Strata of standardization: the Phong Nha dialect of Vietnamese (Quảng Bình Province) in historical perspective
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The present research, based on first-hand data, is intended as a contribution to the study of the present-day diversity of lesser-described Vietnamese dialects, and of the range of evolutionary paths to which they testify. The Vietnamese dialect of the hamlet of Phong Nha (commune of Sơn Trạch, county of Bố Trạch, Quảng Bình) is one of the “heterodox” dialects of Vietnamese, which are known to present considerable interest for the historical study of Vietnamese and of the Vietic group at large. These dialects are the product of the southerly expansion of Vietnamese over related (Vietic) languages, a process which involved various interferences. Comparative evidence reveals strata of standardization: some words are phonologically identical to Standard Vietnamese; others are of Southern Vietic stock, as demonstrated by the absence of telltale historical changes that took place in Vietnamese, such as the spirantization of medial stops; still others appear to be the result of hybridization.

Keywords: historical phonology; dialectology; spirantization; diphthongization; vowel systems; Vietnamese; Vietic languages; Quảng Bình.

1. INTRODUCTION

The present study is based on first-hand data on the Vietnamese dialect of the hamlet of Phong Nha, in the commune of Sơn Trạch, county of Bố Trạch, Quảng Bình (thôn Phong Nha, xã Sơn Trạch, huyện Bố Trạch, tỉnh Quảng Bình). The aim of the present research is to contribute to the study of the present-day diversity of lesser-described Vietnamese dialects, and of the range of evolutionary paths to which they testify.
1.1. The importance of heterodox dialects

Vietnamese dialects exhibit considerable diversity, and remain relatively understudied. Emeneau (1951) provided a detailed description of the dialects of Vinh (Nghệ An) and Nam Định (the main city of the province of the same name); dialectal information is also found in Hoàng Thị Châu (1989; 2004) and in Chapter 4 of Thompson’s *Vietnamese Grammar* (Thompson 1984). Apart from these and a few other notable exceptions, most research tends to focus on the varieties spoken in the major cities, with special emphasis on the two largest cities: Hanoi and Hồ Chí Minh City (Saigon). However, Maspero pointed out that, within the field of Vietnamese dialectology,

“from a historical point of view, comparison of Tonkinese [i.e. Red River delta Vietnamese: the Northern dialect of Vietnamese, including Hanoi Vietnamese] with Cochinchinese [i.e. Mekong delta Vietnamese, Southern dialect of Vietnamese, including Saigon Vietnamese], which belong in the same group, is least interesting, whereas comparison of these dialects with that of Haut Annam [spoken from the North of Nghệ An to the South of Thừa Thiên] is of much greater importance; unfortunately, this comparison has not yet been thoroughly carried out” (Maspero 1912: 3).

The “Haut Annam” dialects show various irregular correspondences with Vietnamese as reflected in Rhodes’s Dictionary (1651), referred to below as Middle Vietnamese. In view of these irregularities, they are referred to as “heterodox” (Ferlus 1995). This term will be used here, consequently using the term “orthodox dialects” for the varieties that exhibit regular relationships of correspondence with Middle Vietnamese. More than a century after the publication of Maspero’s study, heterodox dialects survive in a few areas of Quảng Bình, Hà Tĩnh and southern Nghệ An; as emphasized by Alves (2007), there remains much progress to be done in the study of this crucial dialect area.

1.2. Earlier work on heterodox dialects

The first published description of a “Haut Annam” dialect is a report by Cadière (1902), who defines “Haut Annam” dialect as “the dialect spoken from Đà Nẵng to Vinh or thereabouts” (“le dialecte parlé depuis Tourane jusqu’à Vinh environ”; page X). As pointed out by Maspero (1912: 1, note 1), the data in this initial report suffer from some inconsistencies, due in part to the absence of sufficiently clear indications on where each cited form comes from. Maspero collected data

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1 “Au point de vue historique, la comparaison du tonkinois et du cochinchinois, qui appartiennent au même groupe, est la moins intéressante ; celle de ces dialectes avec celui du Haut-Annam est beaucoup plus importante : malheureusement elle n’a pas encore été faite de façon complète.”
on more than ten of the dialects of this area; some examples are adduced in his 1912 study, but to our knowledge, his field notes remain unpublished. Data on the dialect of Cao Lao Hạ (Quảng Bình) were collected by Michel Ferlus; they confirm the presence of some irregular correspondences with Middle Vietnamese, interpreted as resulting from the spread of Vietnamese on related language varieties – belonging to the Vietic subbranch of Austroasiatic – with which there was sufficient closeness for cognate words in Vietnamese and in local Vietic languages to be perceived as such by the speakers (Ferus 1995). Ferlus’s argument is that a phonetic compromise was reached between the realizations in Vietnamese and in local varieties, which were not replaced holus-bolus by Vietnamese. Some words were borrowed with their Vietnamese pronunciation; others were imitated in part, modifying the earlier (non-Vietnamese) form through the introduction of some of the phonological contents of the Vietnamese form.

Further additions to documentation and research on heterodox dialects include a study of the Thanh Chương variety, Nghệ An (Alves & Nguyễn Duy Hương 2007) and an experimental study of tