergo palatalization, changing to an affricate /ʧ/, as seen in the cognate set for *panɪˈkɪʔ ‘bat’. For the reflexes of Proto-Batanic *l, seen in *kʊˈlɪt ‘skin’, see §4.1.1.4.

*k	rat	skin	shoulder	bat	stomach	chicken
PB	*kaˈram	*kʊˈlɪt	*paˈkʊɣ	*panɪˈkɪʔ	*bʊˈlək	*maˈnʊk
Iraralay	kaˈɽam	kʊˈlʲɪt	paˈkaw	panɪˈʧɪʔ	fəˈlək	maˈnʊk
Iratay	kaˈɽam	kʊˈlʲɪt	paˈkaw	panɪˈʧɪʔ	fəˈlək	maˈnʊk
Ivalino	kaˈɽam	kʊˈlʲɪt	paˈkaw	panɪˈʧɪʔ	fəˈlək	maˈnʊk
Itbayat	kaˈram	kuˈlɪt	paˈkʊɣ	panɪˈtʃɪʔ	vʊˈlək	maˈnʊk
Ivasay	kaˈram	kʊˈdɪt	paˈkʊh	panɪˈʧɪ	bəˈdək	maˈnʊk
Isamorong	kaˈram	kʊˈdɪt	paˈkʊh	panɪˈtʃɪʔ	vəˈdək	maˈnʊk
Ibatan	kaˈram	kʊˈdɪt	paˈkʊh	paˈnɪːʧɪʔ	bʊˈdək	maˈnʊk

The velar stop *g retains its original form in all the daughter languages, except when it occurs beside the vowel /ɪ/, as it tends to change to the affricate /ʤ/. From the data at hand, very few instances of Proto-Batanic *g were observed, most especially in word-initial and final positions. The implication of such distribution is not fully explored in this study, although it may be related to the absence of the proto-phoneme in PPh following the reconstruction of Charles (1974). Although Blust (1991) notes that there is a good evidence to support the existence of the said proto-phoneme in PPh (p. 87), the evident scarcity of the putative reflex *g in Proto-Batanic can be observed.

*g	pain	to drag	to hang on	neck	to call[11]	to flow[12]
PB	*gaˈnɪt	*gʊrʊˈgʊd	*saˈgɪt	*laˈgaw	*tawag	*ʔʊyʊg
Iraralay	-	-	ʂaˈgɪt	ˈraːgaw	tawag	vʊjʊg
Iratay	-	-	ʂaˈgɪt	ˈraːgaw	-	-
Ivalino	-	-	ʂaˈgɪt	raˈgaw	-	-
Itbayat	gaˈnɪt	-	saˈʤɪt	raˈgaw	tawag	ʔʊjʊg
Ivasay	-	gʊrʊˈgʊd	saˈʤɪt	laˈgaw	tawag	ʔʊjʊg
Isamorong	gaˈɲɪt	gʊrʊˈgʊd	saʤɪˈt(ən)	laˈgaw	tawag	ʔʊjʊg
Ibatan	gaˈɲɪt	gʊrʊˈgʊd	(matʃɪ)saˈʤɪt	laˈgaw	tawag	ʔʊjʊg

[11] Tsuchida, *et. al* (1987: 85)
[12] Tsuchida, *et. al* (1987: 114)

The glottal stop *ʔ is regularly retained as /ʔ/ word-initially and word-finally. In the word-medial position, the segment tends to be deleted in all the daughter languages except Itbayat and Ivasay. In the cognate set for *baʔˈnan ‘to sneeze’, the lengthening of the penultima in Itbayat may be explained by compensatory lengthening due to the loss of the word-medial glottal stop.

*ʔ	old	roof	to sneeze	thigh	stone	bat
PB	*ʔaˈdan	*ʔaˈtəp	*baʔˈnan	*paˈʔa	*baˈtuʔ	*panɪˈkɪʔ
Iraralay	ʔaˈɖan	ʔaˈtəp	-	ˈʔʊːpa	vaˈtʊʔ	panɪˈʧɪʔ
Iratay	ʔaˈɖan	ʔaˈtəp	-	ˈʔʊːpa	vaˈtʊʔ	panɪˈʧɪʔ
Ivalino	ʔaˈɖan	ʔaˈtəp	-	ˈʔʊːpa	faˈtʊʔ	panɪˈʧɪʔ
Itbayat	ʔaˈdan	ʔaˈtəp	(mɪ)ˈvaːnan	paˈʔa	vaˈtʊʔ	panɪˈtʃɪʔ
Ivasay	ʔaˈdan	ʔaˈtəp	vaʔˈnan	pa	baˈtʊ	panɪˈʧɪ
Isamorong	ʔaˈdan	ʔaˈtəp	vaˈnan	paː	vaˈtʊʔ	panɪˈtʃɪʔ
Ibatan	ʔaˈdan	ʔaˈtəp	(maj)baˈnan	-	baˈtʊʔ	paˈnɪːʧɪʔ

4.1.1.2. The nasals /*m, *n, *ŋ/

Proto-Batanic *m regularly retains its original form in all environments.

*m	man	chicken	you	to rain	to drink	to walk
PB	*maɣaˈkay	*maˈnʊk	*ˈʔɪːmʊ	*tɪˈmʊy	*ʔɪˈnʊm	*haˈyam
Iraralay	məʲaˈkaj	maˈnʊk	ˈʔɪːmʊ	ʧɪˈmʊj	ʔɪˈnʊm	ˈʔaːlam
Iratay	məʲaˈkaj	maˈnʊk	ˈʔɪːmʊ	ʧɪˈmʊj	ʔɪˈnʊm	ˈʔaːlam
Ivalino	məʲaˈkaj	maˈnʊk	ˈʔɪːmʊ	ʧɪˈmʊj	ʔɪˈnʊm	ˈʔaːlam
Itbayat	maɣaˈkaj	maˈnʊk	ˈʔɪːmʊ	(ma)tɪˈmʊj	ʔɪˈnʊm	h(ʊm)aˈjam
Ivasay	mahaˈkaj	maˈnʊk	ʔɪˈmʊ	tɪˈmʊj	ʔɪˈnʊm	(m)aˈjam
Isamorong	mahaˈkaj	maˈnʊk	ˈʔɪːmʊʔ	tʃɪˈmʊj	(m)ɪˈnʊm	(m)aˈjam
Ibatan	mahaˈkaj	maˈnʊk	ˈʔɪːmʊ	ʧɪˈmʊj	ˈ(m)ɪːnʊm	(m)aˈjam

*n is retained as /n/ in all environments. Contiguous with the vowel /ɪ/ however, the consonant tends to take the form of the palatal /ɲ/, as seen in the cognate set for *saˈnɪb ‘often’.

*n	fly (insect)	this	often	sand	mountain	nose
PB	*naˈnəd	*ˈnɪːya	*saˈnɪb	*ʔaˈnay	*tʊˈkʊn	*mʊmʊhˈdan
Iraralay	naˈnəɖ	( )ja	ˈʂaːɲɪb	ʔaˈnaj	tʊˈkʊn	mʊmʊˈɖan
Iratay	naˈnəɖ	( )ja	ˈʂaːɲɪb	ʔaˈnaj	tʊˈkʊn	mʊmʊˈɖan
Ivalino	naˈnəɖ	( )ja	ˈʂaːɲɪb	ʔaˈnaj	tʊˈkʊn	mʊmʊˈɖan
Itbayat	naˈnəd	ˈnɪːja	(ma)saˈnɪb	ʔaˈnaj	tʊˈkʊn	mʊhˈdan
Ivasay	naˈnəd	ɲaˈja	(ma)saˈnɪb	ʔaˈnaj	tʊˈkʊn	mʊmʊˈdan
Isamorong	naˈnəd	ɲaʔ	(ma)saˈɲɪb	ʔaˈnaj	tʊˈkʊn	mʊmʊˈdad
Ibatan	ˈnaːnəd	ˈɲaːjaʔ	-	ˈʔaːnaj	tʊˈkʊn	mamʊˈdan

Proto-Batanic *ŋ is regularly retained in all environments, except when it occurs beside the vowel /ɪ/, as in the cognate set for Proto-Batanic *ŋɪˈpən ‘teeth’ below. In this environment, the sound tends to undergo palatalization to /ɲ/ in Itbayat, Ivasay, Isamorong, and Ibatan.

*ŋ	teeth	spittle	cheek	sky	bone	fish
PB	*ŋɪˈpən	*ŋaˈɣay	*pʊsˈŋɪ	*ɣaˈŋɪt	*tʊˈɣaŋ	*ʔaˈmʊŋ
Iraralay	ˈŋəːpən	ŋaˈʁaj	pʊʂˈŋɪ	ˈʔaːŋɪt	tʊˈwaŋ	ʔaˈmʊŋ
Iratay	ˈŋəːpən	ŋaˈʁaj	pʊʂˈŋɪ	ˈʔaːŋɪt	tʊˈwaŋ	ʔaˈmʊŋ
Ivalino	ˈŋəːpən	ŋaˈʁaj	pʊʂˈŋɪ	ˈʔaːŋɪt	tʊˈwaŋ	ʔaˈmʊŋ
Itbayat	ɲɪˈpən	ŋaˈɣaj	pɪsɲɪʔ	ɣaˈɲɪt	tʊˈhaŋ	ʔaˈmʊŋ
Ivasay	ɲɪˈpən	ŋaˈhaj	pɪsˈŋɪ	-	tʊˈhaŋ	ʔaˈmʊŋ
Isamorong	ɲɪˈpən	ŋaˈhaj	pɪsˈɲɪʔ	haˈɲɪt	tʊˈhaŋ	ʔaˈmʊŋ
Ibatan	ɲɪˈpən	ŋaˈhaj	ˈpɪsɲɪʔ	haˈɲɪt	tʊˈhaŋ	ˈʔaːmʊŋ

4.1.1.3. The fricatives /*s, *h, *ɣ/

*s regularly retains its original form in Itbayat, Ivasay, Isamorong, and Ibatan, whereas it changed to a retroflex fricative /ʂ/ in Iratay, Iraralay, and Ivalino.

*s	nine	they	navel	salt	sugarcane	thin
PB	*sasɪˈyam	*sɪˈra	*pʊˈsəd	ʔaˈsɪn	*ʔʊˈnas	*tarɪˈpɪs
Iraralay	ʂjam	ʂɪˈʈa	pəˈʂəɖ	ʔaˈʂɪn	ʔʊˈnaʂ	taʈɪˈpɪʂ
Iratay	ʂjam	ʂɪˈʈa	pəˈʂəɖ	ʔaˈʂɪn	ʔʊˈnaʂ	taʈɪˈpɪʂ
Ivalino	ʂjam	ʂɪˈʈa	pəˈʂəɖ	ʔaˈʂɪn	ʔʊˈnaʂ	taʈɪˈpɪʂ
Itbayat	saˈsjam	sɪˈra	pəˈsəd	ʔaˈsɪn	ʔʊˈnas	(ma)tarɪˈpɪs
Ivasay	sjam	sɪˈraʔ	pəˈsəd	ʔaˈsɪn	ʔʊˈnas	(ma)tarɪˈpɪs
Isamorong	saˈsjam	sɪˈraʔ	pʊˈsəd	ʔaˈsɪn	ʔʊˈnas	(ma)tarɪˈpɪs
Ibatan	saˈʃam	ˈsɪːra	pʊˈsəd	ʔaˈsɪn	ʔʊˈnas	(ma)tarɪˈpɪs

Proto-Batanic *h is deleted in all positions in all the daughter languages except Itbayat. The current glottal fricative /h/ found in the rest of the Batanic languages is traced from a different proto-phoneme, the velar fricative *ɣ, discussed below.

*h	fire	shrimp	long	knee	elbow	fingernail
PB	*haˈpʊy	*hɪˈpʊn	*(ma)hanaˈrʊʔ	*tʊˈhʊd	*sɪˈkʊh	*kʊˈkʊh
Iraralay	ʔaˈpʊj	ʔɪˈpʊn	ʔaˈnaːɽʊʔ	ʔʊˈtʊɖ	ˈʂɪːkʊ	kʊˈkʊ
Iratay	ʔaˈpʊj	ʔɪˈpʊn	ʔaˈnaːɽʊʔ	ʔʊˈtʊɖ	ˈʂɪːkʊ	kʊˈkʊ
Ivalino	ʔaˈpʊj	ʔɪˈpʊn	ʔaˈnaːɽʊʔ	ʔʊˈtʊɖ	ˈʂɪːkʊ	kʊˈkʊʔ
Itbayat	haˈpʊj	hɪˈpʊn	(ma)hanaˈrʊʔ	tʊˈhʊd	sɪˈtʃʊh	kʊkʊh
Ivasay	ʔaˈpʊj	ʔɪˈpən	ˈ(m)aːnarʊʔ	tʊd	sɪˈʧʊʔ	kʊˈkʊʔ
Isamorong	ʔaˈpʊj	ʔɪˈpʊn	ˈ(m)aːnarʊ	tʊːd	sɪˈtʃʊ	kʊˈkʊ
Ibatan	ʔaˈpʊj	ʔɪˈpʊn	ˈ(m)aːnarʊʔ	tʊd	ˈsɪːʧʊʔ	kʊˈkʊʔ

The velar fricative *ɣ is only retained in Itbayat, as it changes to /h/ in Ivasay, Isamorong, and Ibatan, and to /ʁ/ in Iraralay, Iratay, and Ivalino. Moreover, in the aforementioned Yami varieties, the uvular fricative tends to undergo further weakening, as it is deleted in the examples given below, except in the cognate set for *ŋaˈɣay 'spittle'. Yang (2002) reconstructs this sound as *l_2 but in this paper, *ɣ is reconstructed under the assumption that the Itbayat /ɣ/ is a retention of the original form.

*ɣ	sky	mortar[13]	smoke	spittle	shoulder	sibling
PB	*ɣaˈŋɪt	*ɣʊsʊŋ	*ʔaˈɣʊb	*ŋaˈɣay	*paˈkʊɣ	*kakˈtəɣ
Iraralay	ˈʔaːŋɪt	ʔʊʂʊŋ	ʔaˈʷʊb	ŋaˈʁaj	paˈkaw	kakˈtəː
Iratay	ˈʔaːŋɪt	-	ʔaˈʷʊb	ŋaˈʁaj	paˈkaw	kəˈtəː
Ivalino	ˈʔaːŋɪt	-	ʔaˈʷʊb	ŋaˈʁaj	paˈkaw	kəˈtəː
Itbayat	ɣaˈɲɪt	ɣʊsʊŋ	ʔaˈɣʊb	ŋaˈɣaj	paˈkʊɣ	kakˈtəɣ
Ivasay	-	hʊsʊŋ	ʔaˈhʊb	ŋaˈhaj	paˈkʊh	kakˈtəh
Isamorong	haˈɲɪt	hʊsʊŋ	ʔaˈhʊb	ŋaˈhaj	paˈkʊh	kakˈtəh
Ibatan	haˈɲɪt	hʊsʊŋ	ʔaˈhʊb	ŋaˈhaj	paˈkʊh	kakˈtəh

[13] Tsuchida, *et. al* (1987: 64)

4.1.1.4. The liquids /*l and *r/

*l regularly retains its original form in Ivasay, Isamorong, and Ibatan, whereas in Iraralay, Iratay, Ivalino, and Itbayat, the consonant corresponds to the alveolar trill /r/.

*l	neck	to step on[14]	wind	chest	heart	chickenpox[15]
PB	*laˈgaw	*lasag	*salawˈsaw	*kalaŋaˈŋan	*taˈwʊl	*gʊtʊl
Iraralay	ˈraːgaw	raʂag	ʂarʊwˈʂaw	karaŋaˈŋan	taˈʷʊr	kʊtʊr
Iratay	ˈraːgaw	-	ʂarʊwˈʂaw	karaŋaˈŋan	taˈʷʊr	-
Ivalino	raˈgaw	-	ʂarʊwˈʂaw	karaŋaˈŋan	taˈʷʊr	-
Itbayat	raˈgaw	rasag	sarawˈsaw	-	tawʊr	gʊtʊr
Ivasay	laˈgaw	lasag	salawˈsaw	kalaˈŋaːŋan	taˈwəl	gʊtʊl
Isamorong	laˈgaw	lasag	salawˈsaw	kalaˈŋaːŋan	taˈwʊl	gʊtʊl
Ibatan	laˈgaw	lasag	saˈlawsaw	-	-	tʊkʊh

For more sound changes *l underwent, consider the following cognate sets.

[14] Tsuchida, *et. al* (1987: 95)
[15] Tsuchida, *et. al* (1987: 71)

	five	back	to fight	ear	stomach	snake
PB	*dalɪˈmaʔ	*lɪˈkʊd	*lɪˈman	*talɪˈŋaʔ	*bʊˈlək	*bʊˈlay
Iraralay	lʲɪˈmaʔ	lʲɪˈkʊɖ	lʲɪˈman	talʲɪˈŋaʔ	fəˈlək	fʊˈlaj
Iratay	lʲɪˈmaʔ	lʲɪˈkʊɖ	lʲɪˈman	talʲɪˈŋaʔ	fəˈlək	fʊˈlaj
Ivalino	lʲɪˈmaʔ	lʲɪˈkʊɖ	lʲɪˈman	talʲɪˈŋaʔ	fəˈlək	fʊˈlaj
Itbayat	lɪˈmaʔ	lɪˈtʃʊd	lɪˈman	talɪˈɲaʔ	vʊˈlək	vuˈlaj
Ivasay	dadɪˈmaʔ	dɪˈʧʊd	dɪˈman	tadɪˈɲa	bəˈdək	vʊˈdaj
Isamorong	dadɪˈma	dɪˈʧʊd	dɪˈman	tadɪˈɲaʔ	vəˈdək	vʊˈdaj
Ibatan	dadɪˈmaʔ	dɪˈʧʊd	dɪˈman	taˈʤɪɲaʔ	bʊˈdək	bʊˈdaj

Contiguous with the vowel /ɪ/, *l tends to change to /d/ in Ivasay, Isamorong, and Ibatan. In the cognate set for *talɪˈŋaʔ ‘ear’, the Ibatan /d/ underwent further palatalization, thus manifesting /ʤ/.

Proto-Batanic *bʊˈlək ‘stomach’ and *bʊˈlay ‘snake’ seem to be exceptions to this rule, in which the aforementioned sound change is applied even in the absence of the conditioning environment. This is possibly due to a more recent sound movement affecting the other occurrences of the phoneme, but more data is needed to validate this claim.

Reconstructing a single *l in this paper differs with the reconstruction of Yang (2002), in which she reconstructs *l_1 (with the reflex /l/ in all the daughter languages) and *L (with the reflex /r/ in

Imorod and Iraralay and /l/ elsewhere). It seems more reasonable to reconstruct a single *l based on the environments in which Yang's *L and *l_1 occur. Where *l regularly becomes /r/ in Yami and Itbayat (Yang's *L), it retains its original form preceding the vowel /ɪ/ (Yang's *l_1). Presented more systematically in rule form, consider the change of *l:

For Iraralay, Iratay, Ivalino, and Itbayat

*l → l / __ɪ

r / elsewhere

As in: Proto-Batanic *lɪkʊd 'back' > **l**ɪkʊd

Proto-Batanic *lagaw 'neck' > **r**agaw

For Ivasay, Isamorong, and Ibatan

*l → d / __ ɪ

l / elsewhere

As in: Proto-Batanic *lɪkʊd 'back' > **d**ɪˈʧʊd

Proto-Batanic *lagaw 'neck' > **l**aˈgaw

Proto-Batanic *r corresponds to the trill /r/ in Itbayat, Ivasay, Isamorong, and Ibatan, whereas in Iraralay, Iratay, and Ivalino, the consonant corresponds to the retroflex /ɽ/. In reconstructing *r, no word-final occurrences are observed.

*r	blood	big	heavy	name	gills	turtle
PB	*raˈyaʔ	*raˈkʊɣ	*(ma)rayˈmət	*ŋaˈran	*ʔaˈraŋ	*ʔɪˈraŋ
Iraralay	ɽaˈlaʔ	ˈɽaːkʊʔ	ɽəwˈmət	ŋaˈɽan	ʔaˈɽaŋ	ʔɪˈɽaŋ
Iratay	ɽaˈlaʔ	ˈɽaːkʊʔ	ɽəwˈmət	ŋaˈɽan	ʔaˈɽaŋ	ʔɪˈɽaŋ
Ivalino	ɽaˈlaʔ	ˈɽaːkʊʔ	ɽəwˈmət	ŋaˈɽan	ʔaˈɽaŋ	ʔɪˈɽaŋ
Itbayat	raˈjaʔ	raˈkʊɣ	(ma)rayˈmət	ŋaˈran	-	ʔɪˈraŋ
Ivasay	raˈja	raˈkuh	(ma)rahˈmət	ŋaˈran	ʔaˈraŋ	-
Isamorong	raˈja	raˈkʊh	(ma)rahˈmət	ŋaˈran	ʔaˈraŋ	ʔɪˈraŋ
Ibatan	raˈjaʔ	raˈkʊh	(ma)rahˈmət	ŋaˈran	ʔaˈraŋ	ʔɪˈraŋ

The proto-phonemes *d, *l, and *r tend to share similar correspondences in certain environments. For instance, the Yami varieties show a similar correspondence of Proto-Batanic *r and *d in certain positions (discussed in §4.1.2), i.e. the retroflex /ɽ/. In distinguishing *d and *r then, it is necessary to look for evidence in languages which more or less exhibit retention of the former proto-phoneme. Consider *ɗaˈyʊm ‘needle’ below:

	needle
PB	*daˈyʊm
Iraralay	ɽaˈjʊm
Iratay	ɽaˈjʊm
Ivalino	ɽaˈjʊm
Itbayat	raˈjəm
Ivasay	daˈjəm
Isamorong	raˈjʊm
Ibatan	raˈjəm

Evidence from Ivasay ensures that the consonants correspond to *d. Reconstructing *l is more straightforward, in that there is only the need to look for the trill /r/ in the Yami varieties (or the alveolar stop /d/ in the other Batanic languages), as in Proto-Batanic *lagaw ‘neck’ > Yami and Itbayat [ragaw] and Proto-Batanic *lɪkʊd ‘back’ > Ivasay, Isamorong, and Ibatan [dɪˈʧʊd]. If the correspondences are consistent and there are no evidence pointing to a possible *d or *l, *r is then reconstructed.

4.1.1.5. The glides /*w, *y/

Proto-Batanic *w is regularly retained as /w/ in all environments.

*w	eight	right (hand)	wind	thirsty	sun	neck
PB	*wawaˈɣʊ	*kawaˈnan	*salawˈsaw	*(ma)haˈwaw	*ʔaˈraw	*laˈgaw
Iraralay	waˈwʊ	waˈnan	ʂarʊwˈʂaw	ˈ(m)aːwaw	ʔaˈʈaw	ˈraːgaw
Iratay	waˈwʊ	waˈnan	ʂarʊwˈʂaw	ˈ(m)aːwaw	ʔaˈʈaw	ˈraːgaw
Ivalino	waˈwʊ	waˈnan	ʂarʊwˈʂaw	ˈ(m)aːwaw	ʔaˈʈaw	raˈgaw
Itbayat	wawaˈɣʊʔ	waˈnan	sarawˈsaw	(ma)hˈwaw	ʔaˈraw	raˈgaw
Ivasay	wawaˈhʊ	waˈnan	salawˈsaw	(ma)ˈwaw	ʔaˈraw	laˈgaw
Isamorong	wawaˈhʊ	waˈnan	salawˈsaw	(ma)ˈwaw	ʔaˈraw	laˈgaw
Ibatan	wawaˈhʊʔ	kaˈnaːwan	saˈlawsaw	(ma)ˈwaw	ˈʔaːraw	laˈgaw

*y is regularly retained as a palatal glide in all the daughter languages. The form *y is reconstructed instead of the phonetic *j so as not to confuse the form with the PPh palatalized velar stop *j (Charles, 1974 and Blust, 1991).

*y	awake	we	to wash	strong	liver	coconut
PB	*(ma)yʊˈkay	*yaˈtən	*ʔʊˈyas	*(ma)ahˈyɪt	*ʔaˈtay	*ʔanɪˈyʊy
Iraralay	ˈjʊːkaj	jaˈtən	ʔʊˈjaʂ	ʔaˈjɪt	ʔaˈtaj	ʔaˈɲʊj
Iratay	ˈjʊːkaj	jaˈtən	ʔʊˈjaʂ	ʔaˈjɪt	ʔaˈtaj	ʔaˈɲʊj
Ivalino	ˈjʊːkaj	jaˈtən	ʔʊˈjaʂ	ʔaˈjɪt	ʔaˈtaj	ʔaˈɲʊj
Itbayat	jʊkaˈjən	jaˈtən	ʔʊjaˈsan	(m)ahˈjət	ʔataj	nɪˈjʊj
Ivasay	(ma)jʊˈkaj	jaˈtən	(maŋ)ʊˈjas	(m)aʔˈjət	ʔaˈtaj	ɲʊj
Isamorong	jʊˈkaj	jaˈtən	-	(m)aˈjət	ʔaˈtaj	ŋjʊj
Ibatan	majʊˈkaj	jaˈtaʔ	(ˈmaːn)ʊjas	(m)aˈjɪt	ʔaˈtaj	ɲʊj

For Iraralay, Iratay, and Ivalino, *y becomes a lateral /l/ in between two low vowels or when it occurs word-initially, preceding the aforementioned vowel.

In rule form: *y → l / { a ___ a ; #___ a }

As in: Proto-Batanic *rayaʔ ‘blood’ > ɾalaʔ

Proto-Batanic *tataya ‘canoe’ > tatalaʔ

Consider the following cognate sets:

	to run	root[16]	pubic hair[17]	blood	canoe	to walk
PB	*yaˈyʊh	*yamʊt	*yamɪt	*raˈyaʔ	*tataˈya	*haˈyam
Iraralay	(pa)laˈjʊ	jamʊt	jamɪt[18]	ɻaˈlaʔ	tataˈlaʔ	ˈʔaːlam
Iratay	(pa)laˈjʊ	-	-	ɻaˈlaʔ	tataˈlaʔ	ˈʔaːlam
Ivalino	(pa)laˈjʊ	-	-	ɻaˈlaʔ	tataˈlaʔ	ˈʔaːlam
Itbayat	(ma)jaˈjʊh	jamʊt	jamɪt	raˈjaʔ	tataˈja	h(ʊm)aˈjam
Ivasay	jaˈjʊ	jamʊt	jamɪt	raˈja	tataˈja	(m)aˈjam
Isamorong	jaˈjʊʔ	jamʊt	jamɪt	raˈja	tataˈja	(m)aˈjam
Ibatan	(ma)jaˈjʊʔ	jamʊt	jamɪt	ɾaˈjaʔ	-	(m)aˈjam

Yang (2002) reconstructs *R to represent such correspondence. For example, she reconstructs *ɖaRaʔ ‘blood’ in Proto-Batanic, a reflex of the PMP *daRaq (Blust, 1999) and PPh *dag̱uʔ (Paz, 1981). The word-medial consonant corresponds to the proto-consonant in PPh with /g, y, l, r/ reflexes in the daughter languages, i.e. *R. If this consonant is retained in Proto-Batanic, then the reflexes of the consonant would be /y/ for Itbayat, Ivasay, Isamorong, and Ibatan, and /l/ for Iraralay, Iratay, and Ivalino. However, based on the data examined, it seems that the instances of /l/ and /y/ correspondence are rule-governed (discussed above). Such rule applies even to reflexes that do not bear PPh *R, such as *kawayan ‘bamboo’ below.

[16] Tsuchida, *et. al* (1987: 121)
[17] Tsuchida, *et. al* (1987: 43)
[18] [lamɪt] in Imorod, another dialect of Yami (Tsuchida, *et. al*, 1987: 43)

	bamboo	new
PB	*kawaˈyan	*baˈyʊʔ
Iraralay	-	vaˈjʊʔ
Iratay	-	vaˈjʊʔ
Ivalino	kawaˈlan	faˈjʊʔ
Itbayat	kawaˈjan	vaˈjuʔ
Ivasay	kawaˈjan	vaˈjʊ
Isamorong	kawaˈjan	vaˈjʊ
Ibatan	kawaˈjan	baˈjʊʔ

Thus, it is proposed that PPh *R and *y merged in Proto-Batanic as *y. Phonological mergers in historical linguistics mean that instances of two proto-phonemes became similar in the daughter language. In the case of PPh *R and *y, for example, the merger of the two proto-phonemes as a single *y in Proto-Batanic is observed. Following this, *raˈyaʔ 'blood', reflecting the *y reflex of PPh *R in Proto-Batanic is given. Another evidence for this merger is *baˈyʊʔ 'new' above. A reflex of the PMP *baqeRu (Blust, 1999), the Yami forms follows the expected reflex of *R as a palatal glide instead of /l/.

Exceptions to the proposed *y > l presented here are the cognates sets for *yaˈmən 'we (1st person, plural, exclusive)', *yaˈtən 'we (1st person, plural, inclusive)', *yamʊt 'root', and *yamɪt 'pubic hair' presented above. For *yamɪt, Imorod, another Yami dialect, reflects the form /lamɪt/,

demonstrating the sound change proposed in this paper. The reflexes of *yamʊt (a reflex of PMP *Ramut reconstructed by Zorc, 1995) support our hypothesis regarding the merger of the PPh *R and *y, in which all the Batanic languages show the expected /y/ reflex. This form, in addition to the pronouns *yamən and *yatən, may be considered exceptions to the sound law found in Yami.

Thus, the following sequence is proposed regarding the development of PPh *R and *y in Proto-Batanic: PPh *R and *y > Proto-Batanic *y > Yami /l/ in between two low vowels or when it precedes the aforementioned vowel word-initially.

This merger of the PPh uvular trill *R and the glide *y as Proto-Batanic *y is the central evidence for the hypothesis of Zorc (1977 and 1986). He regards this innovation as the basis for subgrouping the Batanic languages with other Philippine languages, i.e. Kapampangan, Sambal, and North Mangyan, also manifesting such merger (see Chapter 2 and Chapter 5 for further discussion).

4.1.1.6. The vowels /*ɪ, *ʊ, *ə, *a/

*ɪ is regularly retained as /ɪ/ in all the daughter languages.

*ɪ	back	earwax	ear	cheek	intestine	bat
PB	*lɪˈkʊd	*tɪˈlʊʔ	*talɪˈŋaʔ	*pʊsˈŋɪ	*tɪnaˈyɪʔ	*panɪˈkɪʔ
Iraralay	lʲɪˈkʊɖ	ʧɪˈlʊʔ	talʲɪˈŋaʔ	pʊʂˈŋɪ	ʧɪnaˈjɪʔ	panɪˈʧɪʔ
Iratay	lʲɪˈkʊɖ	ʧɪˈlʊʔ	talʲɪˈŋaʔ	pʊʂˈŋɪ	ʧɪnaˈjɪʔ	panɪˈʧɪʔ
Ivalino	ljɪˈkʊɖ	ʧɪˈlʊʔ	talʲɪˈŋaʔ	pʊʂˈŋɪ	ʧɪnaˈjɪʔ	panɪˈʧɪʔ
Itbayat	lɪˈʧʊd	tɪˈlʊʔ	talɪˈɲaʔ	pɪsɲʲɪʔ	-	panɪˈtʃɪʔ
Ivasay	lɪˈkʊd	tɪˈdʊ	tadɪˈɲa	pɪsˈŋɪ	tɪnaˈjɪ	panɪˈʧɪ
Isamorong	dɪˈtʃʊd	tʃɪˈdʊʔ	tadɪˈɲaʔ	pɪsˈɲɪʔ	tʃɪnaˈjɪʔ	panɪˈtʃɪʔ
Ibatan	dɪˈʧʊd	ˈʧɪːdʊʔ	taˈʤɪnŋaʔ	ˈpɪsɲɪʔ	-	paˈnɪːʧɪʔ

Similar to *ɪ, *ʊ is regularly retained as /ʊ/ in all the daughter languages.

*ʊ	sugarcane	tail	water	stone	you	at
PB	*ʔʊˈnas	*ʔɪˈpʊs	*daˈnʊm	*baˈtʊʔ	*ˈʔɪːmʊ	*dʊ
Iraralay	ʔʊˈnaʂ	ˈʔɪːpʊʂ	ɽaˈnʊm	vaˈtʊʔ	ˈʔɪːmʊ	-
Iratay	ʔʊˈnaʂ	ˈʔɪːpʊʂ	ɽaˈnʊm	vaˈtʊʔ	ˈʔɪːmʊ	-
Ivalino	ʔʊˈnaʂ	ˈʔɪːpʊʂ	ɽaˈnʊm	faˈtʊʔ	ˈʔɪːmʊ	-
Itbayat	ʔʊˈnas	ʔɪˈpʊs	raˈnʊm	vaˈtʊʔ	ˈʔɪːmʊ	dʊ
Ivasay	ʔʊˈnas	ʔɪˈpʊs	daˈnʊm	baˈtʊ	ʔɪˈmʊ	dʊ
Isamorong	ʔʊˈnas	-	raˈnʊm	vaˈtʊʔ	ˈʔɪːmʊʔ	dʊ
Ibatan	ʔʊˈnas	ˈʔɪːpʊs	raˈnʊm	baˈtʊʔ	ˈʔɪːmʊ	dʊʔ

For *ə, the sound is observable word-medially but is conspicuously absent in the word-final position.

*ə	fly (insect)	navel	night
PB	*naˈnəd	*pʊˈsəd	*ʔaˈɣəp
Iraralay	naˈnəɖ	pəˈʂəɖ	ʔaˈwəp
Iratay	naˈnəɖ	pəˈʂəɖ	ʔaˈwəp
Ivalino	naˈnəɖ	pəˈʂəɖ	ʔaˈwəp
Itbayat	naˈnəd	pəˈsəd	ʔaˈɣəp
Ivasay	naˈnəd	pəˈsəd	(m)aˈhəp
Isamorong	naˈnəd	pʊˈsəd	(m)aˈhəp
Ibatan	ˈnaːnəd	pʊˈsəd	(m)aˈhəp

Finally, *a can be found in all environments as seen below.

*a	needle	new	old	octopus	one	here
PB	*daˈyʊm	*baˈyʊʔ	*ʔaˈdan	*kʊjˈta	*ʔaˈsaʔ	*dɪˈyaʔ
Iraralay	ɽaˈjʊm	vaˈjʊʔ	ʔaˈɖan	kʊjˈta	ʂa	ʤaʔ
Iratay	ɽaˈjʊm	vaˈjʊʔ	ʔaˈɖan	kʊjˈta	ʂa	ʤaʔ
Ivalino	ɽaˈjʊm	faˈjʊʔ	ʔaˈɖan	kʊjˈta	ʂa	ʤaʔ
Itbayat	raˈjəm	vaˈjuʔ	ʔaˈdan	ˈkʊjta	ʔaˈsa	dɪˈjaʔ
Ivasay	daˈjəm	vaˈjʊ	ʔaˈdan	kʊjˈta	ʔaˈsaʔ	ˈdjaːja
Isamorong	raˈjʊm	vaˈjʊ	ʔaˈdan	kʊjˈtaʔ	ʔaˈsaʔ	ˈʤaːja
Ibatan	raˈjəm	baˈjʊʔ	ʔaˈdan	kʊjˈtaʔ	ˈʔaːsaʔ	ˈdʊːʤa

4.1.2. Stress

Paz (1981), in her work on Proto-Philippines, reconstructs stress on the basis of the cognate/s identical to the reconstructed morpheme (p. 41). In this study, quite a number of reconstructions are identical to most (if not all) of the daughter languages. However, in some instances, the position of the stress (e.g. ultima or penultima) differs among the languages. Thus, statistical evidence (i.e. the syllable most frequently stressed in the Batanic languages) is considered as well. Iraralay, Iratay, and Ivalino are considered as one since these are all dialects of Yami. Consider the following cognate sets:

Ultima	back	breast	cheek
PB	*lɪˈkʊd	*sʊˈsʊʔ	*pʊsˈŋɪ
Iraralay	lʲɪˈkʊɖ	ʂʊˈʂʊʔ	pʊʂˈŋɪ
Iratay	lʲɪˈkʊɖ	ʂʊˈʂʊʔ	pʊʂˈŋɪ
Ivalino	lʲɪˈkʊɖ	ʂʊˈʂʊʔ	pʊʂˈŋɪ
Itbayat	lɪˈʧʊd	sʊˈsʊ	pɪsˈɲɪʔ
Ivasay	lɪˈkʊd	ˈsʊːsʊ	pɪsˈŋɪ
Isamorong	dɪˈtʃʊd	sʊˈsʊʔ	pɪsˈɲɪʔ
Ibatan	dɪˈʧʊd	ˈsʊːsʊʔ	ˈpɪsɲɪʔ

For *lɪˈkʊd ‘back’, since stress falls on the ultima in all the daughter languages, Proto-Batanic stress is similarly reconstructed on the ultima. However, for *sʊˈsʊʔ ‘breast’, Ivasay deviates from the

other daughter languages in that the stress falls on the penultimate syllable. Since the rest of the Batanic languages manifest stress on the ultima, such is reconstructed for Proto-Batanic.

As seen in the examples above, stress typically falls on the ultimate syllable in Proto-Batanic. Penultimate stress can also be observed, as seen in the cognate sets below:

Penultima	tail	to spit	to cut
PB	*ˈʔɪːpʊs	*ˈtɪpa	*ˈʔaktəb
Iraralay	ˈʔɪːpʊʂ	ˈʧɪːpa	ˈʔaktəb
Iratay	ˈʔɪːpʊʂ	ˈʧɪːpa	ˈʔaktəb
Ivalino	ˈʔɪːpʊʂ	ˈʧɪːpa	ˈʔaktəb
Itbayat	ʔɪˈpʊs	(mɪ)ˈtɪːpah	ʔaktəˈvən
Ivasay	ʔɪˈpʊs	-	-
Isamorong	-	ˈʧɪːpaʔ	ˈʔaktəb
Ibatan	ˈʔɪːpʊs	ˈʧɪːpaʔ	-

4.2. Syllable structure

Based on the reconstructed proto-morphemes, the syllable structure of Proto-Batanic may either be CV or CVC. No consonant clusters within the syllable were observed. The following are some examples:

	bat	earwax	they	water	night	sugarcane
PB	***pa**.nɪ.ˈkɪʔ*	***tɪ**.ˈlʊʔ*	***sɪ**.ˈra*	*da.ˈ**nʊm***	*ʔa.ˈ**ɣəp***	*ʔʊ.ˈ**nas***
Iraralay	pa.nɪ.ˈʧɪʔ	ʧɪ.ˈlʊʔ	ʂɪ.ˈʈa	ɽa.ˈnʊm	ʔa.ˈwəp	ʔʊ.ˈnaʂ
Iratay	pa.nɪ.ˈʧɪʔ	ʧɪ.ˈlʊʔ	ʂɪ.ˈʈa	ɽa.ˈnʊm	ʔa.ˈwəp	ʔʊ.ˈnaʂ
Ivalino	pa.nɪ.ˈʧɪʔ	ʧɪ.ˈlʊʔ	ʂɪ.ˈʈa	ɽa.ˈnʊm	ʔa.ˈwəp	ʔʊ.ˈnaʂ
Itbayat	pa.nɪ.ˈʧɪʔ	tɪ.ˈlʊʔ	sɪ.ˈra	ra.ˈnʊm	ʔa.ˈɣəp	ʔʊ.ˈnas
Ivasay	pa.nɪ.ˈʧɪ	tɪ.ˈdʊ	sɪ.ˈraʔ	da.ˈnʊm	(m)a.ˈhəp	ʔʊ.ˈnas
Isamorong	pa.nɪ.ˈʧɪʔ	ʧɪ.ˈdʊʔ	sɪ.ˈraʔ	ra.ˈnʊm	(m)a.ˈhəp	ʔʊ.ˈnas
Ibatan	pa.ˈnɪː.ʧɪʔ	ˈʧɪː.dʊʔ	ˈsɪː.ra	ra.ˈnʊm	(m)a.ˈhəp	ʔʊ.ˈnas

4.3. Sound changes

Discussed previously, regular sound correspondences among the Batanic languages are evident, leading to the reconstruction of proto-forms in Proto-Batanic. In this section, several sound changes observable in the descent of the daughter languages are presented.

4.3.1. Unconditioned sound changes

From Proto-Batanic, certain sounds changed unconditionally in the daughter languages. Unconditioned sound changes are those that occur without any conditioning environment/s influencing the form of the sound (Crowley, 1997, p. 63).

4.3.1.1. Loss of Proto-Batanic *h

The Proto-Batanic glottal fricative *h is lost unconditionally in the rest of the Batanic languages except Itbayat. The loss of the consonant word-initially gave rise to the epenthesis of the glottal stop /ʔ/ (discussed in §4.3.2.4).

	fire	long	fingernail
PB	*haˈpʊy	*(ma)hanaˈrʊʔ	*kʊˈkʊh
Iraralay[19]	ʔaˈpʊj	ʔaˈnaːɽʊʔ	kʊˈkʊ
Iratay	ʔaˈpʊj	ʔaˈnaːɽʊʔ	kʊˈkʊ
Ivalino	ʔaˈpʊj	ʔaˈnaːɽʊʔ	kʊˈkʊʔ
Itbayat	haˈpʊj	(ma)hanaˈrʊʔ	kʊˈkʊh
Ivasay	ʔaˈpʊj	ˈ(m)aːnarʊʔ	kʊˈkʊʔ
Isamorong	ʔaˈpʊj	ˈ(m)aːnarʊ	kʊˈkʊ
Ibatan	ʔaˈpʊj	ˈ(m)aːnarʊʔ	kʊˈkʊʔ

4.3.1.2. Retroflexion of Proto-Batanic *d and *s

In Yami, the Proto-Batanic alveolar consonants *d and *s underwent retroflexion, thus taking the forms /ɖ/ and /ʂ/ respectively. Such process is observed in all environments, as seen below.

[19] Boxed data sets exclude languages which do not manifest the feature/sound change discussed.

	two	old	wings
PB	*dadʊˈha	*ʔaˈdan	*papaˈnɪd
Iraralay	ɖʊˈwa	ʔaˈɖan	paˈɲɪɖ
Iratay	ɖʊˈwa	ʔaˈɖan	paˈɲɪɖ
Ivalino	-	ʔaˈɖan	paˈɲɪɖ
Itbayat	ˈdʊːha	ʔaˈdan	paˈnɪd
Ivasay	dadˈwa	ʔaˈdan	papaˈnɪd
Isamorong	dadˈwa	ʔaˈdan	paˈɲɪd
Ibatan	dadˈwaʔ	ʔaˈdan	paˈɲɪd

	nine	salt	thin
PB	*sasɪˈyam	ʔaˈsɪn	*tarɪˈpɪs
Iraralay	ʂjam	ʔaˈʂɪn	taɽɪˈpɪʂ
Iratay	ʂjam	ʔaˈʂɪn	taɽɪˈpɪʂ
Ivalino	ʂjam	ʔaˈʂɪn	taɽɪˈpɪʂ
Itbayat	saˈsjam	ʔaˈsɪn	(ma)tarɪˈpɪs
Ivasay	sjam	ʔaˈsɪn	(ma)tarɪˈpɪs
Isamorong	saˈsjam	ʔaˈsɪn	(ma)tarɪˈpɪs
Ibatan	saˈʃam	ʔaˈsɪn	(ma)tarɪˈpɪs

4.3.1.3. Fortition of Proto-Batanic *ɣ

Crowley (1997) presents several generalizations on the strength of speech sounds based on their sonority hierarchy (i.e. the less sonorous, the stronger). His proposed sonority hierarchy is presented below (p. 37):

Vowels > Rhotics > Laterals > Nasals > Voiced Fricatives >

Voiceless Fricatives > Voiced Stops > Voiceless Stops

In the case of Proto-Batanic *ɣ, the consonant is only retained in Itbayat, whereas it underwent fortition (i.e. strengthening) to a voiceless glottal fricative /h/ in Ivasay, Isamorong, and Ibatan. In Yami, the consonant shifted to the uvular fricative /ʁ/.

	spittle	smoke	sibling
PB	*ŋaˈɣay	*ʔaˈɣʊb	*kakˈtəɣ
Iraralay	ŋaˈʁaj	ʔaˈʷʊb	kakˈtəː
Iratay	ŋaˈʁaj	ʔaˈʷʊb	kəˈtəː
Ivalino	ŋaˈʁaj	ʔaˈʷʊb	kəˈtəː
Itbayat	ŋaˈɣaj	ʔaˈɣʊb	kakˈtəɣ
Ivasay	ŋaˈhaj	ʔaˈhʊb	kakˈtəh
Isamorong	ŋaˈhaj	ʔaˈhʊb	kakˈtəh
Ibatan	ŋaˈhaj	ʔaˈhʊb	kakˈtəh

Following the shift of this proto-phoneme to a uvular fricative /ʁ/ in Iraralay, Iratay, and Ivalino, the uvular fricative /ʁ/ undergoes lenition (discussed previously in §3.9.3) accompanied by secondary sound changes such as compensatory lengthening and vowel breaking, as in Proto-Batanic *kakˈtəɣ ‘sibling’ > Yami [kakˈtəː]/[kəˈtəː] and Proto-Batanic *ʔaˈɣʊb > Yami [ʔaˈʷʊb] (discussed in §4.3.2.5 and 4.3.2.6 respectively). Such changes, however, is not manifested by the glottal fricative /h/ in Ivasay, Isamorong, and Ibatan. These changes are discussed further in Chapter 5.

4.3.1.4. Fortition of the intermediate /v/ > /b/

Discussed in §4.3.2.2.3. below, Proto-Batanic *b weakened into the fricative /v/ in certain positions in all the daughter languages. However, in Ibatan, this intermediate /v/ underwent subsequent strengthening, reverting to /b/ in all positions (also discussed in §4.1.1.1).

	stomach	black	woman
PB	*bʊˈləkˈ	*mabaˈɣəŋ	*mabaˈkəs
Iraralay	fəˈlək	mavaˈʷəŋ	mavaˈkəʂ
Iratay	fəˈlək	mavaˈʷəŋ	mavaˈkəʂ
Ivalino	fəˈlək	maˈfaːʷəŋ	mafaˈkəʂ
Itbayat	vʊˈlək	mavaˈwʊŋ	mavaˈkəs
Ivasay	bəˈdək	mavaˈhəŋ	mavaˈkəs
Isamorong	vəˈdək	mavaˈhəŋ	mavaˈkəs
Ibatan	bʊˈdək	mabaˈhəŋ	mabaˈkəs

Thus, in Ibatan, the descent of Proto-Batanic *b can be observed in the development of *bʊˈlək ‘stomach’: *bʊˈlək > vʊˈdək > bʊˈdək.

4.3.1.5. Devoicing of the intermediate /v/ > /f/

The voiced, labiodental, fricative /v/ (a reflex of Proto-Batanic *b) tends to undergo devoicing in the Yami varieties Iratay and Ivalino unconditionally. The following are illustrative:

	ant	stomach	blind
PB	*bʊɣaˈwuʔ	*bʊˈlək	*mabʊˈtaʔ
Iraralay	vaʁaˈwʊʔ	fəˈlək	mafʊˈtaʔ
Iratay	faʷaˈwʊʔ	fəˈlək	mafʊˈtaʔ
Ivalino	ˈfaːwʊʔ	fəˈlək	mafʊˈtaʔ
Itbayat	-	vʊˈlək	mavʊˈtaʔ
Ivasay	vʊhaˈwʊʔ	bəˈdək	-
Isamorong	vʊhaˈwʊʔ	vəˈdək	mavʊˈtaʔ
Ibatan	bʊhaˈwʊʔ	bʊˈdək	-

4.3.2. Conditioned sound changes

Conditioned sound changes, as opposed to those discussed in §4.3.1., are changes that have arisen because of certain conditioning environments (Crowley, 1997, p. 64). Instead of the expected reflexes in the daughter languages then, certain aberrant forms are observed, as influenced by these environments.

4.3.2.1. Assimilation

Assimilation is the process in which a certain sound influences a nearby sound to assume a similar form or feature (Crowley, 1997, p. 48). In this section, two common types of assimilation in the development of the Batanic languages are presented: (1) vowel harmony and (2) palatalization.

4.3.2.1.1. Vowel harmony

Assimilation typically involves two adjacent sounds, but it can sometimes occur at a distance as well. In the case of vowel harmony, a vowel assimilates to one or more features of another vowel within the word (Crowley, 1997, p. 53).

	ant	mosquito	navel
PB	*bʊɣaˈwuʔ	*tamʊˈnəŋ	*pʊˈsəd
Iraralay	vaʁaˈwʊʔ	tamʊˈnʊŋ	pəˈʂəɖ
Iratay	faʷaˈwʊʔ	tamʊˈnʊŋ	pəˈʂəɖ
Ivalino	ˈfaːwʊʔ	tamʊˈnʊŋ	pəˈʂəɖ
Itbayat	-	-	pəˈsəd
Ivasay	vʊhaˈwʊʔ	təməˈnəŋ	pəˈsəd
Isamorong	vʊhaˈwʊʔ	təməˈnəŋ	pʊˈsəd
Ibatan	bʊhaˈwʊʔ	tamʊˈnəŋ	pʊˈsəd

In *bʊɣaˈwuʔ ‘ant’, the vowel /ʊ/ assimilates to the low vowel /a/ in Iraralay, Iratay, and Ivalino. In *tamʊˈnəŋ ‘mosquito’, the central vowel /ə/ assimilates to the vowel /ʊ/ in Yami, whereas the reverse is observed in Ivasay and Isamorong. Finally, in *pʊˈsəd ‘navel’, the vowel /ʊ/ completely assimilates to the vowel /ə/ in all languages except Isamorong and Ibatan.

4.3.2.1.2. Palatalization

Palatalization occurs when a specific consonant assimilates to the palatal feature of the adjacent vowel, typically the vowel /ɪ/ or the semi-vowel /j/ (Crowley, 1997, p. 51). Synchronically, the process is observable in the daughter languages as discussed in §3.9. Historically, such is also the case. The following are illustrative:

	earwax	here	elbow	to hang on	wings	teeth
PB	*tɪˈlʊʔ	*dɪˈyaʔ	*sɪˈkʊh	*saˈgɪt	*papaˈnɪd	*ŋɪˈpən
Iraralay	ʧɪˈlʊʔ	ʤaʔ	ˈʂɪːkʊ	ʂaˈgɪt	paˈnʲɪd	ˈŋəːpən
Iratay	ʧɪˈlʊʔ	ʤaʔ	ˈʂɪːkʊ	ʂaˈgɪt	paˈnʲɪd	ˈŋəːpən
Ivalino	ʧɪˈlʊʔ	ʤaʔ	ˈʂɪːkʊ	ʂaˈgɪt	paˈnʲɪd	ˈŋəːpən
Itbayat	tɪˈlʊʔ	dɪˈjaʔ	sɪˈtʃʊh	saˈʤɪt	paˈnɪd	ɲɪˈpən
Ivasay	tɪˈdʊ	ˈdjaːja	sɪˈʧʊʔ	saˈʤɪt	papaˈnɪd	ɲɪˈpən
Isamorong	ʧɪˈdʊʔ	ˈʤaːja	sɪˈʧʊ	saʤɪˈtən	paˈɲɪd	ɲɪˈpən
Ibatan	ˈʧɪːdʊʔ	ˈdʊːʤa	ˈsɪːʧʊʔ	(matʃɪ)saˈʤɪt	paˈɲɪd	ɲɪˈpən

The consonants *t, *d, *k, *g, *n, and *ŋ regularly underwent palatalization whenever they occur contiguous with the vowel *ɪ. This sound change gave rise to the palatals /ʧ, ʤ, and ɲ/.

In rule form, this is expressed as:

$$\begin{pmatrix} *t,\ *k \\ *d,\ *g \\ *n,\ *ŋ \end{pmatrix} \rightarrow \begin{pmatrix} ʧ \\ ʤ \\ ɲ \end{pmatrix} \ / \ \left\{ \begin{matrix} \_\_ɪ\ (C) \\ ɪ\_\_V \end{matrix} \right\}$$

Yami presents an interesting scenario in that the velars *k, *g, and *ŋ in Proto-Batanic did not undergo this process, as in Proto-Batanic *sɪˈkʊh ‘elbow’ > Yami [ˈʂɪːkʊ]. On the contrary, alveolar stops *t, *d, and *n manifest such palatalization, as in Proto-Batanic *tɪˈlʊʔ ‘earwax’ > Yami [ʧɪˈlʊʔ].

Itbayat and Ivasay present a complementary distribution of this sound change, in that this palatalization seems to exclude alveolar stops, and is only restricted to velar consonants, as in the following: Proto-Batanic *saˈgɪt 'to hang on' > Itbayat and Ivasay [saˈʤɪt] and Proto-Batanic *tɪˈlʊʔ 'earwax' > Itbayat [tɪˈlʊʔ] and Ivasay [tɪˈdʊ].

It can be said that this palatalization of the stops and nasals (i.e. non-continuants or sounds which are produced with an incomplete closure of the vocal tract) in the Batanic languages are in flux. This is attributed to the natural tendency of languages to move towards a balanced system of sounds. Specifically, in the Batanic microgroup, a more recent set of palatal consonants is added to the languages' sound inventory. In the case of Isamorong and Ibatan, both alveolar and velar consonants manifest this palatalization.

4.3.2.2. Lenition

The counterpart of fortition, lenition is the weakening of a segment (Crowley, 1997, p. 37). As discussed previously in §4.3.1.3, sounds follow a sonority hierarchy, in which the less sonorous sounds are considered stronger. Repeated below is the hierarchy proposed by Crowley (1997, p. 37):

Vowels > Rhotics > Laterals > Nasals > Voiced Fricatives >

Voiceless Fricatives > Voiced Stops > Voiceless Stops

4.3.2.2.1. Loss of Proto-Batanic *ʔ

The glottal stop is deleted in Yami, Isamorong, and Ibatan whenever it occurs inter-vocalically (*ʔ → Ø / V_V).

	to sneeze	thigh
PB	*baʔˈnan	*paˈʔa
Iraralay	-	ˈʔʊːpa
Iratay	-	ˈʔʊːpa
Ivalino	-	ˈʔʊːpa
Itbayat	(mɪ)ˈvaːnan	paˈʔa
Ivasay	vaʔˈnan	pa
Isamorong	vaˈnan	paː
Ibatan	(maj)baˈnan	-

In Itbayat and Ivasay, the consonant is retained, as in the Itbayat /paˈʔa/ ‘thigh’ and the Ivasay /vaʔˈnan/ ‘to sneeze’. In the cognate set for *paˈʔa ‘thigh’, the loss of the word-medial glottal stop in Isamorong resulted to the fusion of the remaining identical vowels (discussed in §4.3.4) giving rise to the lenghtened /a/ in /paː/. Ivasay is assumed to have followed a similar process, subsequently losing the lengthening in the aforementioned vowel, thus the form /pa/.

4.3.2.2.2. Rhotacism of Proto-Batanic *d and *l

Rhotacism is the weakening of a consonant to a rhotic (Crowley, 1997, p. 38). In the case of *d, the consonant weakens to a rhotic (/ɽ/ in Iraralay, Iratay, and Ivalino and /r/ in Itbayat, Isamorong, and Ibatan) in word-initial position, as in *daˈnʊm 'water' and *daˈyʊm 'needle' below.

	water	needle
PB	*daˈnʊm	*daˈyʊm
Iraralay	ɽaˈnʊm	ɽaˈjʊm
Iratay	ɽaˈnʊm	ɽaˈjʊm
Ivalino	ɽaˈnʊm	ɽaˈjʊm
Itbayat	ranʊm	raˈjəm
Ivasay	daˈnʊm	daˈjəm
Isamorong	raˈnʊm	raˈjʊm
Ibatan	raˈnʊm	raˈjəm

	neck	wind	heart
PB	*laˈgaw	*salawˈsaw	*taˈwʊl
Iraralay	ˈra:gaw	ʂarʊwˈʂaw	taˈʷʊr
Iratay	ˈra:gaw	ʂarʊwˈʂaw	taˈʷʊr
Ivalino	raˈgaw	ʂarʊwˈʂaw	taˈʷʊr
Itbayat	raˈgaw	saraw'saw	tawʊr
Ivasay	laˈgaw	salawˈsaw	taˈwəl
Isamorong	laˈgaw	salawˈsaw	taˈwʊl
Ibatan	laˈgaw	saˈlawsaw	-

Moreover, *l undergoes rhotacism in Yami and Itbayat as well. Seen in the examples above, the proto-phoneme becomes a trill /r/ in all environments in the aforementioned languages, except when it occurs contiguous with the vowel /ɪ/, in which it retains its original form as a lateral /l/ (discussed in §4.1.1.4).

4.3.2.2.3. Lenition of Proto-Batanic *b > v

In the Batanic languages except Ibatan, Proto-Batanic *b weakens into a fricative /v/ in word-initial and intervocalic positions (discussed in §4.1.1.1).

	wet	woman	black
PB	*baˈsaʔ	*mabaˈkəs	*mabaˈɣəŋ
Iraralay	vaˈʂa	mavaˈkəs	mavaˈʷəŋ
Iratay	vaˈʂa	mavaˈkəs	mavaˈʷəŋ
Ivalino	faˈʂa	mafaˈkəs	maˈfaːʷəŋ
Itbayat	vaˈsaʔ	mavaˈkəs	mavaˈwʊŋ
Ivasay	vaˈsaʔ	mavaˈkəs	mavaˈhəŋ
Isamorong	vaˈsaʔ	mavaˈkəs	mavaˈhəŋ
Ibatan	baˈsaʔ	mabaˈkəs	mabaˈhəŋ

As discussed previously, Ibatan is assumed to have undergone the same sound change. With its separation from the rest of the Batanic languages and subsequent contact with other distantly-related languages, the fricative /v/ reverted to its original form as a bilabial stop /b/ in all environments (discussed in §4.3.1.4 above).

4.3.2.2.4. Haplology

Haplology is a rare kind of lenition that involves the loss of an entire syllable (Crowley, 1997, p. 41). This sound change occurs whenever the syllables involved are identical in form. The following are some examples:

	two	nose	wings
PB	*dadʊˈha	*mʊmʊhˈdan	*papaˈnɪd
Iraralay	ɖʊˈwa	mʊmʊˈɖan	paˈɲɪɖ
Iratay	ɖʊˈwa	mʊmʊˈɖan	paˈɲɪɖ
Ivalino	-	mʊmʊˈɖan	paˈɲɪɖ
Itbayat	ˈdʊːha	mʊhˈdan	paˈnɪd
Ivasay	dadˈwa	mʊmʊˈdan	papaˈnɪd
Isamorong	dadˈwa	mʊmʊˈdad	paˈɲɪd
Ibatan	dadˈwaʔ	mamʊˈdan	paˈɲɪd

In *dadʊˈha ‘two’, the deletion of the first syllable is observed in Iraralay, Iratay, and Itbayat, whereas in *mʊmʊhˈdan ‘nose’, the first syllable is deleted in Itbayat. In *papaˈnɪd ‘wings’, the initial syllable is deleted in all the Batanic languages except Ivasay.

4.3.2.3. Fortition

Discussed in this section are the different segments that underwent strengthening in the Batanic languages.

4.3.2.3.1. Fortition of Proto-Batanic *l > d

As the Proto-Batanic *l tends to weaken to a rhotic in Yami and Itbayat (discussed in §4.3.2.2), the consonant tends to strengthen to the alveolar stop /d/ in Ivasay, Isamorong, and Ibatan. This sound change is observed whenever *l occurs contiguous with the vowel /ɪ/ (discussed previously in §4.1.1.4), as in the following examples:

	five	to fight	ear
PB	*dalɪˈmaʔ	*lɪˈman	*talɪˈŋaʔ
Iraralay	lʲɪˈmaʔ	lʲɪˈman	talʲɪˈŋaʔ
Iratay	lʲɪˈmaʔ	lʲɪˈman	talʲɪˈŋaʔ
Ivalino	lʲɪˈmaʔ	lʲɪˈman	talʲɪˈŋaʔ
Itbayat	lɪˈmaʔ	lɪˈman	talɪˈɲaʔ
Ivasay	dadɪˈmaʔ	dɪˈman	tadɪˈɲa
Isamorong	dadɪˈma	dɪˈman	tadɪˈɲaʔ
Ibatan	dadɪˈmaʔ	dɪˈman	taˈʤɪŋŋaʔ

4.3.2.3.2. Fortition of Proto-Batanic *y > l

In Yami, the Proto-Batanic *y becomes the lateral /l/ whenever it occurs in between two identical vowel /a/, or word-initially preceding the aforementioned vowel (discussed previously in §4.1.1.5). The following cognate sets are illustrative:

	to run	blood	canoe
PB	*yaˈyʊh	*raˈyaʔ	*tataˈya
Iraralay	(pa)laˈjʊ	ɽaˈlaʔ	tataˈlaʔ
Iratay	(pa)laˈjʊ	ɽaˈlaʔ	tataˈlaʔ
Ivalino	(pa)laˈjʊ	ɽaˈlaʔ	tataˈlaʔ
Itbayat	(ma)jaˈjʊh	raˈjaʔ	tataˈja
Ivasay	jaˈjʊ	raˈja	tataˈja
Isamorong	jaˈjʊʔ	raˈja	tataˈja
Ibatan	(ma)jaˈjʊʔ	raˈjaʔ	-

4.3.2.4. Epenthesis of the glottal stop /ʔ/

The glottal fricative /h/ undergoes weakening in all environments except Itbayat (discussed in §4.3.2.1). The loss of the aforementioned consonant word-initially leaves a gap in the phonotactics of the languages. To follow the expected CV(C) syllable structure of the Batanic languages, a glottal stop /ʔ/ is inserted in the word-initial position. Thus, in *haˈpʊn 'dew' below, the following development can be observed: *haˈpʊn > aˈpʊn > ʔaˈpʊn.

	dew	fire	shrimp
PB	*haˈpʊn	*haˈpʊy	*hɪˈpʊn
Iraralay	-	ʔaˈpʊj	ʔɪˈpʊn
Iratay	-	ʔaˈpʊj	ʔɪˈpʊn
Ivalino	-	ʔaˈpʊj	ʔɪˈpʊn
Itbayat	haˈpʊn	haˈpʊj	hɪˈpʊn
Ivasay	ˈʔaːpʊn	ʔaˈpʊj	ʔɪˈpən
Isamorong	ʔaˈpʊn	ʔaˈpʊj	ʔɪˈpʊn
Ibatan	ʔaˈpʊn	ʔaˈpʊj	ʔɪˈpʊn

4.3.2.5. Fusion/Compensatory lengthening

A secondary sound law in relation to the lenition of segments discussed previously is a type of vowel fusion called compensatory lengthening. Since the intervocalic consonants were previously lost, a two-vowel sequence remains. As this sequence is not permitted in the phonotactics of the Batanic languages, the remaining vowels undergo a type of fusion. This specific sound change applies if the two remaining vowels are identical (V_1V_1). Thus, the resulting vowel appears lengthened (Crowley, 1997, p. 46).

	knee	long	sibling
PB	*tʊˈhʊd	*(ma)hanaˈrʊʔ	*kakˈtəɣ
Iraralay	ʔʊˈtʊɖ	ʔaˈnaːɽʊʔ	kakˈtəː
Iratay	ʔʊˈtʊɖ	ʔaˈnaːɽʊʔ	kəˈtəː
Ivalino	ʔʊˈtʊɖ	ʔaˈnaːɽʊʔ	kəˈtəː
Itbayat	tʊˈhʊd	(ma)hanaˈrʊʔ	kakˈtəɣ
Ivasay	tʊd	ˈ(m)aːnarʊʔ	kakˈtəh
Isamorong	tʊːd	ˈ(m)aːnarʊ	kakˈtəh
Ibatan	tʊd	ˈ(m)aːnarʊʔ	kakˈtəh

As seen in *(ma)hanaˈrʊʔ ‘long’ above, the intervocalic /h/ is deleted in the Batanic languages except in Itbayat, and the V_1V_1 that remain in Ivasay, Isamorong, and Ibatan undergo fusion. The resulting vowel appears lengthened, firstly in compensation for the deleted consonant, and

secondly in application of the languages' phonotactic rules. The same is also true for *tʊˈhʊd 'knee', in which the word-medial /h/ is deleted and a subsequent fusion applies, thus the lengthening in Isamorong /tʊːd/.

For *kakˈtəɣ 'sibling', compensatory lengthening is seen in Iraralay, Iratay, and Ivalino, after the synchronic loss of the word-final consonant /ʁ/ (discussed in §3.9.3).

4.3.2.6. Vowel breaking

Another subsequent sound law operating after the loss of an intervocalic consonant is vowel breaking that applies when the two remaining vowels are different (V_1V_2). Similar to fusion, this sound change applies as the two-vowel sequence within a word is not permitted in the phonotactics of the Batanic languages. In vowel breaking, the second vowel breaks, retaining the original form and adding a glide before it (Crowley, 1997, p. 47). The following examples are illustrative:

	white	paddle	smoke
PB	*(ma)hɪˈlak	*kaˈhʊd	*ʔaˈɣʊb
Iraralay	-	-	ʔaˈʷʊb
Iratay	-	-	ʔaˈʷʊb
Ivalino	-	-	ʔaˈʷʊb
Itbayat	(ma)ˈhɪːlak	kaˈhʊd	ʔaˈɣʊb
Ivasay	(ma)jˈdak	kaˈwʊd	ʔaˈhʊb
Isamorong	(ma)jˈdak	kaˈwʊd	ʔaˈhʊb
Ibatan	ˈ(ma)jdak	ˈkawd(an)	ʔaˈhʊb

The clearest example of vowel breaking is *kaˈhʊd ‘paddle’, in which the intervocalic *h is lost in Ivasay, Isamorong, and Ibatan. The second consonant of the V_1V_2 sequence breaks into the glide /w/ and the vowel /ʊ/, giving rise to the current form /kawʊd/ (i.e. *kahʊd > kaʊd > kawʊd). Looking into other examples such as *mahɪˈlak ‘white’, the sound law that applies may also be an instance of vowel breaking, in which a subsequent syncope (deletion of word-medial segment) is also observable, as in *mahɪdak > maɪdak > majɪdak > majdak.

In *ʔaˈɣʊb ‘smoke’, the synchronic loss of the medial /ʁ/ in Iraralay, Iratay, and Ivalino, gave rise to vowel breaking, i.e. Proto-Batanic *ʔaˈɣʊb > Yami ʔaˈʁʊb > ʔaˈʊb > ʔaˈʷʊb (discussed in §3.9.3).

4.3.2.7. Metathesis

Metathesis involves the change in the order of sounds (Crowley, 1997, p. 44). In Yami, the metathesis of /t/ and /ʊ/ in *tʊˈhʊd can be seen. Moreover, /r/ and /ɽ/ also underwent metathesis in Iraralay, as seen in *sərɪl 'fish spp. (caesio)'.

	knee	fish spp. (caesio)[20]
PB	*tʊˈhʊd	*sərɪl
Iraralay	ʔʊˈtʊɖ	ʂərəɽ
Iratay	ʔʊˈtʊɖ	-
Ivalino	ʔʊˈtʊɖ	-
Itbayat	tʊˈhʊd	sərər
Ivasay	tʊd	-
Isamorong	tʊːd	sɪrɪl
Ibatan	tʊd	-

[20] Tsuchida, *et. al* (1987: 129)

4.4. Summary

Presented below are the regular sound correspondences in the Batanic languages.

Table 8: Sound correspondences in the Batanic languages

PB	Iraralay	Iratay	Ivalino	Itbayat	Ivasay	Isamorong	Ibatan
*p	p	p	p	p	p	p	p
*b	b	b	b	b	b	b	b
*t	t	t	t	t	t	t	t
*d	ɖ	ɖ	ɖ	d	d	d	d
*k	k	k	k	k	k	k	k
*g	g	g	g	g	g	g	g
*ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ
*m	m	m	m	m	m	m	m
*n	n	n	n	n	n	n	n
*ŋ	ŋ	ŋ	ŋ	ŋ	ŋ	ŋ	ŋ
*s	ʂ	ʂ	ʂ	s	s	s	s
*ɣ	ʁ	ʁ	ʁ	ɣ	h	h	h
*h	Ø	Ø	Ø	h	Ø	Ø	Ø
*l	r	r	r	r	l	l	l
*r	ɽ	ɽ	ɽ	r	r	r	r
*w	w	w	w	w	w	w	w
*y	y	y	y	y	y	y	y
*ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ	ɪ
*ʊ	ʊ	ʊ	ʊ	ʊ	ʊ	ʊ	ʊ
*ə	ə	ə	ə	ə	ə	ə	ə
*a	a	a	a	a	a	a	a

As observed, *d and *s underwent unconditioned retroflexion in Iraralay, Iratay, and Ivalino, thus corresponding to the retroflex consonants /ɖ/ and /ʂ/ respectively. The velar fricative *ɣ is only

retained in Itbayat, whereas it became a uvular fricative /ʁ/ in Yami, and a glottal fricative /h/ in Ivasay, Isamorong, and Ibatan. Proto-Batanic *h, on the contrary, was lost in the rest of the Batanic languages except Itbayat. Thus, it can be said that the current /h/ found in some of the Batanic languages are reflexes of Proto-Batanic *ɣ instead of *h.

The lateral *l became a rhotic /r/ in Yami and Itbayat, whereas it retained its form in the rest of the Batanic languages. Moreover, the trill *r corresponds to the retroflex /ɽ/ in Yami.

Despite the regularity of the sound correspondences, aberrant forms among the Batanic languages are observed as influenced by certain environments. The constant application of the sound changes outlined in §4.3. has given rise to various phonemes in the daughter languages at present, such as the palatals /ʧ, ʤ, and ɲ/, as well as the voiced fricative /v/.

From the correspondences presented in Table 8 above, a reconstruction of Proto-Batanic phonemes is proposed. Going back, Yang (2002) reconstructs nineteen consonants and four vowels, namely /*p, *b, *t, *d, *k, *g, *q, *m, *n, *N, *r, *R, *s, *h, *w, *y, *l_1, *l_2, *L, *i, *o, *e, and *a/. The reconstruction presented here (see Tables 6 and 7) differs from the aforementioned regarding (1) the number of phonemes (a single *l instead of *l_1 and *L, and a merger of *R and *y), and (2) the form of some sounds (namely *ŋ, *ɣ, *ʔ, *ɪ, *ə, and *ʊ). Moreover, stress (typically found on the ultima and penultima) is also reconstructed here under Proto-Batanic.

5

TRACING ANCESTRY AND DESCENT

In Chapter 4, regular sound correspondences within the Batanic microgroup as well as the reconstruction of the Proto-Batanic phonology are presented. This systematic comparison of forms in the daughter languages also points which languages within the microgroup are more closely related. In classifying languages under a single subgroup, it is assumed that exclusively shared similarities found in these languages are actually innovations indicating a period of common history. Similarities that have arisen because of borrowings and parallel development (i.e. same but independent changes) must be ruled out. In determining plausible innovations, it is necessary to look for (1) changes that are particularly unusual, (2) sets of phonological changes which are not expected to be connected, and (3) parallel but independent grammatical, lexical, or semantic changes (Crowley, 1997, p. 169).

In this chapter, the descent of the Batanic languages based on the kinds of innovations outlined above is presented. Moreover, the issue of ancestry is also discussed, particularly the external relationship of Proto-Batanic with its putative ancestor Proto-Philippines. In dealing with the

connection of Proto-Batanic to PPh, arguments and issues raised by Ross (2005) are revisited. External evidence from genetics and archaeology, corresponding to the linguistic claims presented here are also utilized.

5.1. Tracing the descent of Proto-Batanic

From the sound changes discussed in §4.3, shared phonological innovations among the daughter languages are identified to sketch out the plausible subgrouping of the Batanic microgroup. Subsequently, parallel lexical, grammatical, and semantic changes supporting this subgrouping hypothesis are also determined.

A brief examination of the reconstructions and sound changes presented in the previous chapter leads to the conclusion that Itbayat is phonologically the most conservative of the Batanic languages as it retains all the phonemes of Proto-Batanic. Yami, Ivasay, Isamorong, and Ibatan, for instance, lost Proto-Batanic *h in all environments.

Data from Tsuchida, *et al.* (1987) regarding the Batanic determiners and pronouns illustrate morphosyntactic retentions of the Proto-Batanic system. In particular, Itbayat clearly retained the ancestral system of nominal marking. Consider the following:

Table 9: The nominal markers of the Batanic languages (Tsuchida, *et al.*, 1987, p. 22)

	Nominative	Genitive	Locative	Oblique
Yami	u	nu	du	su
Itbayat	i/u	ni/nu	di/du	si/su
Ivasay	u	nu	du	su
Isamorong	u	nu	du	su
Ibatan	u	nu	du	su

As seen in Table 9 above, Itbayat manifests two sets of nominal markers that specify proximity. Ross (2005) analyzes such sets as retention of the Proto-Malayo-Polynesian nominal marking system, presented in Table 10 below:

Table 10: The nominal markers of Proto-Malayo-Polynesian (Ross, 2005, p. 16)

	Nominative	Genitive	Locative	Oblique
*-i grade	*i	*ni	*di, *i	*si
*-a grade	*a	*na	*da	*ta, *sa
*-u grade	*u	*nu	*du (?)	*tu, *su

Ross (2005) characterizes the different grades of the determiners as indicators of spatial relations (i.e. relative to the distance of speaker/hearer), time (past/present/future), specificity, and definiteness (pp. 15-16). It can be observed that the rest of the Batanic languages except Itbayat lost such feature in their nominal marking system.

Despite the conservatism of Itbayat regarding phonology and the aforementioned nominal marking system, the remaining Batanic languages cannot be immediately grouped together as the innovations presented above are quite common even outside the microgroup. For instance, the loss of the glottal fricative /h/ is a fairly common change that may be explained by drift or parallel development (e.g. PMP *hapuy 'fire' (Blust, 1999) > Itbayat and Bontok [hapʊj], and Yami, Ivasay, Ilokano, Sambal, and Molbog [ʔapʊj]). The loss of the grade contrast in the determiners can also be found in other Philippine or Malayo-Polynesian languages.

Considering other phonological, lexical, and semantic innovations (presented §5.1.1 to §5.1.2.1), Ivasay, Isamorong, and Ibatan are found to be much closer, and that Iraralay, Iratay, and Ivalino form a distinct subgroup as well. Presented in the following sections are the different innovations supporting the validity of these lower-order subgroups.

5.1.1. Yami: Iraralay-Iratay-Ivalino

Geo-politically, it is quite straightforward to assume that the Yami varieties Iraralay, Iratay, and Ivalino are separate from the rest of the Batanic languages. Within this Yami subgroup, it is proposed that Iratay and Ivalino form a lower-order subgroup, separate from Iraralay, presented in Figure 16 below. This is discussed in §5.1.1.1.

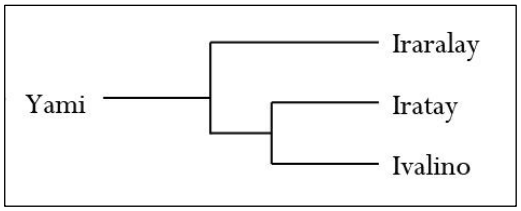


Figure 16: Internal subgrouping of Yami

In terms of phonology, there are several innovations within the Yami varieties that cannot be found in the rest of the Batanic languages.

First, a shift of the Proto-Batanic *ɣ to a uvular fricative /ʁ/ in Yami is evident.

	spittle	shoulder	sky
PB	*ŋaˈɣay	*paˈkʊɣ	*ɣaˈŋɪt
Iraralay	ŋaˈʁaj	paˈkaw	ˈʔaːŋɪt
Iratay	ŋaˈʁaj	paˈkaw	ˈʔaːŋɪt
Ivalino	ŋaˈʁaj	paˈkaw	ˈʔaːŋɪt
Itbayat	ŋaˈɣaj	paˈkʊɣ	ɣaˈɲɪt
Ivasay	ŋaˈhaj	paˈkʊh	-
Isamorong	ŋaˈhaj	paˈkʊh	haˈɲɪt
Ibatan	ŋaˈhaj	paˈkʊh	haˈɲɪt

Although there is indeed a shift of the proto-phoneme to another consonant in all the Batanic languages except Itbayat, the Yami /ʁ/ tends to undergo synchronic lenition, as seen in *paˈkʊɣ 'shoulder' and *ɣaˈŋɪt 'sky' above (discussed in §3.9.3). Such change is not manifested in Ivasay, Isamorong, and Ibatan. Adding to the fact that the consonant takes two different forms in the two subgroups (i.e., /ʁ/ in Yami and /h/ in Ivasay, Isamorong, and Ibatan), this peculiar behavior of the consonant in Yami leads us to assume that the development of this proto-phoneme in the two subgroups (i.e. Yami and Ivasay-Isamorong-Ibatan) is separate.

Additionally, the Proto-Batanic consonants *y and *l merged in Yami. As discussed in §4.3.2.3.2, Proto-Batanic *y takes the form of the lateral /l/ whenever it occurs in between two low vowels or in the word-initial position preceding /a/.

	canoe	to run	to walk
PB	*tataˈya	*yaˈyʊh	*haˈyam
Iraralay	tataˈlaʔ	(pa)laˈjʊ	ˈʔaːlam
Iratay	tataˈlaʔ	(pa)laˈjʊ	ˈʔaːlam
Ivalino	tataˈlaʔ	(pa)laˈjʊ	ˈʔaːlam
Itbayat	tataˈja	(ma)jaˈjʊh	h(ʊm)aˈjam
Ivasay	tataˈja	jaˈjʊ	(m)aˈjam
Isamorong	tataˈja	jaˈjʊʔ	(m)aˈjam
Ibatan	-	(ma)jaˈjʊʔ	(m)aˈjam

Finally, Yami also manifests retroflexion of the Proto-Batanic alveolar consonants *d and *s unconditionally. This feature is regarded as an exclusive innovation of Yami as such retroflex consonants are not found in any of the Batanic languages outside this particular subgroup.

	two	old	salt
PB	*dadʊˈha	*ʔaˈdan	ʔaˈsɪn
Iraralay	ɖʊˈwa	ʔaˈɖan	ʔaˈʂɪn
Iratay	ɖʊˈwa	ʔaˈɖan	ʔaˈʂɪn
Ivalino	-	ʔaˈɖan	ʔaˈʂɪn
Itbayat	ˈdʊːha	ʔaˈdan	ʔaˈsɪn
Ivasay	dadˈwa	ʔaˈdan	ʔaˈsɪn
Isamorong	dadˈwa	ʔaˈdan	ʔaˈsɪn
Ibatan	dadˈwaʔ	ʔaˈdan	ʔaˈsɪn

Several lexical changes are also seen in this subgroup. From the data gathered for this study, it is apparent that Yami manifests quite a number of lexical innovations not seen in the other members of the microgroup. Some of these changes are presented below:

	animal	stomach	white
PB	*bɪnɪˈhay	*bʊˈlək	*(ma)hɪˈlak
Iraralay	ʔʊmʊwmalaˈlam	lʊˈtʊj	laˈfaŋ
Iratay	ʔʊmʊwmalaˈlam	lʊˈtʊj	laˈfaŋ
Ivalino	ʔʊmʊmalaˈlam	lʊˈtʊj	laˈfaŋ
Itbayat	vɪnɪˈhaj	vʊˈlək	(ma)ˈhɪːlak
Ivasay	vɪˈɲaj	bəˈdək	(ma)jˈdak
Isamorong	vɪˈɲaj	vəˈdək	(ma)jˈdak
Ibatan	-	bʊˈdək	ˈ(ma)jdak

Semantic changes also support this subgrouping. Specifically, there are shifts in the meaning of certain lexical items such as those given below.

	evening	to defecate	urine
PB	*(m)aˈɣəp	*taˈkɪ	*ʔʊˈpɪs
Iraralay	kʊˈjab	ˈʔʊːbʊt	taˈʧɪ
Iratay	kʊˈjab	ˈʔʊːbʊt	taˈʧɪ
Ivalino	kʊˈjab	ˈʔʊːbʊt	taˈʧɪ
Itbayat	ʔaˈɣəp	(maka)taˈʧɪ	ˈʔʊːpɪs
Ivasay	(m)aˈhəp	tatˈʧɪ	ˈpəːtəg; ˈʔʊːpɪs
Isamorong	(m)aˈhəp	taˈʧɪʔ	ˈpəːtəg; ˈʔʊːpɪs
Ibatan	(m)aˈhəp	(maka)taˈʧɪʔ	ˈpəːtəg

It is quite complicated to reconstruct the semantics of a proto-language. However, external evidence may be considered (i.e. cognates in distantly-related languages outside the microgroup) to be able to hypothesize the form-meaning correspondence of reconstructed forms.

For instance, the form *taˈkɪ is given the gloss 'to defecate' as cognate sets external to the microgroup also carry such correspondence[21]. In Yami, the meaning of the proto-form has shifted to mean 'urine/to urinate' (reconstructed as Proto-Batanic *ʔʊˈpɪs). Meanwhile, the term /ˈʔʊːbʊt/ has replaced *taˈkɪ in Yami. Moriguchi (2005) writes that the original meaning of the term /ˈʔʊːbʊt/ is 'to go out to the seashore (to get seawater for cooking)', and such term has developed as a

[21]As in the following: Tagalog and Pangasinan /ˈtaːʔɪ/; Agutaynon /taˈkɪ/; Bontok and Ilokano /takˈkɪ/; Ayta Mag-Antsi and Botolan Sambal /taˈkaʔ/; Maguindanao /taj/

euphemism meaning 'going to the beach for excretions' (p. 250). For *(m)aˈɣəp 'evening', Yami has the term /kʊˈjab/, which is assumed to originally mean 'yesterday' in Proto-Batanic.

5.1.1.1. Iratay-Ivalino

The only evidence for this lower-order subgroup within Yami is the devoicing of the labiodental fricative /v/ to /f/ in Iratay and Ivalino. The following examples are illustrative:

	ashes	ant	blind
PB	*ʔaˈbʊʔ	*bʊɣaˈwuʔ	*mabʊˈtaʔ
Iraralay	ˈʔaːvʊʔ	vaʁaˈwʊʔ	mafʊˈtaʔ
Iratay	-	faʷaˈwʊʔ	mafʊˈtaʔ
Ivalino	ˈʔaːfʊʔ	faːˈwʊʔ	mafʊˈtaʔ
Itbayat	ʔaˈvʊʔ	-	mavʊˈtaʔ
Ivasay	ʔaˈvʊʔ	vʊhaˈwʊʔ	-
Isamorong	ʔaˈvʊʔ	vʊhaˈwʊʔ	mavʊˈtaʔ
Ibatan	-	bʊhaˈwʊʔ	-

This subgrouping hypothesis, however, is fairly tentative as this change is said to be a characteristic of younger speakers of Yami (Providence University, 2005). Subgrouping Iratay and Ivalino within Yami then needs further validation.

5.1.2. Ivatan: Ivasay-Isamorong-Ibatan

Adopting the term Ivatan (the name generally used to refer to the language spoken in the islands of Batan and Sabtang) for this lower-order subgroup, it is proposed that Ibatan forms a lower-order subgroup within this branch, separate from Ivasay and Isamorong (discussed in §5.1.2.1).

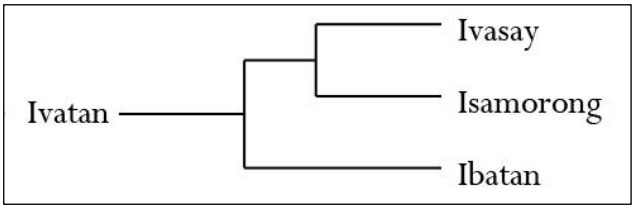


Figure 17: Internal subgrouping of Ivatan

Two distinct phonological innovations unite the Ivatan subgroup. First, Proto-Batanic *ɣ has shifted to a glottal fricative /h/.

	heavy	house	man (male)
PB	*(ma)raɣˈmət	*baˈɣay	*məɣaˈkay
Iraralay	ɽəwˈmət	vaˈʁaj	məʲaˈkaj
Iratay	ɽəwˈmət	vaˈʁaj	məʲaˈkaj
Ivalino	ɽəwˈmət	faˈʁaj	məʲaˈkaj
Itbayat	(ma)raɣˈmət	vaˈɣaj	maɣaˈkaj
Ivasay	(ma)rahˈmət	vaˈhaj	mahaˈkaj
Isamorong	(ma)rahˈmət	vaˈhaj	mahaˈkaj
Ibatan	(ma)rahˈmət	baˈhaj	mahaˈkaj

Moreover, preceding the Proto-Batanic high vowel *ɪ, Proto-Batanic *l in Ivasay, Isamorong, and Ibatan takes the form of the alveolar stop /d/. Thus in this position, the two consonants merged as /d/.

	skin	small	sit
PB	*kʊˈlɪt	*(ʔa)lɪˈkəy	*lɪsˈna
Iraralay	kʊˈl̪ɪt	ˈl̪ɪːkəj	ˈl̪ɪʂna
Iratay	kʊˈl̪ɪt	ˈl̪ɪːkəj	ˈl̪ɪʂna
Ivalino	kʊˈl̪ɪt	ˈl̪ɪːkəj	ˈl̪ɪʂna
Itbayat	kʊˈlɪt	(ʔa)ləˈkəj	-
Ivasay	kʊˈdɪt	ˈdəːkəj	dɪsˈnaʔ
Isamorong	kʊˈdɪt	ˈdəːkəj	dɪsˈnaʔ
Ibatan	kʊˈdɪt	ˈdəːkəj	ˈdɪsnaʔ

Below are some lexical and semantic innovations supporting the validity of this subgroup.

	hand	fingers	pig
PB	*lɪˈmaʔ	*tanʊˈrʊ	*kʊˈyɪs
Iraralay	lʲɪˈmaʔ	tanʊˈʈʊʔ	kʊˈʲɪʂ
Iratay	lʲɪˈmaʔ	tanʊˈʈʊʔ	kʊˈʲɪʂ
Ivalino	lʲɪˈmaʔ	tanʊˈʈʊʔ	kʊˈʲɪʂ
Itbayat	ˈlɪːmaʔ	*kakaˈmaj*	kʊˈjəs
Ivasay	tanʊˈrʊ	*kakaˈmaj*	baˈgʊʔ
Isamorong	tanʊˈrʊ	*kakaˈmaj*	baˈgʊh
Ibatan	(pa)nʊrʊ(ˈwan)	*kakaˈmaj*	baˈgʊʔ

The cognate set for *kʊˈyɪs ‘pig’ is fairly straightforward, as it changes to /baˈgʊ(ʔ/h)/ in this subgroup. Innovations are also seen in the development of the forms for ‘hand’ and ‘fingers’. It is assumed that *lɪˈmaʔ corresponds to ‘hand’ in Proto-Batanic, as such is a retention of PAn and PMP *(qa)lima ‘hand’ (Blust, 1999). Moreover, the meaning of Proto-Batanic *tanʊˈrʊ is reconstructed as ‘fingers’ as observed in Yami. From these reconstructions, corresponding changes such as the semantic innovation of Proto-Batanic *tanʊˈrʊ from ‘fingers’ to ‘hand’ in Ivasay, Isamorong, and Ibatan are evident. The form /kakaˈmaj/ seen in Itbayat, Ivasay, Isamorong, and Ibatan, glossed here as ‘fingers’, is assumed to have arisen due to contact[22].

[22] The source of this contact is yet to be determined, but the Tagalog word /kaˈmaj/ ‘hand’ is assumed to be related. Firmly classifying such as an instance of borrowing, however, needs further validation as *kamay ‘hand’ is reconstructed under PAn as well (Zorc, 1995). Positing such form under Proto-Batanic is plausible; however, reconstructing the semantics of the three forms discussed becomes more complicated.

Another interesting semantic innovation is seen in Proto-Batanic *ˈʔuːpɪs 'urine'.

	urine
PB	*ˈʔuːpɪs
Iraralay	taˈʧɪ
Iratay	taˈʧɪ
Ivalino	taˈʧɪ
Itbayat	ˈʔuːpɪs
Ivasay	ˈpəːtəg; ˈʔuːpɪs
Isamorong	ˈpəːtəg; ˈʔuːpɪs
Ibatan	ˈpəːtəg

As discussed in §5.1.1, Yami underwent a semantic innovation of the form /taˈʧɪ/, originally meant as excretion in Proto-Batanic. For the remaining Batanic languages, two forms are observed: /ˈʔuːpɪs/ and /ˈpəːtəg/. For Itbayat, only the former is used, whereas Ibatan only uses the latter to mean urine. However, Ivasay and Isamorong make use of the two forms differentiated according to female and male urination respectively. Moriguchi (2005) claims that such difference has resulted from the difference between land register and fishermen's register in the Batanic languages, in that /ˈʔuːpɪs/ is generally meant as urination in the land register whereas /ˈpəːtəg/ is the word used at sea to refer to male urination (thus fishermen's register).

In reconstructing the development of the term for urination in Proto-Batanic, it is indeed assumed that /ˈʔʊːpɪs/ is the older form fully retained in Itbayat. However, the intermediate Ivatan network manifests a semantic innovation, in which the term for urination becomes differentiated according to sex, thus /ˈʔʊːpɪs/ and /ˈpəːtəg/[23]. In the descent of Ibatan from this subgroup, on the contrary, this distinction is once again ignored, as the term /ˈʔʊːpɪs/ is lost and /ˈpəːtəg/ is retained.

5.1.2.1. Ibatan

As Proto-Batanic *b split into /v/ and /b/ in the Batanic languages, Ibatan manifests a separate innovation, in which the two consonants merged in all positions. This change is exclusive in the language, and is assumed to have occurred after its separation from Ivasay and Isamorong.

	wet	woman	seed
PB	*baˈsaʔ	*mabaˈkəs	*bʊˈtʊɣ
Iraralay	vaˈʂa	mavaˈkəs	vʊtˈtʊw
Iratay	vaˈʂa	mavaˈkəs	fʊtˈtʊw
Ivalino	faˈʂa	mafaˈkəs	fʊtˈtʊw
Itbayat	mavaˈsaʔ	mavaˈkəs	vʊˈtʊɣ
Ivasay	mavaˈsaʔ	mavaˈkəs	vʊˈtʊh
Isamorong	mavaˈsaʔ	mavaˈkəs	vʊˈtʊh
Ibatan	mabaˈsaʔ	mabaˈkəs	bʊˈtʊh

[23] Moriguchi (2005) traces the possible etymology of /ˈpəːtəg/, in which he proposes 'navel' as the original meaning of the term based on possible cognates found in the Cordilleran languages. Several issues can be raised regarding this claim, and such discussion merits a separate study.

As seen in §5.1.2, the terms for urination relative to sex in the Ivasay-Isamorong-Ibatan subgroup is a semantic innovation peculiar to this lower-order subgroup. However, Ibatan clearly shows a subsequent innovation, as the distinction is ignored, retaining the term /ˈpəːtəg/ and losing the equivalent /ˈʔʊːpɪs/. To summarize, the semantic development of the term for urination in Proto-Batanic is shown as: Proto-Batanic *ˈʔʊːpɪs 'urination' > Ivatan/ˈʔʊːpɪs/ 'female urination' and /ˈpəːtəg/ 'male urination' > Ibatan /ˈpəːtəg/ 'urination'.

5.1.3. Summary

Based on several phonological, lexical, and semantic innovations, two lower-order branches within the Batanic microgroup are identified: (1) Yami, with Iratay and Ivalino genetically closer to each other than with Iraralay, and (2) Ivatan, composed of Ivasay, Isamorong, and Ibatan, with the subsequent separation of Ibatan as its speakers migrated out of Batanes. Figure 18[24] below presents the proposed subgrouping of the Batanic languages.

[24] Those presented in italics are classified as dialects based on current data and also following Tsuchida, *et. al* (1987). Specifically, Iraralay, Iratay, and Ivalino are dialects of Yami, whereas Ivasay and Isamorong are dialects of Ivatan (different from the higher Ivatan which serves as the mother of Ivasay, Isamorong, and Ibatan).

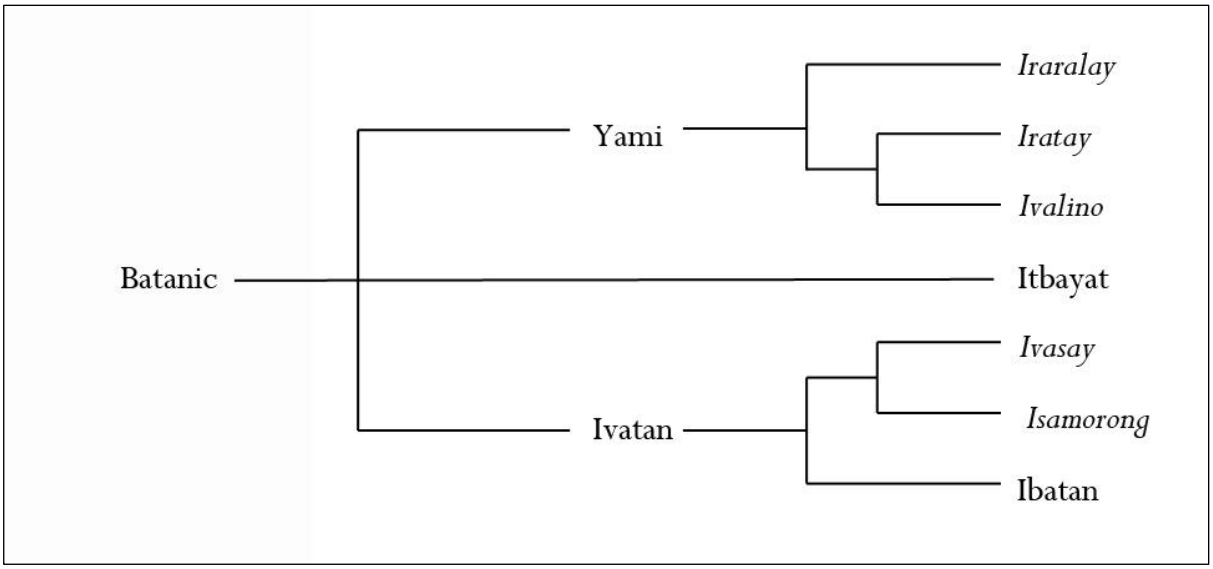


Figure 18: Subgrouping of the Batanic languages

Such hypothesis is similar to that of Yang (2002), in which a statistical analysis of phonological divergence and phonemic correspondences was utilized. This proposed subgrouping differs with those of Zorc (1977) and Li (2001), in which Itbayat is regarded as closer to Ivatan (i.e. Ivasay, Isamorong, and Ibatan). Moreover, this subgrouping assumption also differs with the proposal of Moriguchi (2005), in which he places Yami together with Isamorong and Ibatan, based on evidence in the fisherman's register among others (discussed in §2.1.1.2).

From the proposed reconstructions in Proto-Batanic, Itbayat seems to retain most of the features of the proto-language, such as the number and form of the phonemes as well as the system of nominal marking in which grade contrast in terms of proximity is preserved. Thus, it can be assumed that the descent of Proto-Batanic is characterized by three separate branches. One main branch is composed of Itbayat, in which a direct line can be traced from Proto-Batanic based on the several

retentions manifested by the language. Another branch is composed of Yami, with its dialect Iraralay separate from Iratay and Ivalino. Finally, the remaining branch is composed of the Ivatan subgroup, Ivasay, Isamorong, and Ibatan, in which there is a subsequent separation of Ibatan as its speakers migrated out of Batanes and into Babuyan.

5.2. Tracing the ancestry of Proto-Batanic

Having established the validity of the Batanic microgroup, it is imperative to situate the languages within the Austronesian Family. Current subgrouping hypotheses agree that the languages outside Taiwan belong to the Malayo-Polynesian Family of Austronesian. Blust (1999) identifies the following mergers as PMP innovations: (1) PAn *N and *n > PMP *n; (2) PAn *C and *t > PMP *t; and (3) PAn *S and *h > PMP *h (and possibly zero) (p. 43). Comparing the reconstructions presented in the previous chapter to those of Proto-Malayo-Polynesian (in Blust, 1999), it is evident that the PMP innovations are also reflected in Proto-Batanic:

Table 11: PMP and Proto-Batanic innovations

*N and *n	wing	water	right
PAn	*paNid	*daNum	*ka-wanaN
PMP	*panid	*danum	*ka-wanan
PB	*(pa)panɪd	*danʊm	*ka-wanan
*C and *t	sky	thunder	stone
PAn	*laŋiC	*likaC	*batu
PMP	*laŋit	*kilat	*batu
PB	*ɣaŋɪt	*kɪlat	*batʊ
*S and * h	hair	fire	dig up
PAn	*bukeS	*Sapuy	*kalih
PMP	*buhek	*hapuy	*kali
PB	*bʊhʊk	*hapʊy	*kalɪ

From the evidence presented above, it is quite clear that Proto-Batanic belongs to the Malayo-Polynesian Family. Within the Malayo-Polynesian family, moreover, the Batanic languages are argued to be classified under the Philippine subgroup (Blust, 1991 and 2005). In tracing the descent of Proto-Batanic from PPh, four phonological innovations involving mergers and splits can be observed.

First, there is the evident merger of PPh *d, *z, and *j > Proto-Batanic *d, seen in Table 12 below. The data set for 'bile' is illustrative, in which PPh *qapeju 'bile' became Proto-Batanic *ʔapˈdʊʔ; similarly, PMP *zaRum 'needle' became Proto-Batanic *daˈyʊm.

Table 12: Merger of PPh *d, *z, and *j[25]

	bile	needle	cloud/dark
PMP	-	*zaRum (B99)	-
PPh	*qapeju (C74)	*daRem (Z86)	*demdem (C74)
PB	*ʔapˈdʊʔ	*daˈyʊm	*dəmdəm

Next, PPh *n and *ñ merged into Proto-Batanic *n. For instance, PPh balñaw 'rinse' > Proto-Batanic *ʔahˈnaw, in which PPh *ñ and *n are reflected as a single *n in Proto-Batanic.

Table 13: Merger of PPh *n and *ñ

	rinse	name	tooth
PMP	-	*najan (B99)	*ipen (B99)
PPh	*balñaw (B05)	*ŋarən (P81)	*ipen (Z86)
PB	*ʔahˈnaw	*ŋaˈran	*ŋɪˈpən

[25] The PMP and PPh reconstructions presented in Tables 12-15 came from a number of sources. The following abbreviations are used in to refer to the sources of specific reconstructions:

B99: Blust (1999) P81: Paz (1981)
B05: Blust (2005) Z86: Zorc (1986)
C74: Charles (1974) Z95: Zorc (1995)

The merger of PPh *R and *y > Proto-Batanic *y can also be observed, discussed previously in Chapter 4. An example of this is seen in the descent of PPh *ɗaRaq 'blood' to Proto-Batanic *rayaʔ, in which PPh *R is reflected as *y in Proto-Batanic.

Table 14: Merger of PPh *R and *y

*R and *y	blood	new	liver
PMP	*daRaq (B99)	*baqeRu (B99)	*qatay (B99)
PPh	*daRaq (C74)	*baqRu (C74)	*qatay (C74)
PB	*rayaʔ	*bayʊʔ	*ʔatay

Finally, PPh *l split into Proto-Batanic *l and *ɣ, as in PPh *buluŋ 'leaf" > Proto-Batanic *buˈɣʊŋ and PPh *likud 'back' > Proto-Batanic *lɪˈkʊd. In this example, it is evident that PPh consonant *l (found in both the form for 'leaf" and 'back') split into two consonants in Proto-Batanic, specifically the lateral *l and the fricative *ɣ.

Table 15: Split of PPh *l

*l	sky	leaf	back
PMP	*laŋit (B99)	*buluŋ (Z95)	*likud (B99)
PPh	-	*buluŋ (Z86)	*likud (P81)
PB	*ɣaŋɪt	*buˈɣʊŋ	*lɪˈkʊd

It is evident that Proto-Batanic can be traced both to PPh and PMP, as seen in the retentions and innovations manifested by this proto-language. However, finding the closest ancestor of Proto-Batanic within PPh is not that quite straightforward.

Zorc (1977), for instance, proposes that the Batanic languages are grouped together with Sambal, Kapampangan, and North Mangyan under the North Extension of the Philippine Family based on the merger of PMP *R and *y to /y/. Data on the Central Luzon languages Kapampangan, Botolan Sambal, and Ayta Mag-Antsi in relation to the reconstructed items for Proto-Batanic exhibit the aforementioned merger. Following the PMP reconstructions of Blust (1999), the following are the reflexes of PMP forms in the aforementioned languages.

Table 16: Reflexes of PMP *R in Proto-Batanic and Central Luzon

PMP *R> /y/	new	blood	needle
PMP	*baqeRu	*daRaq	*zaRum
PB	*bayʊʔ	*rayaʔ	*dayum
Kapampangan	bajʊ	dajaʔ	(ka)rajʊm
Sambal	bajʊ	dajaʔ	(ka)rayɨm
Mag-Antsi	bajʊʔ	dajaʔ	(ka)rajʊm

Table 17: Reflexes of PMP *y in Proto-Batanic and Central Luzon

PMP *y > y	liver	fire	to pound
PMP	*qatay	*hapuy	*bayu
PB	*ʔatay	*hapʊy	-
Kapampangan	ʔaˈtɛ	-	bajo
Sambal	ʔagtay	ʔapoy	bajo
Mag-Antsi	ʔagtaʔʊj	ʔapʊj	bajoʔ

From the data above, it is evident that PMP (and PPh) *R is reflected as a palatal glide /j/ in Kapampangan, Sambal, and Mag-Antsi, languages belonging to the Central Luzon microgroup (e.g. PMP *baqeRu 'new' > Kapampangan, Sambal, and Mag-Antsi [bajʊ]). Similarly, PMP and PPh *R is reflected as *y in Proto-Batanic, as in PMP *baqeRu 'new' > Proto-Batanic *bayʊʔ.

Comparing the cognate sets for PMP and PPh *R to forms with instances of PMP and PPh *y, it can clearly be said that there is an evident merger of PMP and PPh *R and *y to /y/ not only in the Batanic network, but also in the Central Luzon microgroup.

Another evidence for this putative Northern Extension is the usage of cross-referencing pronouns in the Batanic languages and Kapampangan.

(1) Kapampangan (Kitano, 2005, p. 340)

Malagu	**ya**	ing	babai.
beautiful	3SG[26].NOM	DET.NOM	woman

'The woman is beautiful.'

(2) Ivatan (Hidalgo, 1970, p. 210)

Rutungan	**na**	ni	Maria	u	wakay.
cook	3SG.GEN	DET.GEN	Maria	DET.NOM	sweet.potato

'The sweet potato was cooked by Maria.'

(3) Ibatan (Maree, 2007, p. 254)

Kinan	**da**=n	manomanok	u	paray	namen.
ate	3PL.GEN=DET.GEN	chicken	DET.NOM	rice	1PL.GEN

'Those birds ate our rice.'

As seen in the sample sentences above, cross-referencing pronouns are agreement markers that are coreferential to a specific nominal within the sentence. These forms agree with the head noun in terms of number and case. Kitano (2005) writes that "this feature distinguishes Kapampangan from other Central Philippine languages, many of which employ second-position clitic pronouns but not as agreement markers" (p. 339). As in (2) and (3) above, such usage of pronouns is also manifested in the Batanic languages. According to Reid (in Blust, 1991, p. 106), it is the existence of cross-referencing pronouns in the Batanic and Central Luzon microgroups that provides support to Zorc's proposed North Extension.

[26] The abbreviations used in the gloss are listed as follows:

1:	1st person	NOM:	nominative
3:	3rd person	SG:	singular
DET:	determiner	PL:	plural
GEN:	genitive		

Additionally, Zorc (1986) proposes that the Batanic microgroup, together with Central Luzon and North Mangyan, subgroups with the Cordilleran languages under the larger Northern Philippine group on the basis of shared lexicon. Current data on these Northern Philippine languages tell very little, as there are very few uniquely shared lexical items found in these languages.

Positing a Northern Philippine subgroup indeed provides a different perspective regarding the history and descent of the Philippine languages. Going back to Blust (1991) regarding his Greater Central Philippine Hypothesis, in which he attributes the relatively low linguistic diversity in the Central Philippines to the expansion of the GCP subgroup, a similar instance of language expansion in Zorc (1977) regarding his Northern Philippine Hypothesis can be seen. It can be assumed that with the expansion of the speakers of Proto-GCP leading to the displacement and extinction of non-GCP languages in nearby areas, a similar expansion of Proto-Northern Luzon speakers somewhere in Northern and Central Luzon (where the current Central Luzon and Batanic languages are spoken) is quite probable. However, this expansion is not as expansive as that of GCP, as it seemed to have covered a relatively small geographic area compared to the aforementioned microgroup.

Subgrouping the languages of Northern Philippines together based on the merger of PMP and PPh *R and *y (just as the merger of PPh *R and *g is used to establish GCP), it can be said that episodes of large-scale language expansion and leveling are not restricted within the Central Philippines. This linguistic scenario is quite parallel to the current expansion of the regional lingua

francas in many areas of the Philippines today, such as Ilokano in the north, and Tagalog and Cebuano in central and southern Philippines.

On the contrary, the plausibility of this Northern Philippine Hypothesis needs further support as Blust (1991) writes that the merger of *R and *y, although quite rare, has limited subgrouping value since such innovation can also be found in other languages outside the Philippines (p. 106). Moreover, the aforementioned usage of cross-referencing pronouns, supposedly restricted to the Northern Philippine languages (including some Cordilleran languages), is also seen in languages outside the subgroup, namely the Sama languages (of the Barito Subgroup under Malayo-Polynesian) Abak and Samal (Constantino, 1965, p. 112). If a number of Malayo-Polynesian languages manifest this system of cross-referencing, it can be argued that such is a retention of a PMP feature rather than an innovation of this putative Northern Philippine subgroup. Finally, Ross (2005) writes that the lexical evidence for Proto-Batanic/Central Luzon may be characterized as instances of retention or borrowing rather than innovations exclusively shared by these languages.

Without unique innovations uniting the Batanic microgroup with other neighboring languages, the issue of ancestry is then considered in relation to the larger Proto-Philippines. This proto-language is said to be the mother of all the languages spoken within the Philippine archipelago (except the Sama languages which belong to the Barito subgroup), as well as Yami of Taiwan and the Sangiric, Minahasan, and Gorontalo-Mongondow groups of Sulawesi (Blust, 1991).

Similar to the issue of the Northern Philippine subgroup, the lack of uniquely shared phonological and grammatical innovations for Proto-Philippines weakens the validity of the subgroup. Reid (1982) writes that the apparent innovations under PPh can also be seen outside the subgroup. Ross (2005), moreover, is convinced that the lexical innovations posited under PPh are retentions from PMP which are lost in Malayo-Polynesian languages outside the Philippines. Such similarities may also be contact-induced, occurring after the separation of these extra-Philippine Malayo-Polynesian languages. The similarities of the Philippine languages may then be considered as products of intense social contact and economic relations instead of evidence pointing to a common ancestor (p. 13).

On the contrary, Blust (1991 and 2005) remains convinced regarding the validity of PPh. He writes that the low linguistic diversity within the Philippine archipelago, despite it being one of the initial stepping stones of the Austronesian expansion, is not due to language convergence but of language leveling and extinction instead. The massive expansion of PPh caused the displacement of certain MP languages as well as the extinction of some early descendants of PMP (discussed in §2.1.1.2).

Zorc (1986) identifies several compelling lexical innovations for PPh, some of which are widespread and some selective (i.e. innovations that skip lower-level subgroup boundaries). He disregards instances of borrowings, and the number of selective innovations seen in genetically and geographically diverse microgroups rule out the possibility of what Ross (2005) characterizes as language convergence. Eliminating the possibility of contact-induced change, it is assumed that the lexical similarities restricted within the Philippine languages are PPh innovations rather than PMP

retentions. The lack of these lexical items outside the Philippine subgroup is evidence against the possibility of treating such items as retentions. Considering data from Chamorro, a non-Philippine language believed to have originated within the Philippines (Blust, 2005, p. 40), the absence of these items illustrates that the uniquely shared lexical items among the Philippine languages are indeed concrete innovations attributed under PPh.

The whole debate regarding the validity of PPh is central in tracing the ancestry of Proto-Batanic. Ross (2005) gives two possible histories regarding the descent of the proto-language. History 1 proposes that the ancestors of Proto-Batanic are the stay-at-home speakers left in Batanes as the speakers of PMP migrated southward to Luzon. History 2, on the contrary, proposes that somewhere in northern Luzon, a group of PMP speakers migrated northward to Batanes, thereby becoming the ancestors of Proto-Batanic (pp. 10-11). As Ross (2005) puts Proto-Batanic directly under PMP, History 1 is more plausible, although such does not rule out History 2 as well.

Following the proposals of Zorc (1986) and Blust (1991 and 2005) regarding PPh, in addition to the putative Northern Philippine subgroup proposed by Zorc (1977 and 1986), placing Proto-Batanic under interstage proto-languages PPh and Proto-Northern Philippine favors History 2, corresponding to the external evidence from archaeology and genetics.

Based on the inventory of material culture recovered in Itbayat and Batan, Bellwood and Dizon (2005) claim that the human settlement in the Batanes Islands is much older than those in Luzon. Comparing the Neolithic assemblages found in Cagayan Valley, the materials recovered in Batanes

are significantly older, in which the oldest human activity is dated 4450-4080 BP (p. 7). However, genetic evidence based on the haplogroups shared between Yami and Ivatan is dated 800-1600 BP. This suggests that the permanent settlement found in Batanes must have "post-dated the first traces of human activities observed on Orchid or Batanes islands" (Loo, *et al.*, 2011, p. 3). As the Batanic languages are closely related, it is assumed that speakers of Yami of Taiwan, and Itbayat and Ivatan of the Philippines share a close genetic relationship as well. Based on the study done by Loo, *et al.* (2011), however, the Yami and Ivatan population shows a higher affinity with Taiwan and the Philippines respectively than with each other. Cultural, genetic, and linguistic histories between Lan-yu and Batanes muddle the migration and contact histories between the two populations. However, tying current evidence on linguistics, archaeology, and genetics, the following chronology can be deduced:

(1) Proto-Austronesian spoken on the island of Taiwan 5000 years ago (Tryon, 1995, p. 23)

(2) Departure of pre-MP speakers southward into the Philippines

(3) Oldest human activity (pottery) in Torongan Cave, Itbayat, Batanes dated 4450-4080 BP. Recovered evidence is attributed to the Neolithic population coming from Taiwan. This continued until 1500/1000 BP (Bellwood and Dizon, 2005, p. 7).

(4) Yami and Ivatan genetic affinity dated 800-1600 BP, conflicting with the archaeological estimate above. These populations are regarded as a more recent line of immigrants (Loo, *et al.*, 2011).

With the more recent Yami-Ivatan population migrating into Batanes, it is indeed possible to assume a re-colonization of Batanes from the south based on the high genetic affinity between the Ivatans and the populations of Luzon. These findings are indeed parallel to History 2 proposed by Ross (2005). Loo, *et al.* (2011) present a modified chronology based on genetic studies. With the migration of pre-MP speakers out of Taiwan, a certain group of speakers remained in Batanes, constituting the early settlers of the islands. Somewhere in Luzon, a group of speakers re-colonized Orchid and Batanes Islands as early as 3,000 years ago. Finally, a much later contact between the Batanic populations and the populations of Taiwan and Luzon is observed, contributing to the genetic profiles of the Yami and the Ivatans respectively (p. 13).

From these possibilities, the re-colonization of Batanes from the south can be linked to the expansion of Proto-Philippines, estimated to have occurred around 3,500 BP (Blust, 2005, p. 40). It is not difficult to assume that the ancestors of Proto-Batanic are genetically related to other populations within the Philippines under PPh. As the speakers of PPh spread across the Philippines, one of its daughter populations eventually reached and re-colonized Orchid and Batanes Islands in the north, representing the ancestors of Proto-Batanic.

5.3. More questions

Linguistic, genetic, and archaeological findings point to the colonization of Orchid and Batanes Islands by the descendants of PPh. This corresponds to the expansion of PPh roughly 3,500 years ago (Blust, 2005, p. 40). However, based on the archaeological evidence found in Torongan Cave in Itbayat, Batanes (Bellwood and Dizon, 2005), the Batanic-speaking populations at present do not

seem to be the initial settlers of the islands. With the re-colonization of Batanes, what happened to the initial non-Philippine Batanic population? Archaeological findings show that these settlers are of Austronesian origin, and it is assumed that the language they spoke may have constituted either a higher-order Austronesian subgroup or one of the early daughters of PMP. As Blust (2005) writes, linguistic expansion may lead to the displacement of dominated groups, and with the pressure brought by the expansion of PPh, several descendants of PMP speakers are affected, such as the pre-Chamorro speakers of Northern Mindanao, and possibly the non-Philippine speakers of Batanes. The possibility of remaining in situ with subsequent language shift is ruled out by current evidence on linguistics and genetics, and the possibility of displacement is perhaps convincing at this point. A bigger question remains unanswered, however. As the pre-Chamorro speakers of Northern Mindanao eventually migrated into the Marianas Islands (Blust, 2005, p. 40), what happened to this displaced population of Batanes?

6

CONCLUSION

The Batanic languages of Batanes, Philippines and Lan-yu, Taiwan share significant similarities in phonology, lexicon, and morphosyntax that reconstructing Proto-Batanic, the proto-language ancestral to the microgroup has been quite straightforward. Revisiting the reconstructions of Yang (2002), this study reconstructed 21 segmental phonemes under Proto-Batanic instead of 23, namely /*p, *b, *t, *d, *k, *g, *ʔ, *m, *n, *ŋ, *r, *s, *ɣ, *h, *w, *y, *l, *ɪ, *ʊ, *ə, and *a/, merging the previously reconstructed *l_1 and *L > *l and *R and *y > *y. It was also found that stress typically occurs on the ultima and penultima, and that the syllable structure of the proto-language may either be CV or CVC.

Aside from the reconstruction of Proto-Batanic, the Comparative Method was also utilized to determine the internal subgrouping of the microgroup. Innovations uniquely shared by certain languages are used as evidence to support subgrouping hypotheses. The shift of the Proto-Batanic *ɣ to a uvular fricative /ʁ/, the merger of Proto-Batanic *y and *l in certain environments, the

retroflexion of Proto-Batanic *d and *s, in addition to various lexical and semantic innovations, separate Yami from the rest of the microgroup. Moreover, the shift of Proto-Batanic *ɣ to a glottal fricative /h/ and the merger of Proto-Batanic *l and *d in certain environments link Ivasay, Isamorong, and Ibatan under a lower-order subgroup (Ivatan) (see Figure 18).

Based on the reconstructions proposed in this study, it is apparent that Itbayat is phonologically the most conservative of the Batanic languages, retaining all phonemes of Proto-Batanic. Additionally, the language also retained the grade contrast of PMP and PPh nominal markers.

In terms of ancestry, it is assumed that the Batanic languages form a close relationship with its neighboring Philippine languages under Proto-Philippines. Within PPh, a lower-order Proto-Northern Philippines, consisting of Batanic, Central Luzon, and Cordilleran microgroups, is plausible on the basis of the merger of PPh *R and *y > *y, as well as the usage of cross-referencing pronouns. However, further evidence is needed to establish this subgroup as the aforementioned innovations are also seen in languages outside the Northern Philippines. Moreover, the validity of PPh is problematic as well. Reid (1982) as well as Ross (2005) argue against such, whereas Zorc (1986) and Blust (1991 and 2005) provide a significant number of lexical innovations attributed to this proto-language.

Placing Proto-Batanic under PPh, it is assumed that Batanes is re-colonized from the south based on linguistic and genetic evidence. Archaeological evidence points to a much older settlement, assumed to be the stay-at-home population after the migration of pre-PMP speakers out of Taiwan.

With the northward migration of pre-Batanic speakers into Batanes, assumed to be linked to the expansion of PPh, a possible displacement of the initial non-Philippine population in Batanes may have ocurred.

Few important questions remain however. Whatever happened after the displacement of these non-Philippine speakers? And where is the exact homeland of Proto-Batanic? Current data cannot provide a direct answer to these issues; however, certain directions can be set. As to what happened to the initial settlers of Batanes after their displacement, the Formosan languages north of the Philippines may shed some light on the matter. Assuming that PMP developed somewhere in Luzon, the population left in Batanes after the migration of a group of Austronesian speakers out of Taiwan may have been closer to Formosan than Malayo-Polynesian. Evidence of slate and nephrite found in Itbayat pointing to Formosan origins demonstrate continuous contact between Taiwan and Batanes (Bellwood and Dizon, 2005, p. 7). It is not difficult to assume that subsequent migrations of non-Philippine/Malayo-Polynesian speakers of Batanes into Taiwan also occurred after the arrival of pre-Proto-Batanic speakers. Ross (2005) traces the closest relative of PMP in Taiwan; although he notes that such detail is "no longer recoverable with any certainty" (p. 19).

As for tracing the homeland of a proto-language, Ross (2005) writes that "the speech of a community that remains in the same location will be subject to fewer innovations than the speech of a community which changes location" (p. 15). Following such principle, Itbayat Island is perhaps the most probable homeland of Proto-Batanic, with Itbayat speakers remaining in situ, thus retaining most features of Proto-Batanic. With speakers migrating southward into Batan and

northward into Lan-yu, the parallel subgrouping of the Batanic languages is evident, i.e. Ivatan and Yami respectively. Assuming that dating the divergence of languages is related to the similarities shared by the daughter languages in consideration (i.e. greater differences mean greater time depth), the similarities of the Batanic languages point to the fairly recent break-up of Proto-Batanic. Alternatively, it may also be assumed that such similarities are attributed to the continuous and intensive contact of the Batanic-speaking communities, maintaining linguistic unity even after a very long period of time (Ross, 2005, p. 18).

Deriving from previous studies, this research revisited several issues regarding the ancestry and descent of the Batanic languages. However, further studies are needed to resolve several problems arising from this thesis. For instance, there is a need to reconsider the external relationship of the Batanic microgroup to the rest of the Philippine languages. It is also necessary to provide further reconstructions of Proto-Batanic as this study is merely the beginning of a more comprehensive reconstruction of the linguistic and cultural features of Proto-Batanic. Moreover, the Comparative Method offers limitless possibilities with regard to linguistic and cultural reconstruction, and such can be taken to fill the gaps in current studies as well as corroborate findings from other fields such as history, archaeology, anthropology, and genetics. For instance, a more detailed reconstruction is needed to substantiate claims regarding the migration histories of the Batanic-speaking populations, as well as to determine the nature and type of relationship that may have existed among the different groups in contact with the people of Batanes and Orchid Island.

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APPENDIX A

A GLOSSARY OF PROTO-BATANIC MORPHEMES

A

	English	Proto-Batanic		
1.	adze	*ˈpɪːkʊ	ˈpɪːkʊ	Ivasay, Isamorong
2.	alive/life	*(ma)bɪhay	ˈ(maː)fjaj	Iratay, Ivalino
			(ma)vɪhaj	Itbayat
			(ma)ˈvjaj	Ivasay, Isamorong
			bjaj	Ibatan
3.	all	*taˈtaːvʊh	taˈtaːvʊh	Itbayat
			ˈtaːvʊʔ	Ivasay
			ʔaˈtaːvʊ	Isamorong
			ˈtaːbʊ	Ibatan
4.	and	*ʔah kaˈnʊʔ	ʔah kaˈnʊʔ	Itbayat
			ˈʔaːka	Iratay
			kan	Ivasay, Isamorong, Ibatan
5.	anger	*sʊˈlɪh	sʊˈrɪh	Itbayat
			sʊˈlɪʔ	Isamorong, Ibatan
6.	animal	*bɪnɪˈhay	vɪnɪˈhaj	Itbayat
			vɪˈɲaj	Ivasay, Isamorong
7.	ankle	*bəˈkəɣ	fəˈkəʁ	Iratay, Ivalino
			vəˈkəh	Isamorong
8.	ant	*bʊɣaˈwuʔ	vʊhaˈwʊʔ	Ivasay, Isamorong
			bʊhaˈwʊʔ	Ibatan
			vaʁaˈwʊʔ	Iraralay
			faʷaˈwʊʔ	Iratay
			faːˈwʊʔ	Ivalino
9.	arm	*tatɪˈyay	tatˈʧaj	Itbayat, Ivasay, Isamorong
10.	armpit	*kəkələˈhan	kəkələˈwan	Iratay
			kələˈhan	Itbayat
			kəkədˈwan	Ivasay
			kəˈdan	Isamorong
11.	arrow	*paˈnaʔ	paˈnaʔ	Itbayat, Isamorong
			ˈpaːnaʔ	Ivasay, Ibatan

12.	ashes	*ʔaˈbʊʔ	ˈʔaːvʊʔ	Iraralay
			ˈʔaːfʊʔ	Ivalino
			ʔaˈvʊʔ	Itbayat, Ivasay, Isamorong
13.	at	*dʊ	dʊ	Itbayat, Ivasay, Isamorong, Ibatan
			dʊʔ	Ibatan
14.	awake	*(ma)yʊˈkay	(ma)jʊˈkaj	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan

B

	English	Proto-Batanic		
15.	back	*lɪˈkʊd	lɪˈkʊd	Ivasay
			lɪˈʧʊd	Itbayat
			lʲɪˈkʊɖ	Iraralay, Iratay, Ivalino
			dɪˈtʃʊd	Isamorong, Ibatan
16.	bad	*maraˈɣət	maˈʈaːhət	Iraralay
			maˈʈaːʷət	Iraralay, Ivalino
			maraˈwət	Itbayat
			maraˈhət	Ivasay, Isamorong, Ibatan
17.	bald	*bwaŋ	bwaŋ	Itbayat, Isamorong
18.	bamboo	*kawayan	kawaˈlan	Iratay, Ivalino
			kawaˈjan	Itbayat, Ivasay, Isamorong, Ibatan
19.	bark (tree)	*kʊˈlɪt	kʊˈlɪt	Itbayat
			kʊˈlʲɪt	Iratay, Ivalino
			kʊˈdɪt	Ivasay, Isamorong, Ibatan
20.	bear, suffer	*lɪˈlɪw	lɪlɪˈw(ən)	Itbayat
			(man)dɪˈdɪw	Isamorong
21.	beard	*mahɪˈŋən	mahɪˈɲən	Itbayat
			ˈmɪːɲɪn	Isamorong
			ʔamˈʔɪŋ	Iratay, Ivalino

22.	beautiful	*ˈmaːvɪd	ˈmaːvɪd	Ivasay, Isamorong
			ˈmaːvɪʤ	Itbayat
23.	belly	*bʊˈlək	vʊˈlək	Itbayat
			vəˈdək	Isamorong
			bəˈdək	Ivasay
			bʊˈdək	Ibatan
24.	big	*raˈkʊɣ	raˈkʊɣ	Itbayat
			ˈɽaːkʊʔ	Iraralay, Iratay, Ivalino
			raˈkʊh	Ivasay, Isamorong, Ibatan
25.	bile	*ʔapˈdʊʔ	ʔapˈdʊʔ	Itbayat, Ivasay, Isamorong, Ibatan
26.	bird	*lapɪˈjək	lapɪˈjək	Iraralay, Iratay
			lapˈpɪːk	Ivalino
27.	bitter	*(ma)kʊpaˈhad	(ma)kpaˈhad	Itbayat
			kʊˈpad	Iratay, Ivalino
			(ma)kˈpad	Ivasay, Isamorong, Ibatan
28.	black	*mabaˈɣəŋ	mavaˈʷəŋ	Iraralay, Iratay
			maˈfaːʷəŋ	Ivalino
			mavaˈwʊŋ	Itbayat
			mavaˈhəŋ	Ivasay, Isamorong
			mabaˈhəŋ	Ibatan
29.	blade/ sharpness	*taˈrəm	taˈrəm	Itbayat, Ivasay, Isamorong, Ibatan
			taˈɽəm	Iratay, Ivalino
30.	blind	*mabʊˈtaʔ	mafʊˈtaʔ	Iratay, Ivalino
			mavʊˈtaʔ	Itbayat, Isamorong
31.	blood	*raˈyaʔ	raˈjaʔ	Itbayat, Ibatan
			raˈja	Ivasay, Isamorong
			ɽaˈlaʔ	Iraralay, Iratay, Ivalino
32.	body (see ‘big’)	*(ka)raˈkʊɣ(an)	karakʊˈhan	Itbayat, Ivasay, Isamorong
33.	bone	*tʊˈɣaŋ	tʊˈhaŋ	Itbayat, Ivasay, Isamorong, Ibatan
			tʊˈwaŋ	Iraralay, Iratay, Ivalino
34.	boy (young m, not son)	*mʊtˈdəɣ	mʊtˈdəɣ	Itbayat
			mətˈdəh	Isamorong
35.	brain	*ˈʔʊːtək	ˈʔʊːtək	Itbayat, Isamorong, Ibatan
			ˈʔəːtək	Iraralay, Iratay

36.	branch	*saˈŋaʔ	saˈŋaʔ	Itbayat, Ivasay, Ibatan
37.	breast	*sʊˈsʊʔ	sʊˈsʊ	Itbayat, Isamorong
			ˈsʊːsʊ	Ivasay, Ibatan
			ʂʊˈʂʊʔ	Iraralay, Iratay, Ivalino
38.	bright	*masəɣˈdaŋ	masəɣˈdaŋ	Itbayat
			masehˈdaŋ	Ivasay
			maˈsəːdaŋ	Isamorong, Ibatan
39.	brother/sister-in-law	*kataˈyʊɣ	kataˈyʊɣ	Itbayat
			kataˈyʊh	Isamorong
40.	bundle, belt	*ʔabˈtək	ʔabˈtək	Itbayat, Isamorong
41.	butterfly	*kʊlɪˈbaːbaŋ	kʊdɪˈbaːbaŋ	Ivasay, Isamorong
			kalɪˈvaːvaŋ	Itbayat
			kʊlɪˈbaːŋaʔ	Ibatan
42.	buttocks	*ʔaˈtaŋ	ʔaˈtaŋ	Iratay, Ivalino, Isamorong

C

	English	Proto-Batanic		
43.	charcoal	*ʔʊˈrɪŋ	ʔʊˈrɪŋ	Itbayat
			ʔʊˈrɪn	Ivasay, Isamorong, Ibatan
44.	cheek	*pʊsˈŋɪ	pʊʂˈŋɪ	Iraralay, Iratay, Ivalino
			pɪsˈŋɪ	Ivasay
			pɪsˈŋɪ	Itbayat, Isamorong, Ibatan
45.	chest	*kalaŋaˈŋan	kalaˈŋaːŋan	Ivasay, Isamorong
			karaŋaˈŋan	Iratay, Ivalino
46.	chick	*sɪwˈsɪw	sʲɪwˈsʲɪw	Itbayat
			ˈʃəwʃəw	Ivasay
			ˈsɪːsjɪw	Isamorong
47.	chicken	*maˈnʊk	maˈnʊk	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan

48.	chief	*ʔapʊˈɣən	ʔapʊˈhən	Isamorong
			ʔapʊˈhʊn	Ivasay
			ʔaˈpʊn	Itbayat
49.	child (young)	*ʔaˈnak	ʔaˈnak	Iratay, Ivalino, Itbayat, Ivasay
			ʔanˈnak	Ibatan
50.	chin	*tʊˈmɪd	tʊˈmɪd	Ivasay, Isamorong
			tʊˈmɪɖ	Iraralay, Iratay, Ivalino
51.	cloud	*dəmˈdəm	dəmˈdəm	Ivasay, Isamorong
			ˈdəmdəm	Ibatan
			rəmˈdəm	Itbayat
52.	cockroach	*ʔɪˈpʊs	ʔɪˈpʊs	Itbayat
			ʔɪˈpəs	Ivasay, Isamorong
			ʔɪpˈpəs	Ibatan
53.	coconut	*ʔanɪˈyʊy	ʔaˈɲʊj	Iratay, Ivalino
			nɪˈjʊj	Itbayat
			ɲʊj	Ivasay, Isamorong, Ibatan
54.	coconut grater	*kʊdˈkʊd(an)	kʊdkʊˈɾan	Itbayat, Ivasay, Isamorong
55.	coconut milk	*gaˈtaʔ	gaˈtaʔ	Itbayat, Ivasay, Isamorong
56.	cold (objects/weather)	*maɣanəbˈnəb	maɣanəbˈnəb	Itbayat
			mahanəbˈnəb	Ivasay, Ibatan
			manahəbˈnəb	Isamorong
57.	cousin	*katəyˈsa	katajˈsa	Itbayat
			təjˈʂa	Iratay, Ivalino
58.	crocodile	*bʊwaˈja	bʊwaˈja	Itbayat
			vʊwaˈja	Isamorong
			ˈbwaːja	Ivasay, Ibatan
59.	crow	*ragʊˈwak	ragˈwak	Itbayat
			ʔʊˈwak	Ivasay
			ʔʊwaˈwak	Isamorong
			kak	Ibatan
60.	curly hair	*kʊˈlʊt	kʊˈlʊt	Itbayat, Ibatan
			kʊlˈlʊt	Ivasay

D

	English	Proto-Batanic		
61.	dark, dim	*saˈrɪʔ	saˈrɪʔ	Ivasay, Isamorong, Ibatan
			ʂaˈɽɪʔ	Iraralay, Iratay, Ivalino
62.	daytime	*mabəkˈɣas	mavəkˈhas	Ivasay
			mavəkˈhəs	Isamorong
			mabəˈkas	Ibatan
63.	deaf	*makʊˈtəŋ	makʊˈtəŋ	Itbayat, Isamorong
			makəˈtəŋ	Ivasay
64.	debt	*ˈʔʊːtaŋ	ˈʔʊːtaŋ	Itbayat, Ivasay, Ibatan
65.	deep	*(mahɪ)raˈɣəm	(mahɪ)raˈɣəm	Itbayat
			(ˈmaː)rahəm	Ivasay
			(ma)raˈhəm	Isamorong, Ibatan
			ɽaˈʷəm	Iraralay, Iratay
			ɽaˈʁəm	Ivalino
66.	deer	*ʔʊgˈsaʔ	ˈʔʊgsaʔ	Ibatan
			ʔagˈsaʔ	Itbayat, Isamorong
67.	dew	*haˈpʊn	haˈpʊn	Itbayat
			ˈʔaːpʊn	Ivasay
			ʔaˈpʊn	Isamorong, Ibatan
68.	dirty	*marʊˈlɪt	marʊˈlɪt	Itbayat
			malʊˈʷɪt	Iratay
			malʊˈjɪt	Ivalino
			marʊˈdɪt	Ivasay, Isamorong
69.	dog	*kɪˈtʊʔ	ʧɪˈtʊ	Ivasay, Isamorong, Ibatan
			tɪˈtʊʔ	Itbayat
70.	door	*panˈtaw	panˈtaw	Itbayat, Ivasay, Isamorong
71.	downward	*ʔʊˈsʊk	ʔʊˈʂʊk	Iraralay, Iratay, Ivalino
			ʔ(ʊm)ʊˈsʊk	Itbayat
			(m)ʊˈsʊk	Isamorong

72.	dream	*tayayˈnəp	tajajˈnəp	Isamorong
			taʲɪˈnəp	Iraralay, Iratay, Ivalino
			taˈjɪːnəp	Ivasay, Ibatan
			tajˈnəp	Itbayat
73.	dry (substance)	*(ma)kʊˈlay	(ma)kʊˈraj	Itbayat
			kʊˈlaj	Isamorong
74.	dull (knife)	*maŋaˈrəɣ	maŋaˈrəɣ	Itbayat
			maŋaˈrəh	Ivasay, Isamorong
75.	dust	*ʔaɣˈbək	ʔaɣˈbək	Itbayat
			ʔahˈbək	Ivasay, Isamorong, Ibatan

E

	English	Proto-Batanic		
76.	ear	*talɪˈŋaʔ	talɪˈɲaʔ	Itbayat
			talʲɪˈŋaʔ	Iraralay, Iratay, Ivalino
			tadɪˈɲaʔ	Isamorong
			tadɪˈɲa	Ivasay
			taˈʤɪnɲaʔ	Ibatan
77.	earth (soil)	*taˈnaʔ	taˈnaʔ	Isamorong, Iatan
			taˈna	Ivasay
78.	earwax	*tɪˈlʊʔ	tɪˈlʊʔ	Itbayat
			ʧɪˈlʊʔ	Iraralay, Iratay, Ivalino
			tʃɪˈdʊʔ	Isamorong, Ibatan
			tɪˈdʊ	Ivasay
79.	edible, climbing	*ʔʊˈbɪʔ	ʔʊˈbɪʔ	Ibatan
	plant		ʔʊˈvɪʔ	Itbayat, Ivasay, Isamorong
80.	eel	*tʊˈnaʔ	tʊˈnaʔ	Iraralay, Iratay, Ivalino, Isamorong
			tʊˈna	Ivasay
			ˈtʊːnaʔ	Ibatan

81.	egg	*ʔɪtɪˈyʊy	ʔɪtɪˈjʊj	Itbayat
			ʔɪˈʧʊj	Iraralay, Iratay
			ʔʊtˈʧʊj	Ivasay, Isamorong
			ˈʔʊːʧʊj	Ibatan
82.	eggplant	*baɣʊˈsaʔ	vaɣʊˈsaʔ	Itbayat
			vahʊˈsaʔ	Ivasay, Isamorong
			baˈhʊːsaʔ	Ibatan
83.	eight	*wawaˈɣʊ	wawaˈɣʊʔ	Itbayat
			wawaˈhʊ	Ivasay, Isamorong
			wawaˈhʊʔ	Ibatan
			waˈʷʊ	Iratay
			waˈwʊ	Ivalino
84.	elbow	*sɪˈkʊh	sɪˈtʃʊh	Itbayat
			ˈʂɪːkʊ	Iraralay, Iratay, Ivalino
			sɪˈʧʊʔ	Ivasay
			sɪˈtʃʊ	Isamorong
			ˈsɪːʧʊʔ	Ibatan
85.	ember, hot coal	*hɪnmaˈyaʔ	hɪnmaˈjaʔ	Itbayat
			ʔɪnmaˈja	Ivasay, Isamorong
86.	evening	*ʔaʔˈɣəp	ʔaˈɣəp	Itbayat
			(m)aʔˈhəp	Ivasay
			(m)aˈhəp	Isamorong, Ibatan
87.	excrement	*taˈkɪ	taˈtʃɪʔ	Itbayat, Isamorong
			taˈʧɪ	Ivasay
88.	eye	*maˈta	maˈta	Iraralay, Iratay, Ivalino, Isamorong
			maˈtaʔ	Itbayat, Ivasay, Ibatan
89.	eyebrow	*(kɪ)kɪˈray	ʧɪʧɪˈraj	Ivasay, Isamorong, Ibatan
			ʧɪˈɽaj	Iraralay, Iratay, Itbayat

F

	English	Proto-Batanic		
90.	face	*mʊˈyɪŋ	mʊˈʲɪŋ	Iraralay, Iratay, Ivalino
			mʊˈjɪn	Isamorong
91.	far	*(ma)haraˈyɪ	(ma)haraˈwɪʔ	Itbayat
			(ma)raˈjɪʔ	Ivasay, Isamorong
			ʔaɽaˈʲɪ	Iraralay
			ʔaɽaˈʔɪ	Iratay, Ivalino
92.	fat (substance)	*taˈbaʔ	taˈvaʔ	Iraralay, Iratay, Itbayat, Ivasay, Isamorong
			taˈfaʔ	Iratay
			taˈbaʔ	Ibatan
93.	father	*ʔaˈmaʔ	ʔaˈmaʔ	Iratay, Ivalino, Itbayat
			ʔaˈma	Ivasay
			ˈʔaːmaŋ	Ibatan
94.	feather/fur	*bʊɣˈbʊɣ	vʊɣˈbʊɣ	Itbayat
			ˈbʊːbʊh	Ivasay, Isamorong, Ibatan
			bʊˈbʊw	Iraralay, Iratay, Ivalino
95.	fin	*paˈnɪd (wings)	paˈnɪd	Itbayat
			paˈɲɪd	Isamorong
96.	finger	*tanʊˈrʊ	tanʊˈɽʊʔ	Iraralay, Iratay, Ivalino
97.	fingernail	*kʊˈkʊh	kʊˈkʊh	Itbayat
			kʊˈkʊʔ	Ivalino, Ivasay, Ibatan
			kʊˈkʊ	Iratay, Isamorong
98.	fire	*haˈpʊy	haˈpʊj	Itbayat
			ʔaˈpʊj	Iraralay, Iratay, Ivalino, Ivasay, Isamorong, Ibatan
99.	first	*maˈnʊːmaʔ	maˈnʊːmaʔ	Itbayat, Isamorong
			manˈma	Ivasay
			ˈnanmaʔ	Ibatan
100.	firstborn	*matʊˈnəŋ	matʊˈnəŋ	Ibatan
			matəˈnəŋ	Itbayat, Ivasay, Isamorong
101.	fish	*ʔaˈmʊŋ	ʔaˈmʊŋ	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
			ˈʔaːmʊŋ	

102.	five	*dalɪˈmaʔ	dadɪˈmaʔ	Ivasay, Ibatan
			dadɪˈma	Isamorong
			lɪˈmaʔ	Itbayat
			lʲɪˈmaʔ	Iraralay, Iratay, Ivalino
103.	flatulence	*ʔaˈtʊt	ʔaˈtʊt	Itbayat, Ivasay, Isamorong
			ˈʔaːtʊt	Iraralay, Iratay, Ivalino
			ʔatˈtʊt	Ibatan
104.	flower	*(sabʊ)saˈbʊŋ	savʊsaˈvʊŋ	Itbayat, Ivasay, Isamorong
			ˈsaːbʊŋ	Ibatan
			ʂaˈfʊŋ	Iratay, Ivalino
105.	fly (the insect)	*naˈnəd	naˈnəd	Itbayat, Ivasay, Isamorong
			ˈnaːnəd	Ibatan
			naˈnəd̪	Iraralay, Iratay, Ivalino
106.	foam	*ʔasˈbʊh	ʔasˈbʊh	Itbayat
			ʔasˈbʊʔ	Ivasay
107.	fog	*kaɣəpˈɣəp	kaɣəpˈkəp	Itbayat
			kahəpˈhəp	Ivasay
			taˈhəːhəp	Isamorong
108.	foot	*ʔaˈjɪʔ	ʔaˈjɪʔ	Itbayat
			ʔaˈʲɪ	Iraralay, Iratay, Ivalino
109.	forehead	*rʊˈ(ŋ/g)ʊh	rʊŋʊh	Itbayat
			rʊˈgʊʔ	Iratay, Ivalino
110.	foul-smelling	*mabʊˈjʊk	mavʊˈjʊk	Itbayat, Ivasay, Isamorong
111.	four	*ˈʔaːpat	ˈʔaːpat	Itbayat, Ivasay, Ibatan
			(tʃa)ˈpat	Isamorong
			pat	Iraralay, Iratay, Ivalino
112.	fragrant	*mabaŋˈlʊʔ	mabaŋˈlʊʔ	Ibatan
			mabaˈŋʊʔ	Itbayat, Ivasay
113.	frog	*palaˈkaʔ	palaˈkaʔ	Itbayat, Isamorong, Ivasay
114.	full (after eating)	*(m)abˈsʊy	(m)abˈsʊj	Itbayat, Ivasay, Isamorong
			ˈ(m)abʂʊj	Iraralay, Iratay, Ivalino
			ˈ(n)absʊj	Ibatan
115.	full (not empty)	*pʊˈnʊʔ	pʊˈnʊʔ	Iraraly, Iratay, Ivalino
			(ma)pˈnʊʔ	Itbayat, Ivasay
			(na)pˈnʊʔ	Isamorong

G

	English	Proto-Batanic		
116.	gills	*ʔaˈraŋ	ʔaˈraŋ	Ivasay, Isamorong, Ibatan
			ʔaˈɽaŋ	Iratay, Ivalino
117.	ginger	*ʔahnaˈɣaʔ	ʔahnaˈɣaʔ	Itbayat
			ʔanaˈha	Isamorong
			ʔanaˈhaʔ	Ibatan
			naˈha	Ivasay
118.	gold	*bʊɣaˈwan	ʔʊwɣaˈwan	Itbayat
			vʊhaˈwan	Isamorong
119.	good	*mapɪˈyaʔ	maˈpjaʔ	Itbayat, Isamorong
			mapˈja	Ivasay
120.	grass	*taˈmək	taˈmək	Iraralay, Iratay, Ivalino, Ivasay
			ˈmaːtək	Ibatan
121.	gray hair	*ʔʊˈban	ʔʊˈvan	Iraralay, Iratay, Itbayat, Ivasay, Isamorong
			ʔʊˈfan	Ivalino
			ʔʊˈban	Ibatan
122.	guts	*tɪnaˈyɪʔ	tɪnaˈjɪ	Ivasay
			ʧɪnaˈjɪʔ	Iraralay, Iratay, Ivalino, Isamorong

H

	English	Proto-Batanic		
123.	hair	*bʊˈhʊk	vʊˈhʊk	Itbayat
			ʔʊˈvʊk	Iraralay, Iratay
			ʔʊˈfʊk	Ivalino
			bʊk	Ivasay
			vʊːk	Isamorong

124.	hand	*lɪˈmaʔ	ˈlɪːmaʔ	Itbayat
			ɭʲɪˈmaʔ	Iraralay, Iratay, Ivalino
125.	hard	*makəɣʊˈnət	makəɣʊˈnət	Itbayat
			makəhˈnət	Ivasay, Isamorong
126.	he	*ʔɪˈyaʔ	ʔɪˈjaʔ	Ivalino, Ibatan
			ʔɪˈja	Iratay, Ivasay
			ˈʔɪːyaʔ	Itbayat
127.	head	*ʔʊˈɣʊ	ʔʊˈɣʊʔ	Itbayat
			ʔʊˈhʊʔ	Isamorong
			ˈʔʊːhʊʔ	Ibatan
			ʔʊˈhʊ	Ivasay
			ʔʊˈʷʊ	Iraralay, Iratay, Ivalino
128.	healthy	*masalɪwaʔˈwaʔ	masalɪwaʔˈwaʔ	Itbayat
			mawaʔˈwa	Ivasay
			ɪmawaˈwa	Isamorong
			(ʔalʲɪpa)ʂaˈlaw	Iraralay, Iratay, Ivalino
129.	heart	*taˈwʊl	taˈwʊr	Itbayat
			taˈʷʊr	Iraralay, Iratay, Ivalino
			taˈwʊl	Isamorong
			taˈwəl	Ivasay
130.	heavy	*(ma)ɾaɣˈmət	(ma)ɾaɣˈmət	Itbayat
			(ma)rahˈmət	Ivasay, Isamorong
			(ma)ˈrahmət	Ibatan
			ɽəwˈmət	Iraralay, Iratay, Ivalino
131.	here	*dɪˈyaʔ	dɪˈjaʔ	Itbayat
			ʤaʔ	Iraralay, Iratay, Ivalino
			ˈdjaːja)	Ivasay
			ˈʤaːja)	Isamorong
132.	high tide	*maɣˈnəp	maɣˈnəp	Itbayat
			mahˈnəp	Ivasay, Isamorong
133.	hole (ground)	*tʊlˈjaŋ	tʊlˈjaŋ	Itbayatm Usaniribg
			tʊlˈja	Ivasay
134.	hot	*(ma)kʊˈɣat	makʊˈhat	Itbayat, Ibatan
			kʊˈwat	Iraralay, Iratay, Ivalino

135.	house	*baˈɣay	vaˈɣaj	Itbayat
			vaˈhaj	Ivasay, Isamorong
			vaˈʁaj	Iraralay, Iratay
			faˈʁaj	Ivalino
			ˈbaːhaj	Ibatan
136.	how many/much/some	*(pa)pɪˈrah	pɪˈrah	Itbayat
			pɪˈra	Ivasay
			pɪˈraʔ	Isamorong
			(pa)ˈpɪːraʔ	Ibatan
			ˈpɪːɽa	Iraralay, Iratay, Ivalino
137.	hungry	*mapˈtəŋ	mapˈtəŋ	Itbayat, Ivasay, Isamorong, Ibatan
138.	husband/wife	*kakʊˈbʊt	kakʊˈvʊt	Ivasay, Isamorong

I

	English	Proto-Batanic		
139.	I	*yaˈkən	jaˈkən	Itbayat, Ivasay, Isamorong, Ibatan
140.	intestines	*bɪtʊˈkaʔ	vɪtʊˈkaʔ	Itbayat
			fɪtʊˈkaʔ	Iratay
			bɪtʊˈka	Ivasay
			bɪˈtʊːkaʔ	Ibatan
141.	itch	*kaˈtəɣ	kaˈtəɣ	Itbayat
			kaˈtəh	Ivasay, Isamorong
			kaˈtəʁ	Ivalino
			kaˈtəː	Iratay

J

	English	Proto-Batanic		
142.	jaw	*saˈŋɪʔ (chin)	saˈɲɪʔ	Itbayat, Isamorong

K

	English	Proto-Batanic		
143.	kiss	*ʔaˈdək	ʔaˈrək	Ivasay, Isamorong
			ʔaɖk(aˈnan)	Iraralay, Iratay
			(maj)ˈdaːdək	Ibatan
144.	knee	*tʊˈhʊd	tʊˈhʊd	Itbayat
			tʊd	Ivasay, Ibatan
			tʊːd	Isamorong
			ʔʊˈtʊɖ	Iratay, Ivalino

L

	English	Proto-Batanic		
145.	leaf	*bʊˈɣʊŋ	vʊˈɣʊŋ	Itbayat
			vʊˈhʊŋ	Ivasay, Isamorong
			bʊˈhʊŋ	Ibatan
			fʊˈʷʊŋ	Iratay, Ivalino
146.	last	*waˈdɪʔ	(man)awˈdɪʔ	Itbayat
			(naˈn)awʤɪʔ	Isamorong, Ibatan
			(man)awdɪʔ	Ivasay
	slow	*waˈdɪʔ	(ma)waˈdɪʔ	Ivasay, Isamorong

147.	later	*ʔantɪˈhay	ʔantɪˈhaj	Itbayat
			ʔantɪˈjaw	Ivasay
			ʔanˈtʃɪːjaw	Isamorong
148.	leaf	*bʊˈɣʊŋ	vʊˈɣʊŋ	Itbayat
			vʊˈhʊŋ	Ivasay, Isamorong
			bʊˈhʊŋ	Ibatan
			fʊˈʷʊŋ	Iratay, Ivalino
149.	leak	*tʊˈrʊʔ	tʊˈrʊʔ	Itbayat, Isamorong, Ibatan
150.	left (hand)	*ɣʊˈlɪʔ	hʊˈlɪʔ	Isamorong
			gʊˈrɪʔ	Itbayat
			ʔʊˈrɪʔ	Iratay, Ivalino
151.	leg	*ʔalˈtək	ʔalˈtək	Ivasay, Isamorong
152.	lie (falsehood)	*daˈday	daˈdaj	Ivasay, Isamorong
153.	light	*(ma)haˈpaw	(ma)hˈpaw	Itbayat
			(m)aʔˈpaw	Ivasay
			ˈ(m)aːpaw	Isamorong, Ibatan
			ʔaˈpaw	Iraralay, Iratay
			ˈʔaːpaw	Ivalino
154.	lightning	*kɪˈlat	tʃɪˈlat	Itbayat
			tʃɪˈdat	Ivasay, Isamorong
155.	lip/mouth	*bɪˈbɪg	vɪˈvɪdʒ	Itbayat
			vɪˈvɪʔ	Ivasay
			bɪˈbɪʔ	Ibatan
			ˈfɪːfɪʔ	Iratay, Ivalino
156.	liver	*ʔaˈtay	ʔaˈtaj	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
157.	long	*(ma)hanaˈrʊʔ	(ma)hanaˈrʊʔ	Itbayat
			ˈ(m)aːnarʊʔ	Ivasay, Isamorong, Ibatan
			ʔaˈnaːɽʊʔ	Iraralay, Iratay, Ivalino
158.	loose	*maraɣaˈwaʔ	marahaˈwaʔ	Isamorong, Ibatan
159.	louse	*kʊˈtʊʔ	kʊˈtʊ	Iraralay, Iratay, Ivalino, Ivasay
			kʊˈtʊʔ	Itbayat, Isamorong
			kaˈtʊʔ	Ibatan
160.	love charm	*gaˈyʊːmaʔ	gaˈjʊːmaʔ	Itbayat, Ibatan
			gaˈjʊːma	Isamorong

161.	lungs	*ʔapʊˈhaw	ʔapʊˈʷaw	Iratay, Ivalino
			pʊˈwaw	Isamorong
			pwaw	Ivasay

M

	English	Proto-Batanic		
162.	man (male)	*məɣaˈkay	maɣaˈkaj	Itbayat
			mahaˈkaj	Ivasay, Isamorong, Ibatan
			məʲaˈkaj	Iraralay, Iratay, Ivalino
163.	many	*ʔaˈrʊʔ	ʔaˈrʊʔ	Itbayat
			ˈʔaːrʊʔ	Ivasay, Isamorong, Ibatan
			ʔaˈɽʊʔ	Iraralay, Iratay, Ivalino
164.	mat (for floor)	*haˈpɪn	haˈpɪn	Itbayat
			ʔaˈpɪn	Ivasay, Isamorong
			ʔaˈpən	Ibatan
165.	meat (flesh)	*ʔasɪˈsɪʔ	ʔaʂɪˈʂɪʔ	Iraralay, Iratay, Ivalino
			ʔaˈsɪʔ	Isamorong
166.	medicine	*tubatuˈbaʔ	tʊvatʊˈvaʔ	Itbayat, Isamorong
			tʊvatʊˈva	Ivasay
167.	melt	*ˈtʊːnaw	ˈtʊːnaw	Ivasay, Ibatan
168.	middle	*ɣʊˈbʊk	jʊˈvʊk	Itbayat
			hʊˈvʊk	Ivasay, Isamorong
			bʊˈhʊk	Ibatan
			ʔaˈvak	Iraralay, Iratay
			ʔaˈfak	Ivalino
169.	moon	*bʊˈɣan	vʊˈɣan	Itbayat
			vʊˈhan	Ivasay, Isamorong
			bʊˈhan	Ibatan
			fəˈʷan	Iratay, Ivalino
170.	mosquito	*tamʊˈnəŋ	tamʊˈnəŋ	Itbayat
			tamʊˈnʊŋ	Iraralay, Iratay, Ivalino
			tamәˈnəŋ	Ivasay, Isamorong

171.	moss	*ɣʊˈmʊt	ˈhʊːmʊt	Itbayat, Ibatan
172.	mother	*ʔɪˈnaʔ	ʔɪˈnaʔ	Ivasay, Isamorong
			ˈʔɪːnaʔ	Iraralay, Iratay, Ivalino, Itbayat
173.	mountain	*tʊˈkʊn	tʊˈkʊn	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
174.	mud	*ɣʊˈtaʔ	hʊˈtaʔ	Isamorong, Ibatan
			wʊˈtaʔ	Itbayat

N

	English	Proto-Batanic		
175.	nail (finger or toe)	*kʊˈkʊh	kʊˈkʊh	Itbayat
			kʊˈkʊ	Ivasay, Isamorong
			ˈkʊːkʊ	Iratay, Ivalino
176.	name	*ŋaˈran	ŋaˈran	Itbayat, Ivasay, Isamorong, Ibatan
			ŋaˈɽan	Iraralay, Iratay, Ivalino
177.	nape	*pʊtʊˈɣan	pʊtʊˈɣan	Itbayat
			pʊtʊˈhan	Isamorong
178.	narrow	*(ma)hɪˈlɪd	(ma)hɪˈlɪd	Itbayat
			ˈʔɪːlʲɪɖ	Iraralay, Iratay, Ivalino
			(ma)jˈdɪd	Ivasay
179.	navel	*pʊˈsəd	pʊˈsəd	Isamorong, Ibatan
			pəˈsəd	Itbayat, Ivasay
			pəˈʂəɖ	Iraralay, Iratay, Ivalino
180.	near	*masˈŋən	masˈŋən	Itbayat
			ˈmasŋən	Isamorong, Ibatan
			majˈɲən	ɪvasay
181.	neck	*laˈgaw	laˈgaw	Ivasay, Isamorong, Ibatan
			raˈgaw	Ivalino, Itbayat
			ˈraːgaw	Iratay
182.	necklace	*ˈsaːrɪyʊ	ˈsaːrjʊ	Ivasay, Isamorong
			ˈsaːrɪ	Itbayat
183.	needle	*daˈyʊm	daˈjəm	Ivasay

			raˈjʊm	Isamorong
			ɽaˈjʊm	Iratay, Ivalino
			raˈjəm	Itbayat, Ibatan
184.	net (fishing)	*saˈgap	saˈgap	Itbayat, Ivasay, Isamorong
185.	new	*baˈyʊʔ	vaˈjʊʔ	Iraralay, Iratay, Itbayat
			vaˈjʊ	Ivasay, Isamorong
			baˈjʊʔ	Ibatan
			faˈjʊʔ	Ivalino
186.	night	*ʔaˈɣəp	ʔaˈɣəp	Itbayat
			(m)aˈhəp	Ivasay, Isamorong, Ibatan
			ʔaˈʷəp	Iraralay, Iratay, Ivalino
187.	nine	*sasɪˈyam	saˈsjam	Itbayat, Isamorong
			saˈʃam	Ibatan
			sjam	Ivasay
			ʂjam	Iraralay, Iratay, Ivalino
188.	none	ʔaˈbʊʔ	ʔaˈbʊʔ	Ivasay, Ibatan
			ʔaːbʊʔ	Iraralay, Iratay, Ivalino
189.	northeast wind	*hɪlaˈwʊd	hɪlaˈwʊd	Itbayat
			ʔɪdaˈwʊd	Ivasay
190.	nose	*mʊmʊhˈdan	mʊhˈdan	Itbayat
			mʊmʊˈɖan	Iraralay, Iratay, Ivalino
			mʊmʊˈdan	Ivasay
			mʊmʊˈdad	Isamorong
			mamʊˈdan	Ibatan
191.	not	*ʔʊmˈba	ʔʊmˈba	Ivasay, Isamorong
		*ʔɪŋˈgaʔ	ʔɪŋˈgaʔ	Itbayat, Ibatan
192.	now/today	*kaŋʊryaˈwɪʔ	tʃaŋʊrˈjaːwɪʔ	Itbayat
			ʧaŋʊrˈjaw	Ivasay
			tʃaŋʊˈrɪʔ	Isamorong
			ʧaˈŋʊːrɪʔ	Ibatan

O

	English	Proto-Batanic		
193.	octopus	*kʊyˈta	kʊjˈta	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
194.	often	*(ma)saˈnɪb	(ma)saˈnɪb	Itbayat, Ivasay
			(ma)saˈɲɪb	Isamorong
			ˈʂaːɲɪb	Iraralay, Iratay, Ivalino
195.	old	*ʔaˈdan	ʔaˈdan	Itbayat, Ivasay, Isamorong, Ibatan
			ʔaˈɖan	Iraralay, Iratay, Ivalino
196.	once	*ˈpɪʔsa	(mɪ)ˈpɪʔsa	Itbayat
			(naj)pɪˈsaʔ	Ibatan
		*(ma)waˈyɪd	mawaˈjɪd	Ivasay, Isamorong
197.	one	*ʔaˈsaʔ	ʔaˈsaʔ	Ivasay, Isamorong
			ˈʔaːsaʔ	Ibatan
			ʔaˈsa	Itbayat
			ʂa	Iraralay, Iratay, Ivalino
198.	one hundred	*yaˈtʊs	(ʔʊm)jaˈtʊs	Itbayat, Isamorong
199.	one thousand	*lɪˈbʊʔ	(ʔʊm)lɪˈvʊʔ	Isamorong
			(ʔasa)ˈrɪːbʊʔ	Ibatan
			(ʔasa) rɪˈfʊʔ	Iratay, Ivalino
200.	orphan	*nasˈbaŋ	nasˈbaŋ	Itbayat, Isamorong
201.	other, different	*taˈrək	(ma)taˈrək	Itbayat, Ivasay, Isamorong, Ibatan
202.	outrigger canoe	*tataˈya	tataˈja	Itbayat, Ivasay, Isamorong
			tataˈlaʔ	Iraralay, Iratay, Ivalino

P

	English	Proto-Batanic		
203.	paddle (canoe)	*kaˈhʊd	kahʊd	Itbayat
			kaˈwʊd	Ivasay, Isamorong
			ˈkawd(an)	Ibatan
204.	pain	*gaˈnɪt	gaˈnɪt	Itbayat
			gaˈɲɪt	Isamorong, Ibatan
		*ʔɪˈŋən	ʔɪˈŋən	Iratay, Ivalino
			(ma)jˈɲən	Ivasay
205.	palm (hand)	*raˈpan	raˈpan	Ivasay, Isamorong
206.	penis	*bʊˈtʊ	vʊˈtʊ	Itbayat, Ivasay
			bʊˈtʊʔ	Ibatan
207.	person	*taˈwʊʔ	taˈwʊʔ	Iraralay, Iratay, Ivalino, Itbayat, Ibatan
			taˈwʊ	Ivasay
			taˈwʊh	Isamorong
208.	pig	*kʊˈyɪs	kʊˈʲɪʂ	Iraralay, Iratay, Ivalino
			kʊˈjəs	Itbayat
209.	plant	*(mʊɣa)mʊˈɣa	mʊɣamʊˈɣa	Itbayat
			mʊhamʊˈhaʔ	Ivasay, Isamorong
			ˈmʊːwa	Iraralay, Iratay, Ivalino
210.	pound, well ground	*ʔaˈsad	ʔasad	Itbayat, Ibatan
211.	press with hand or weight	*raɣˈmət	rahməˈt(an)	Isamorong, Ibatan
212.	prick, pierce	*tʊˈlʊk	tʊˈlʊk	Isamorong
			tʊˈrʊk	Iraralay, Iratay, Ivalino, Itbayat
			ˈtʊːdʊk	Ibatan
213.	pus	*naˈnaʔ	naˈnaʔ	Itbayat
			ˈnaːnaʔ	Ibatan
			naˈna	Ivasay

R

	English	Proto-Batanic		
214.	rat	*kaˈram	kaˈram	Itbayat, Ivasay, Isamorong, Ibatan
			kaˈɽam	Iraralay, Iratay, Ivalino
215.	red	*mabʊˈyah	mabʊˈja	Ibatan
			mavaˈjah	Itbayat
			mavaˈjaʔ	Isamorong
			mavaˈja	Ivasay
216.	rib	*tagˈlaŋ	tagˈlaŋ	Isamorong
			tagˈraŋ	Iraralay, Iratay, Ivalino
217.	right (hand)	*kawaˈnan	kaˈnaːwan	Ibatan
			waˈnan	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong
218.	rinse	*ʔahˈnaw(an)	ʔahnaˈw(an)	Itbayat
			ʔanaˈw(an)	Ivasay
219.	river	*ʔaɣˈsʊŋ	ʔahˈsʊŋ	Ivasay, Isamorong
			ˈʔʊksʊŋ	Ibatan
220.	road	*raraˈɣan	raraˈɣan	Itbayat
			raraˈhan	Ivasay, Isamorong, Ibatan
221.	rock (or boulder)	*baˈtʊʔ	baˈtʊʔ	Ibatan
			vaˈtʊʔ	Iraralay, Iratay, Itbayat, Isamorong
			faˈtʊʔ	Ivalino
			baˈtʊ	Ivasay
222.	roof	*ʔaˈtəp	ʔaˈtəp	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
223.	root	*yaˈmʊt	jaˈmʊt	Iratay, Ivalino, Itbayat, Isamorong
224.	rope	*ɣʊˈbɪd	hʊˈvɪd	Isamorong
			hʊˈbɪd	Ibatan
225.	rotten (fruit)	*nararaˈyaw	nararaˈjaw	Itbayat, Ivasay, Ibatan
226.	rotten (log)	*naɣˈta	naɣˈta	Itbayat
			nahˈtaʔ	Ivasay, Isamorong
			ˈnahtaʔ	Ibatan
227.	rough	*mapaˈyas	mapaˈjas	Itbayat, Ivasay, Isamorong

S

	English	Proto-Batanic		
228.	salt	*ʔaˈsɪn	ʔaˈsɪn	Itbayat, Ivasay, Isamorong, Ibatan
			ʔaˈʂɪn	Iraralay, Iratay, Ivalino
229.	salty	*mapaˈyɪt	mapaˈjɪt	Itbayat, Ivasay, Isamorong
			maˈpaːjɪt	Iratay, Ivalino
230.	same	*ʔakˈmay	ʔakˈmaj	Ivasay, Isamorong
			ʔakˈma	Itbayat
231.	sand	*ʔaˈnay	ʔaˈnaj	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong
			ˈʔaːnaj	Ibatan
232.	scratch, carving	*kadˈkad	kadˈkad	Ivasay, Isamorong, Ibatan
			ˈkaɖkaɖ	Iratay, Ivalino
233.	second	*ʔɪka-dadʊˈha	ʔɪtʃadaduˈha	Itbayat
			ʧadˈwa	Ivasay, Isamorong
			ʔɪkaˈdwa	Ibatan
234.	sea (ocean)	*haˈwaʔ	haˈwa	Itbayat
			waˈwaʔ	Iratay, Ivalino
235.	seed	*bʊˈtʊɣ	vʊˈtʊɣ	Itbayat
			vʊˈtʊh	Ivasay, Isamorong
			bʊˈtʊh	Ibatan
			fʊtˈtʊw	Iratay, Ivalino
236.	servant	*kasɪˈdʊŋ	kasɪˈdʊŋ	Itbayat, Ivasay, Ibatan
237.	seven	*papɪˈtʊ	papɪˈtʊ	Itbayat, Ivasay, Ibatan
			pɪˈtʊʔ	Iraralay, Iratay, Ivalino
			(tʃa)pɪˈtʊ	Isamorong
238.	shadow	*ʔaˈnɪːnʊ	ʔaˈnɪːnʊ	Ivasay
			ʔanˈnɪːnʊ	Itbayat
			ʔaŋɪˈnʊ	Isamorong
239.	shallow	*baˈbaw	(ma)vaˈvaw	Ivasay, Isamorong
			(mahɪ)vaˈvaw	Itbayat
			(ma)ˈbaːbaw	Ibatan
240.	shark	*ʔɪˈjʊʔ	ʔɪˈjʊʔ	Isamorong, Ibatan
			ˈʔɪːjʊ	Ivasay

241.	sharp (knife)	*maˈtarəm	mataˈrəm	Itbayat, Ivasay, Isamorong, Ibatan
			maˈtaːɽəm	Iratay, Ivalino
242.	shore	*kanaˈyan	kanaˈjan	Itbayat, Ivasay, Isamorong, Ibatan
243.	short	*mayˈŋəd	majˈɲəd	Ivasay
			majˈɲɪd	Isamorong
			ˈmaːɲɪd	Ibatan
			(han)ajˈɲəd	Itbayat
			(ʔaˈlʲɪː)ŋəɖ	Iratay, Ivalino
244.	shoulder	*paˈkʊɣ	paˈkʊɣ	Itbayat
			paˈkʊh	Ivasay, Isamorong, Ibatan
			paˈkaw	Iratay, Ivalino
245.	shrimp	*hɪˈpʊn	hɪˈpʊn	Itbayat
			ʔɪˈpʊn	Iraralay, Iratay, Ivalino, Isamorong, Ibatan
			ʔɪˈpən	Ivasay
246.	sibling (m/f)	*kakˈtəɣ	kakˈtəɣ	Itbayat
			kakˈtəh	Ivasay, Isamorong, Ibatan
			kakˈtəː	Iraralay
			kəˈtəː	Iratay, Ivalino
247.	singe	*paˈsʊ	paˈsʊ	Ivasay
			ˈpaːsʊ	Isamorong
			(na)ˈpʊːsʊʔ	Ibatan
			pasˈw(ən)	Itbayat
248.	six	*ʔaʔˈnəm	ʔaʔˈnəm	Itbayat
			ˈʔaːnəm	Ivasay
			nəm	Iraralay, Iratay, Ivalino
			ʔɪnˈnəm	Ibatan
			ˈ(tʃaː)nəm	Isamorong
249.	skin (person)	*kʊˈlɪt	kʊˈlɪt	Itbayat
			kʊˈlʲɪt	Iratay, Ivalino
			kʊˈdɪt	Ivasay, Isamorong, Ibatan
250.	skull	*yaˈŋa	jaˈŋa	Itbayat, Isamorong
251.	sky	*ɣaˈŋɪt	ɣaˈɲɪt	Itbayat
			haˈɲɪt	Isamorong, Ibatan
			ˈʔaːŋɪt	Iraralay, Iratay, Ivalino

252.	sleepy	*ˈmaːdʊhʊʔ	ˈmaːdʊhʊʔ	Isamorong, Ibatan
			madʊˈhʊʔ	Ivasay
253.	small	*(ʔa)lɪˈkəy	ˈlʲɪːkəj	Iraralay, Iratay, Ivalino
			ˈdəːkəj	Ivasay, Isamorong, Ibatan
			(ʔa)ləˈkəj	Itbayat
254.	smoke	*ʔaˈɣʊb	ʔaˈɣʊb	Itbayat
			ʔaˈhʊb	Ivasay, Isamorong, Ibatan
			ʔaˈʷʊb	Iraralay, Iratay, Ivalino
255.	snake	*bʊˈlay	vʊˈlaj	Itbayat
			fʊˈlaj	Iratay, Ivalino
			vʊˈdaj	Ivasay, Isamorong
			bʊˈdaj	Ibatan
256.	sneeze	*baʔˈnan	vaʔˈnan	Ivasay
			vaˈnan	Isamorong
			(mɪ)ˈvaːnan	Itbayat
			(maj)baˈnan	Ibatan
257.	soft	*maɣəˈmaʔ	maɣˈmaʔ	Itbayat
			maˈʁəːma	Iratay, Ivalino
			mahˈma	Ivasay, Isamorong, Ibatan
258.	sole	*daˈpan	ɗaˈpan	Ibatan
			ʈapˈpan	Iraralay, Iratay, Ivalino
259.	soul	*paˈɣad	paˈɣad	Itbayat
			paˈʁaɖ	Iratay
			paˈhad	Isamorong
260.	southwest wind	*habaˈyat	havaˈjat	Itbayat
			ʔavaˈjat	Ivasay, Isamorong
261.	spear	*(t/k)ɪˈbʊt	ʧɪˈbʊt	Isamorong, Ibatan
262.	species of bats	*panɪˈkɪʔ	panɪˈʧɪʔ	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong
			paˈnɪːʧɪʔ	Ibatan
263.	spider	*(ka)kaˈmaw	kakaˈmaw	Iraralay, Iratay, Ivalino
			kaˈmaw	Isamorong
264.	spittle(saliva)	*ŋaˈɣay	ŋaˈɣaj	Itbayat
			ŋaˈhaj	Ivasay, Isamorong, Ibatan
			ŋaˈʁaj	Iratay, Ivalino

265.	squid	*ʔaˈnʊs	ʔaˈnʊs	Isamorong, Ibatan
			ʔaˈnʊʂ	Iraralay, Iratay, Ivalino
266.	stand up, stature	*taʔˈnək	(mɪ)taʔˈnək	Itbayat
			taˈnək	Iraralay, Iratay, Ivalino
			(maj)ˈtəːnək	Ibatan
			t(ʊm)ˈnək	Ivasay, Isamorong
267.	star	*bɪtʊˈɣən	vɪtʊˈhən	Isamorong
			bɪtʊˈhən	Ibatan
			vɪtʊˈhʊn	Ivasay
			vɪˈtʊn	Itbayat
268.	stomach	*bʊˈlək	vʊˈlək	Itbayat
			fəˈlək	Iratay, Ivalino
			bʊˈdək	Ibatan
			bəˈdək	Ivasay
			vəˈdək	Isamorong
269.	storehouse (food)	*kamaˈlɪg	kamaˈlʲɪg	Iraralay, Iratay, Ivalino
			kamaˈdɪd	Isamorong
			kamaˈrɪn	Ivasay
270.	straight	*(ma)talɪˈnəŋ	talɪˈnəŋ	Isamorong
			(ma)tarɪˈnəŋ	Itbayat
271.	stretch	*lanəˈnət	laˈnət	Isamorong
			(ma)həˈnəːnət	Ibatan
			nəˈnət	Iraralay, Iratay, Ivalino
272.	strong	*(ma)ahˈyɪt	(m)ahˈjət	Itbayat
			ʔaˈjɪt	Iraralay, Iratay, Ivalino
			(m)aʔˈjət	Ivasay
			(m)aˈjɪt	Ibatan
			(m)aˈjət	Isamorong
273.	suck	*səpˈsəp	sɪpˈsɪp	Itbayat, Ivasay
			ˈsəpsəp	Ibatan
			ʂəpˈʂəp	Iraralay, Iratay, Ivalino
274.	sugarcane	*ʔʊˈnas	ʔʊˈnas	Itbayat, Ivasay, Isamorong, Ibatan
			ʔʊˈnaʂ	Iraralay, Iratay, Ivalino
275.	sun/day	*ʔaˈraw	ʔaˈraw	Itbayat, Ivasay, Isamorong
			ˈʔaːraw	Ibatan
			ʔaˈɽaw	Iraralay, Iratay, Ivalino

276.	sweet	*mawnawˈnas	mawnawˈnas	Itbayat, Isamorong
277.	swollen	*laˈtək	laˈtək	Ivasay, Isamorong
			ˈ(m)jaːtək	Ibatan
			ˈjʊːtək	Itbayat
			jaˈtək	Iratay, Ivalino

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	English	Proto-Batanic		
278.	tail	*ˈʔɪːpʊs	ˈʔɪːpʊs	Ibatan
			ʔɪˈpʊs	Itbayat, Ivasay
			ˈʔɪːpʊʂ	Iraralay, Iratay, Ivalino
279.	tall	*makaˈraŋ	makaˈraŋ	Itbayat, Ivasay, Isamorong, Ibatan
280.	tear (from crying)	*(ka)ɣʊˈhʊʔ	ɣʊˈhʊʔ	Itbayat
			(majtʃa)ˈhʊːhʊʔ	Ibatan
			hʊʔ	Isamorong
			(ka)^{w}ʊˈ^{w}ʊʔ	Iraralay, Iratay, Ivalino
281.	ten	*pʊˈɣʊ	(sa)ˈpʊɣʊ	Itbayat
			(ˈsaː)pʊhʊ	Isamorong
			(ˈʔaːsa)pʊhʊʔ	Ibatan
			ˈpʊː^{w}ʊ	Ivalino
			pʊː	Iraralay, Iratay,
282.	termites	*ʔaˈnaj	ʔaˈnaj	Itbayat, Ivasay, Isamorong, Ibatan
283.	testicle	*kamɪˈnaw	kamɪˈnaw	Itbayat, Isamorong
284.	that/there	*dawˈrɪ	dawˈrɪʔ	Isamorong
			daˈwɪʔ	Itbayat
			ˈnawrɪʔ	Ivasay, Ibatan
285.	they	*sɪˈra	sɪˈra	Itbayat
			ˈsɪːra	Ibatan
			ʂɪˈʈa	Iraralay, Iratay, Ivalino
			sɪˈraʔ	Ivasay, Isamorong

286.	thick	*matʊkˈpʊɣ	matʊkˈpʊɣ	Itbayat
			matʊkˈpʊh	Ivasay
			matʊkˈpʊʔ	Isamorong
			maˈtʊhpʊ	Ibatan
287.	thigh	*paˈʔa	paˈʔa	Itbayat
			paː	Ivasay, Isamorong
			ˈʔʊːpa	Iraralay, Iratay, Ivalino
288.	thin	*tarɪˈpɪs	(ma)tarɪˈpɪs	Itbayat, Ivasay, Isamorong, Ibatan
			taɽɪˈpɪʂ	Iraralay, Iratay, Ivalino
289.	thin (human)	*magʊˈlaŋ	magʊˈlaŋ	Ivasay, Isamorong, Ibatan
			magʊˈraŋ	Itbayat
290.	third	*ʔɪka-tatlʊ	ʔɪtʃatˈlʊ	Itbayat
			ʧatˈdʊ	Ivasay, Isamorong
			ʧaˈtatdʊʔ	Ibatan
291.	thirsty	*mahˈwaw	mahˈwaw	Itbayat
			maˈwaw	Ivasay, Isamorong, Ibatan
			ˈmaːwaw	Iraralay, Iratay, Ivalino
292.	this	*ˈnɪːya	ˈnɪːja	Itbayat
			ɲa(ˈja)	Ivasay, Isamorong, Ibatan
			ja	Iratay, Ivalino
293.	thorn	*manʊˈlək	manʊˈrʊk	Itbayat
			nʊˈlək	Ibatan
294.	thou/you	*ˈʔɪːmʊ	ˈʔɪːmʊ	Iraralay, Iratay, Ivalino, Itbayat, Isamorong, Ibatan
			ʔɪˈmʊ	Ivasay
295.	three	*tatˈlʊ	tatˈdʊ	Ivasay, Isamorong
			ˈtatdʊʔ	Ibatan
			ˈʔatlʊʔ	Iraralay, Iratay, Ivalino
			ʔatˈlʊ	Itbayat
296.	throat	*tətəɣˈnan	təɣˈnan	Itbayat
			tətəhˈnan	Ivasay
			təhˈnan	Isamorong
			ˈtehnan	Ibatan
			tətəʁˈnan	Iraralay, Iratay, Ivalino
297.	thunder	*ʔaˈdəy	ʔaˈdəj	Ivasay, Isamorong, Ibatan
			ˈʔaːɖə̤j	Iratay, Ivalino

298.	tight	*masˈpət	masˈpət	Itbayat, Ivasay, Isamorong
			ˈmaspət	Ibatan
299.	to ask	*ʔaˈɣəs	ʔaˈɣəs	Itbayat
			ʔaˈʲəʂ	Iraralay, Iratay, Ivalino
			jaˈhəs	Ivasay, Isamorong
300.	to awake	*(ma)yʊˈkay	(ma)jʊˈkaj	Itbayat, Ivasay, Isamorong, Ibatan
			ˈjʊːkaj	Iratay, Ivalino
301.	to bear (child)/to come	*waˈraʔ	(maka)waˈra	Itbayat, Ivasay
			waˈraʔ	Isamorong
302.	to beat (strike)	*sɪpˈlʊt	sɪpˈrʊt	Itbayat
			ʔɪpˈlʊt	Isamorong
303.	to belch	*kʊmˈlab	kʊmˈlab	Isamorong
			kʊmˈrab	Itbayat
304.	to bite	*sʊˈŋɪt	sʊˈɲɪt	Itbayat, Ivasay, Isamorong, Ibatan
305.	to blow (wind)	*ʔaˈlʊp	ʔaˈlʊp	Ivasay, Isamorong
306.	to boil (intrans.)	*ʔakˈbwal	(p)akbwaˈr(ən)	Itbayat
			k(ʊm)ˈbwal	Ivasay, Isamorong
307.	to break (as stick)	*pʊˈtʊt	pʊˈtʊt	Itbayat, Ivasay, Isamorong, Ibatan
308.	to breathe	*hɪnaˈwa	h(ʊm)ɪˈnaːwa	Itbayat, Isamorong
309.	to bring	*raˈra	raˈra	Ivasay, Isamorong
310.	to burn (by itself)	*sʊˈsʊɣ	sʊˈsʊh	Ivasay, Ibatan
311.	to bury	*bʊˈbʊn	vʊˈvʊn	Itbayat, Ivasay, Isamorong
			ˈbʊːbʊʔ	Iraralay, Iratay, Ivalino
312.	to buy/to sell	*saˈlɪw	saˈlɪw	Itbayat
			sadˈjəw	Ivasay, Isamorong
313.	to call	*taˈwag	taˈwag	Itbayat, Ivasay, Isamorong, Ibatan
314.	to carry	*raˈrah	raˈrah	Itbayat
			raˈraʔ	Ivasay, Isamorong
315.	to choose	*pɪˈlɪ	pɪˈlɪ	Itbayat
			pɪˈlʲɪ	Iraralay, Iratay, Ivalino
			pɪˈdɪʔ	Ivasay, Isamorong, Ibatan
316.	to clean	*namʊnaˈmʊ	namʊnaˈmʊʔ	Itbayat, Isamorong
317.	to cough	*gʊˈgʊʔ	gʊˈgʊʔ	Isamorong, Ibatan
			ˈgʊːgʊ	Ivasay
318.	to count	*bɪˈlaŋ	vɪˈlaŋ	Itbayat
			vɪˈdaŋ	Ivasay, Isamorong, Ibatan

319.	to cut	*ˈʔaktəb	ˈʔaktəb	Iraralay, Iratay, Ivalino, Itbayat, Isamorong
320.	to dance	*taˈla	taˈla	Itbayat
			ˈtaːda	Ivasay, Isamorong, Ibatan
321.	to defecate	*taˈkɪ	taˈtʃɪʔ	Itbayat, Isamorong, Ibatan
			tatˈʧɪ	Ivasay
322.	to desire	*haˈkəy	haˈkəj	Itbayat
			(ˈʧaː)kəj	Ivasay, Isamorong
			(ˈdəː)kəj	Ibatan
323.	to die/to fight/to kill/to quarrel/war	*lɪˈman	lɪˈman	Itbayat
			lʲɪˈman	Iraralay, Iratay, Ivalino
			dɪˈman	Ivasay, Isamorong, Ibatan
324.	to dig	*kaˈlɪ	kaˈlʲɪ	Iraralay, Iratay, Ivalino
			kaˈdɪʔ	Isamorong, Ibatan
325.	to do	*paˈrɪn	paˈrɪn	Itbayat, Isamorong, Ibatan
326.	to drag	*gʊrʊˈgʊd	gʊrʊˈgʊd	Ivasay, Isamorong, Ibatan
327.	to drink	*ʔɪˈnʊm	ʔɪˈnʊm	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
328.	to drown	*ʔaˈmʊt	ʔaˈmʊt	Iraralay, Iratay, Ivalino, Ivasay, Isamorong
329.	to eat	*kan	kan	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
330.	to fall	*gagˈtʊs	gagˈtʊs	Isamorong
			g(ʊm)ˈtʊs	Itbayat, Ivasay
331.	to fear	*haʔˈmʊ	(ʔɪtʃa)haʔˈmʊ	Itbayat
			(ˈmaː)mʊʔ	Ivasay, Isamorong, Ibatan
332.	to find/to look	*kɪˈta	tʃɪˈtaʔ	Iraralay, Iratay, Ivalino Ivasay, Isamorong
333.	to float	*ɣəˈtaw	ɣaˈtaw	Itbayat
			ˈʔɪhtaw	Ibatan
			ʔəhˈtaw	Ivasay, Isamorong
334.	to fly	*saˈyap	saˈjap	Itbayat, Isamorong
			ˈʂaːlap	Iratay, Ivalino
			saˈhəp	Ibatan
335.	to forget	*waˈyak	waˈjak	Itbayat, Ivasay, Isamorong, Ibatan

336.	to give	*tʊˈrʊɣ	tʊˈrʊɣ	Itbayat
			tʊˈrʊh	Ivasay, Isamorong, Ibatan
			tʊˈɽʊʔ	Iraralay, Iratay, Ivalino
337.	to go	*maˈŋay	maˈŋaj	Itbayat, Ivasay, Isamorong, Ibatan
			mɪʔ	Iraralay, Iratay, Ivalino
338.	to go down	*kagˈtɪn	ˈkagtɪn	Ivasay
			ʔagˈʧɪn	Iraralay, Iratay, Ivalino
339.	to go in	*(ʔa)sˈdəp	s(ʊm)ˈdəp	Itbayat, Ivasay, Isamorong, Ibatan
340.	to go out	*mʊɣˈbət	mʊɣˈbʊt	Itbayat
			məhˈbət	Isamorong
341.	to go up	*kaˈyat	kaˈjat	Itbayat, Ivasay, Isamorong, Ibatan
342.	to hang on, hook	*saˈgɪt	ʂaˈgɪt	Iraralay, Iratay, Ivalino
	something		saˈʤɪt	Isamorong, Ibatan
343.	to hear	*ʔadˈŋəy	ʔadˈŋəj	Itbayat, Isamorong, Ibatan
			ʔanˈŋəj	Ivasay
344.	to hit	*naˈɣʊʔ	naˈɣʊ	Itbayat
			naˈhʊʔ	Ivasay, Isamorong, Ibatan
			naˈwʊʔ	Iraralay, Iratay, Ivalino
345.	to hold (in hand)	*pɪnˈdan	pɪnˈdan	Itbayat
			pʊnˈdan	Ivasay
			pɪˈnan	Iraralay, Iratay, Ivalino
346.	to jump (esp up)	*ɣʊkˈsʊʔ	hʊkˈsʊʔ	Ivasay, Isamorong, Ibatan
347.	to laugh	*mɪˈyəŋ	mjəŋ	Isamorong, Ibatan
			mɪˈʲɪŋ	Iraralay, Iratay, Ivalino
348.	to lie (on side)	*pʊpˈtad	(maj)pʊpˈtad	Ivasay, Isamorong
			(mɪ)pəpˈtad	Itbayat
			(maj)pʊkˈtad	Ibatan
349.	to live	*mabɪˈhay	mavɪˈhaj	Itbayat
			mavˈjaj	Ivasay, Isamorong
			ˈmaːfjaj	Iratay, Ivalino
			maˈbjaj	Ibatan
350.	to look	*ˈtɪːban	ˈtɪːban	Itbayat, Ivasay
			ˈʧɪːban	Isamorong, Ibatan

351.	to love	*ʔagˈlaw	ʔagˈlaw	Iraralay, Iratay, Ivalino
			ʔadˈlaw	Itbayat
			ʔadˈdaw	Isamorong
			ʔaˈdaw	Ibatan
352.	to open	*ʔɪhˈwaŋ	ʔɪhˈwaŋ	Itbayat
			ʔɪˈwaŋ	Ivasay, Isamorong, Ibatan
353.	to play	*ˈyaːyam	ˈjaːjam	Ivasay, Isamorong
354.	to pound	*maŋˈsad	maŋˈsad	Itbayat, Ivasay, Ibatan
			ʔaˈsad	Isamorong
355.	to pull	*paˈlaŋ	paˈlaŋ	Ivasay, Isamorong, Ibatan
			paˈraŋ	Itbayat
356.	to put	*pahˈŋay	pahˈŋaj	Itbayat
			paˈŋaj	Iraralay, Iratay, Ivalino, Isamorong
357.	to rain	*tɪˈmʊy	tɪˈmʊj	Itbayat, Ivasay
			ʧɪˈmʊj	Iraralay, Iratay, Ivalino, Isamorong, Ibatan
358.	to return	*bɪˈlɪ	vɪˈlɪ	Itbayat
			vɪˈdɪ	Ivasay, Isamorong
			bɪˈdɪʔ	Ibatan
359.	to rub	*gɪsˈgɪs	gɪsˈgɪs	Itbayat
			ʤɪsɪˈʤɪs	Isamorong
360.	to run	*yaˈyʊh	jaˈjʊh	Itbayat
			jaˈjʊ	Ivasay
			jaˈjʊʔ	Isamorong, Ibatan
			(pa)laˈjʊ	Iratay, Ivalino
361.	to say	*baˈta	vaˈta	Itbayat, Ivasay, Isamorong
			baˈta	Ibatan
362.	to scratch (itch)	*kadˈkad	kadˈkad	Itbayat, Ivasay, Isamorong
			kaɖˈkaɖ	Iraralay, Iratay, Ivalino
363.	to sew	*ʔaɣˈnəb	ʔaɣˈnəb	Itbayat
			ʔahˈnəb	Ivasay
			ʔaˈnəb	Isamorong
364.	to show	*(pa)bʊˈyaʔ	(pa)vʊˈjaʔ	Ivasay, Isamorong
			(pa)bʊˈjaʔ	Ibatan
365.	to shower	*salɪnɪˈsɪn	salɪŋɪˈsɪn	Ivasay, Isamorong
			tarɪˈnɪːsɪn	Itbayat

366.	to sink (intrans)	*ʔaˈnəd	ʔaˈnəd	Itbayat, Ivasay, Isamorong, Ibatan
			ʔaˈnəɖ	Iraralay, Iratay, Ivalino
367.	to sit	*lɪsˈna	ˈlʲɪʂna	Iraralay, Iratay, Ivalino
			dɪsˈnaʔ	Ivasay, Isamorong, Ibatan
368.	to sleep	*hɪtˈkəɣ	ʔɪtˈkəː	Iraralay, Iratay, Ivalino
			(maka)hɪˈchəɣ	Itbayat
			(maka)jˈʧə	Ivasay, Ibatan
			(m)ɪˈtʃəh	Isamorong
369.	to smell	*haˈŋʊt	haˈŋʊt	Itbayat
			ˈʔaːŋʊt	Ivasay, Ibatan
			ʔaˈŋʊt	Isamorong
370.	to speak	*kɪˈrɪh	ʧɪˈrɪ(n)	Ivasay, Isamorong, Ibatan
			(mam)ˈʧɪh	Itbayat
371.	to squeeze	*ˈpɪnsa(n)	ˈpɪnsa(n)	Ibatan
			ˈpɪːsa(n)	Itbayat
372.	to stand	*taʔˈnək	taʔˈnək	Itbayat
			taˈnək	Iraralay, Iratay, Ivalino
			t(ʊm)ˈnək	Ivasay
			tətˈnək	Isamorong
			ˈtəːnək	Ibatan
373.	to steal	*taˈkaw	taˈkaw	Iraralay, Iratay, Ivalino
			ˈnaːkaw	Itbayat, Ivasay, Isamorong
374.	to string (as leis)	*tʊhʊˈy(ən)	tʊhˈj(ən)	Itbayat
			ˈtʊːj(ən)	Isamorong
375.	to suck	*səpˈsəp	səpˈsəp	Itbayat, Isamorong
			ˈsəpsəp	Ibatan
			sɪpˈsɪp	Ivasay
376.	to swallow	*ʔɪtˈlən	ʔɪtˈlən	Iraralay, Iratay, Ivalino
			ʔatˈdən	Ivasay, Isamorong
			ʔagˈdən	Ibatan
377.	to sweat	*ʔ(ɪn)alənˈdəŋ	ʔ(ɪn)alənˈdəŋ	Ivasay, Isamorong
378.	to swim	*ʔaˈwat	ʔaˈwat	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan
379.	to think	*ˈtʊktʊ	ˈtʊktʊ	Itbayat, Ivasay, Ibatan
			tʊkˈtʊh	Isamorong

380.	to throw	*(ʔɪ)pʊˈɣah	(ʔɪ)pʊˈɣah	Itbayat
			(ʔɪ)pʊˈhaʔ	Ivasay, Isamorong, Ibatan
381.	to vomit	*ʔʊˈtaʔ	ʔʊˈtaʔ	Itbayat, Isamorong, Ibatan
382.	to walk	*haˈyam	haˈjam	Itbayat
			ʔaˈjam	Ivasay, Isamorong, Ibatan
			ˈʔaːlam	Iraralay, Iratay, Ivalino
383.	to wash	*ʔʊˈyas	ʔʊˈjas	Itbayat, Ivasay, Ibatan
			ʔʊˈjaʂ	Iraralay, Iratay, Ivalino
384.	to wipe	*pʊˈnas	pʊˈnas	Itbayat
			ˈpʊːnas	Isamorong, Ibatan
			pʊˈnaʂ	Iraralay, Iratay, Ivalino
385.	to wrap up	*pʊˈŋʊs	pʊˈŋʊs	Itbayat, Isamorong, Ibatan
386.	tomorrow/the following day	*ʔandəˈlak	ʔandəˈlak	Ivasay
			anˈdəːlak	Isamorong, Ibatan
387.	tooth (front)	*ŋɪˈpən	ˈŋəːpən	Iratay, Ivalino
			ˈɲɪːpən	Itbayat, Ivasay, Isamorong, Ibatan
388.	tree	*kaˈyʊh	kaˈjʊh	Itbayat
			kaˈjʊ	Isamorong, Ibatan
389.	turtle	*ʔɪˈraŋ	ʔɪˈraŋ	Itbayat, Isamorong, Ibatan
			ʔɪˈɽaŋ	Iraralay, Iratay, Ivalino
390.	twins	*paˈŋaʔ	paˈŋaʔ	Itbayat, Isamorong
391.	two	*dadʊˈha	ˈdʊːha	Itbayat
			dadˈwa	Ivasay, Isamorong, Ibatan
			dʊˈwa	Iraralay, Iratay

U

	English	Proto-Batanic		
392.	ugly	*maraˈɣət	maraˈwət	Itbayat
			maraˈhət	Ivasay, Isamorong, Ibatan
393.	upper garment	*layˈlay	lajˈlaj	Ivasay, Isamorong, Ibatan
			rɪˈdaj	Itbayat

394.	upside down	*tʊˈwad	tʊˈwad	Ivasay
			(mɪpa)ˈtwad	Itbayat
			(mapara)ˈdwat	Isamorong
395.	upward	*tʊˈhʊs	tʊˈhʊs	Ivasay, Isamorong, Ibatan
396.	urine	*ˈʔʊːpɪs	ˈʔʊːpɪs	Itbayat, Ivasay, Isamorong

V

	English	Proto-Batanic		
397.	vagina	*ʔʊˈbət	ʔʊˈbət	Ibatan
			ʔʊˈvət	Ivasay, Isamorong
398.	vegetables	*rakaˈnən	rakaˈnən	Itbayat, Ivasay, Isamorong, Ibatan

W

	English	Proto-Batanic		
399.	warm (weather)	*makʊˈɣat	makʊˈɣat	Itbayat
			makʊˈhat	Ivasay, Isamorong, Ibatan
400.	water	*daˈnʊm	daˈnʊm	Ivasay
			raˈnʊm	Itbayat, Isamorong, Ibatan
			ɻaˈnʊm	Iraralay, Iratay, Ivalino
401.	water buffalo	*paˈgad	paˈgad	Itbayat, Ivasay, Isamorong
402.	wave (as surf)	*ʔabˈkas	ʔabˈkas	Itbayat, Ivasay, Isamorong, Ibatan
403.	we (1PL)	*yaˈmən	jaˈmən	Iratay, Ivalino, Itbayat, Isamorong, Ibatan
404.	we (dual, pl)	*yaˈtən	jaˈtən	Iratay, Ivalino, Itbayat, Ivasay, Isamorong, Ibatan

405.	weak	*makaˈɣa	makaˈɣa	Itbayat
			makaˈha	Ivasay, Isamorong
406.	wet	*baˈsaʔ	vaˈsaʔ	Itbayat, Ivasay, isamorong
			vaˈʂa	Iraralay, Iratay
			faˈʂa	Ivalino
			baˈsaʔ	Ibatan
407.	what	*ʔaːŋʊ	ˈʔaːŋʊ	Ivasay, Isamorong, Ibatan
408.	wheel	*ʔalʊˈlʊg	ʔalʊˈlʊg	Itbayat
			ʔadʊˈdʊg	Isamorong
409.	when	*kaˈŋʊh	ˈkaːŋʊʔ	Ibatan
			(nʊ)kaˈŋʊ	Iraralay, Iratay, Ivalino
			(ʔaˈnʊː)ŋʊh	Itbayat
			ˈ(m)aːŋʊʔ	Ivasay
410.	where	*ʔaradɪˈnʊh	aˈraːʤɪnʊʔ	Isamorong
			ˈʔaːʤɪn	Iratay, Ivalino
			dɪˈnʊh	Itbayat
			dɪˈnʊ	Ivasay
			ˈdɪːnʊʔ	Ibatan
411.	white	*mahɪˈlak	maˈhɪːlak	Itbayat
			majˈdak	Ivasay, Isamorong, Ibatan
412.	who	*sɪˈnʊh	sɪˈnʊh	Itbayat
			ˈsɪːnʊ	Ivasay, Isamorong, Ibatan
			ʂɪˈnʊ	Iraralay, Iratay, Ivalino
413.	why	*ʔʊnˈtamaˈŋʊh	ʔʊntamaˈŋʊh	Itbayat
			ʔʊnˈta	Ivasay, Isamorong
414.	wide	*ʔʊˈbʊŋ	ʔʊˈvʊŋ	Isamorong
			ˈʔʊːfʊŋ	Iratay, Ivalino
415.	wind (breeze)	*salawˈsaw	salawˈsaw	Ivasay, Isamorong, Ibatan
			sarawˈsaw	Itbayat
			ʂarʊwˈʂaw	Iraralay, Iratay, Ivalino
416.	wine	*paˈlək	paˈlək	Isamorong
			paˈrək	Itbayat
417.	wing	*papaˈnɪd	papaˈnɪd	Ivasay
			paˈɲɪd	Iraralay, Iratay, Ivalino, Isamorong,
			paˈnɪd	Ibatan
				Itbayat

418.	wink	*kɪˈmɪt	tʃɪˈmɪt	Itbayat, Isamorong
419.	woman (female)	*mabaˈkəs	mavaˈkəs	Iraralay, Iratay, Ivalino, Itbayat, Ivasay, Isamorong
			mabaˈkəs	Ibatan
420.	worm	*ʔʊˈɣəd	ʔʊˈɣəd	Itbayat
			ʔʊˈhəd	Ivasay, Isamorong, Ibatan
421.	wrong	*maˈlɪ	maˈlɪ	Itbayat
			maˈdɪ	Ibatan

Y

	English	Proto-Batanic		
422.	yawn	*hʊˈwab	hʊˈwab	Itbayat
			jʊˈwab	Iratay, Ivalino
			(m)ʊˈwab	Ivasay, Isamorong
423.	year	*haˈwan	haˈwan	Itbayat
			ʔaˈwan	Iraralay, Iratay, Ivalino, Ivasay, Isamorong
424.	yesterday	*kakʊˈyab	kakʊˈjab	Itbayat, Ivasay, Isamorong, Ibatan
425.	welcome	*kanɪˈmʊ paʔ	kanɪˈmʊ paʔ	Itbayat, Isamorong

APPENDIX B

ELICITING MATERIAL

	English	Filipino
001	adze	daras
		piko
002	alive	buhay
003	all	lahat
004	and	at
005	anger	galit
006	animal	hayop
007	ankle	bukung-bukong
		sakong
008	ant	langgam
009	arm	bisig
010	armpit	kili-kili
011	arrow	palaso
		pana
012	ashes	abo
013	at	sa
014	awake	gising
015	back	likod
016	bad	masama
017	bald	kalbo
018	bamboo	kawayan
		buho
019	bark (tree)	balat ng kahoy
020	bear, suffer	tiis
021	beard	balbas
022	beautiful	maganda
023	belly	tiyan
024	big	malaki
025	bile	apdu
026	bird	ibon
027	bitter	mapait
028	black	itim, maitim
029	blade/ sharpness	talim
030	blind	bulag
031	blood	dugo
032	body	katawan
033	bone	buto (also, seed)
034	boy (young m., not son)	batang lalaki
035	brain	utak
036	branch	sanga
037	breast	suso
038	bright	maliwanag
039	brother-in-law	bayaw
040	bundle, belt	bigkis
041	butterfly	paruparo
042	buttocks	puwit, puwitan
043	catch, apprehend	dakip
044	charcoal	uling
045	cheek	pisngi
046	chest	dibdb
047	chick	sisiw
048	chicken	manok
049	chief	pinuno
		puno (also, tree)
050	child (young)	anak
051	chin	baba
052	clean	malinis
053	cloud	ulap
054	cockroach	ipis
055	coconut	niyog
056	coconut grater	kudkuran
057	coconut milk	gata
058	cold (objects)	malamig
059	cold (weather)	maginaw
		malamig
060	corpse	bangkay

061	cousin	pinsan
062	crocodile	buwaya
063	crow	uwak
064	curly hair	kulot
065	dark, dim	madilim
066	day (12 or 24 hrs)	araw (also, sun)
067	daytime (not night time)	umaga
068	deaf	bingi
069	debt	utang
070	deep	malalim
071	deer	usa
072	demolish	giba
073	dew	hamog
074	dirty	marumi
075	dog	aso
076	door	pinto
077	downward	pababa
078	dream	panaginip
079	dry (substance)	tuyo
080	dull (knife)	mapurol
081	dumb (mute)	pipi
082	dust	alikabok alabok
083	ear	tainga
084	earth (soil)	lupa
085	earwax	tutuli
086	edible, climbing plant from fleshy root stock	ube
087	eel	igat (freshwater) palos (saltwater)
088	egg	itlog
089	eggplant	talong
090	eight	walo
091	elbow	siko
092	ember, hot coal	baga
093	erection	latug
094	evening	gabi
095	excrement	dumi tae
096	eye	mata
097	eyebrow	kilay
098	face	mukha
099	far	malayo
100	fast	mabilis
101	fat (substance)	taba
102	father	ama
103	father/mother-in-law	biyenan
104	feather (large)	balahibo (fur,fine hair)
105	fence	bakod
106	few	kaunti iilan
107	fin	palaypay palikpik
108	finger	daliri
109	fingernail	kuko
110	fire	apoy
111	first	una
112	firstborn	panganay
113	fish	isda
114	five	lima
115	flatulence	utot
116	flood	baha
117	flower	bulaklak

118	fly (the insect)	langaw (small)
		bangaw (big)
119	foam	bula
120	fog	ulop
		abuabo
121	foot	paa
122	forehead	noo
123	foul-smelling	mabaho
124	four	apat
125	fragrant	mabango
126	frog	palaka
127	full (after eating)	busog
128	full (not empty)	puno
129	fur	balahibo
130	garden	halamanan
131	gills	hasang
132	ginger	luya
133	girl	batang babae
134	god	bathala
135	gold	ginto
136	good	mabuti
137	goodbye	paalam
138	grass	damo
139	gray hair	uban
140	guts	laman-loob
141	hair	buhok
	cowlick	puyo
142	hand	kamay
143	hard	matigas
144	he	siya (he, she)
145	head	ulo
146	healthy	malusog
147	heart	puso
148	heavy	mabigat
149	here	dito
150	high tide	taog
151	hole (esp. in	butas
	ground)	hukay
152	hot	mainit
153	house	bahay
154	how	paano
155	how many?	ilan
156	how much?	magkano
157	hungry	gutom
158	husband	asawa (spouse)
		tao
159	I	ako
160	image	larawan
161	intestines	bituka
162	island	pulo
163	itch	kati
164	jaw	panga
165	kiss	halik
166	knee	tuhod
167	lake	lawa
168	last	huli
169	lastborn	bunso
170	later	mamaya
171	leaf	dahon
172	leak, drip, rain	tulu
173	left (hand)	kaliwa
174	leg	binti
175	lie (falsehood)	kasinungalingan
176	light	magaan(g)
177	lightning	kidlat
178	lip	labi
		bibig (mouth)
179	liver	atay

180	long	mahaba
181	loose	maluwang
		maluwag
182	louse	kuto
183	love charm	gayuma
184	lungs	baga
185	man (male)	lalaki
186	many	marami
187	mat (for floor)	banig
188	meat (flesh)	karne
		laman
		(also,contents)
189	medicine	gamut
190	melt	tunaw
191	middle	gitna
192	milk	gatas
193	moon	buwan (also,
		month)
194	mosquito	lamok
195	moss	lumot
196	mother	ina, nanay
197	mountain	bundok
198	mouth	bibig
199	mud	putik
200	nail (finger or	kuko
	toe)	
201	name	pangalan
202	nape	batok
203	narrow	makitid
		makipot
204	navel	pusod
205	near	malapit
206	neck	leeg
207	necklace	kuwintas
208	needle	karayom
209	nest (as bird's)	pugad
210	net (fishing)	lambat
211	new	bago
212	night	gabi
213	nine	siyam
214	none	wala
215	northeast wind	amihan
216	nose	ilong
217	not	hindi
218	now	ngayon
219	octopus	pugita
220	often	madalas
		malimit
221	old	luma
222	once	minsan
223	one	isa
224	one hundred	isang daan
225	one thousand	isang libo
226	orphan	ulila
227	other, different	iba
228	outrigger canoe	bangka
229	outrigger float	katig
230	over there (far)	doon
231	paddle (canoe)	sagwan
232	pain	sakit (also,
		sickness)
233	palm (hand)	palad
234	penis	ari ng lalaki
		utin
		titi
		buto
235	person	tao (also human)
236	pig	baboy

237	pillow	unan
238	plant	halaman
		tanim
239	pound, well ground	dikdik
240	press with hand or weight	diin
241	prick, pierce	tusok
242	pus	nana
243	rat	daga
244	red	pula
245	rib	tadyang
246	right (correct)	tama
247	right (hand)	kanan
248	rinse	banlaw
249	river	ilog
250	road	daan
251	rock (or boulder)	bato
252	roof	bubong
253	root	ugat
254	rope	lubid
255	rotten (as fruit)	sira
256	rotten (log)	bulok
257	rough	magaspang
258	salt	asin
259	salty	maalat
260	same	tulad
		katulad
261	sand	buhangin
262	scratch, carving	kamot
		ukit
263	sea (ocean)	dagat
264	second	ikalawa
		pangalawa
265	seed	buto (also, bone)
266	servant	katulong
		alila
267	seven	pito
268	shadow	anino
269	shallow	mababaw
270	shark	pating
271	sharp (knife)	matalim
		matalas
272	shore	tabing-dagat
		dalampasigan
		katihan
273	short	maliit
		maikli
		maigsi
		pandak
274	shoulder	balikat
275	shrimp	hipon
276	sibling (m/f)	kapatid
277	sibling's child (m/f)	pamangkin
278	singe	paso
279	sister-in-law	hipag
280	six	anim
281	skin (person)	balat
282	skull	bungo
283	sky	himpapawid
		langit
		(also, heaven)
284	slave	alipin
285	sleepy	inaantok
286	slow	mabagal
287	small	maliit

288	smoke	usok
289	smooth	makinis
290	snake	ahas
291	sneeze	bahing
292	soft	malambot
293	sole	talampakan
294	some	ilan
295	soul	kaluluwa
296	sour	maasim
297	southwest wind	habagat
298	spear	sibat
299	species of bats	paniki
300	spider	gagamba
301	spittle(saliva)	laway
		dura
302	squid	pusit
303	stairs	hagdan
304	stand up, stature	tindig
305	star	bituin
		tala
306	stick (of wood)	patpat
307	stomach	tiyan
308	stone	bato
309	storehouse	kamalig
	(food)	
310	straight	tuwid, matuwid
311	stretch	unat
312	strong	malakas
313	suck	sipsip
314	sugarcane	tubo
315	sun	araw (also, day)
316	sweet	matamis
317	swollen	maga
318	tail	buntot
319	tall	matangkad
320	tear (from	luha
	crying)	
321	ten	sampu
322	termites	anay
323	testicle	bayag
324	thank you	salamat
325	that (far)	iyon
326	that (near)	iyan
327	there (near)	diyan
328	they	sila
329	thick	makapal
330	thigh	hita
331	thin	manipis
332	thin (human)	payat
333	third	ikatlo
		pangatlo
334	thirsty	uhaw
335	this	ito
336	thorn	tinik (also,
		fishbone)
337	thou/you	ikaw
338	three	tatlo
339	throat	lalamunan
340	thunder	kulog
341	tight	masikip
342	to ask	tanong
343	to awake	gising
344	to be angry	galit
345	to bear (child)	anak
		silang
346	to beat (strike)	palo
347	to belch	dighay
348	to bite	kagat

349	to blow (wind)	ihip
350	to boil (intrans.)	kulo
351	to break (as stick)	bali
352	to breathe	hinga
353	to bring	dala
354	to burn (by itself)	sunog
355	to bury	baon
356	to bury (the dead)	libing
357	to buy	bili
358	to call	tawag
359	to carry	dala
		buhat
360	to choose	pili
361	to clean	linis
362	to come	dating
363	to copulate (human)	talik
364	to cough	ubo
365	to count	bilang
366	to cut	putol
367	to dance	sayaw
368	to defecate	dumi
		bawas
		tae
369	to desire	nais
		nasa
370	to die	patay
371	to dig	hukay
372	to do	gawa
373	to drag	kaladkad
374	to drink	inom
375	to drown	lunod
376	to eat	kain
377	to fall (drop)	hulog
		laglag
378	to fear	takot
379	to fight	laban
380	to find	hanap
381	to float	lutang
382	to flow	agos
383	to fly	lipad
384	to forget	limot
385	to give	bigay
386	to go	punta
387	to go down	baba
388	to go in	pasok
389	to go out	labas
390	to go up	akyat
391	to hang on, hook something	sabit
392	to hear	kinig
393	to hit	tama
394	to hold (in hand)	hawak
395	to hunt (game)	aso
396	to jump (esp. up)	talon
397	to kill	patay
398	to know (facts)	alam
399	to laugh	tawa
400	to lie (on side)	higa
401	to live	buhay
402	to look	tingin
		tanaw
403	to love	ibig
		mahal

404	to moan	ungol
405	to open	bukas
406	to play	laro
407	to pound	bayo
		pukpok
408	to pull	hila
409	to push	tulak
410	to put	lagay
411	to quarrel	away
412	to rain	ulan
413	to return	balik
414	to rub	kuskos
415	to run	takbo
416	to say	sabi
417	to scratch (itch)	kamot
418	to see	kita
419	to sell	bili
420	to sew	tahi
421	to shout	sigaw
422	to show	pakita
423	to shower	ambon
424	to sing	awit
		kanta
425	to sink (intrans.)	lubog
426	to sit	upo
427	to sleep	tulog
428	to smell	amoy
429	to speak	salita
430	to spit	dura
431	to split	hati
432	to squeeze	piga
433	to stab (or stick)	saksak
434	to stand	tayo
435	to steal	nakaw
436	to string (as leis)	tuhog
437	to suck	sipsip
438	to swallow	lunok
439	to sweat	pawis
440	to swell	maga
441	to swim	langoy
442	to think	isip
443	to throw	tapon
		hagis
444	to tie	tali
445	to vomit	suka
446	to walk	lakad
447	to wash	hugas
448	to weave	habi
449	to wipe	pahid
		punas
450	to wrap up	balot
451	today	ngayong araw
452	toe	daliri sa paa
453	tomorrow	bukas
	the following day	kinabukasan
454	tooth (front)	ngipin (all teeth)
455	torch, light	sulo
456	tree	punong-kahoy
457	trunk (of tree)	puno
		katawan
458	turtle	pagong
459	twins	kambal
460	two	dalawa
461	ugly	pangit
462	upper garment	baro
463	upside down, stooping with	tuwad

	the head forward	
464	upward	pataas
		paakyat
465	urine	ihi
466	vagina	pekpek
		puki
467	vegetables	gulay
468	voice	tinig
469	war	digma
		digmaan
470	warm (weather)	mainit
		maalinsangan
	warm and humid	
471	water	tubig
472	water buffalo	kalabaw
473	wave (as surf)	alon
474	we (1st person, pl.)	kami
475	we (dual, pl.)	tayo
476	weak	mahina
477	wet	basa
478	what	ano
479	wheel	gulong
480	when	kailan
481	where	saan
		nasaan
482	white	puti
483	who	sino
484	why	bakit
485	wide	malawak
486	wife	asawa
		maybahay
487	wind (breeze)	hangin
488	wine	alak
489	wing	pakpak
490	wink	kindat
491	woman (female)	babae
492	woods (forest)	gubat
		kagubatan
		kakahuyan
493	woody tendril-bearing vine	gugo
494	worm	uod
		bulate
495	wrong	mali
496	yawn	hikab
497	ye	kayo
498	year	taon
499	yesterday	kahapon
500	welcome	walang anuman

APPENDIX C

PROFILE OF LANGUAGE INFORMANTS

The field work

Field work was done by the researcher twice, first from April 19 to 29, 2012, and another from May 1 to 17, 2013. Two primary informants for each language were consulted, and the elicitation of data was done through translation, recording, and validation. The table below presents a brief profile of the informants.

The informants

AGE	SEX	HOMETOWN	PRESENT ADDRESS	OTHER LANGUAGES SPOKEN
Itbayat				
62	F	Itbayat, Batanes	Basco, Batanes (40 years)	Ivatan, Tagalog, English
52	M	Itbayat, Batanes	Basco, Batanes (43 years)	Ivatan, Tagalog, English
Ivasay				
33	M	Basco, Batanes	Basco, Batanes (since birth)	Tagalog, English
59	F	Basco, Batanes	Ivana, Batanes (40 years)	Tagalog, English
Isamorong				
61	F	Ivana, Batanes	Ivana, Batanes (since birth)	Tagalog, English
59	F	Mahatau, Batanes	Basco, Batanes (37 years)	Tagalog, English
Ibatan				
21	M	Babuyan Claro, Cagayan	Basco, Batanes (4 years)	Ilokano, Tagalog, English
22	M	Babuyan Claro, Cagayan	Basco, Batanes (4 years)	Ilokano, Tagalog, English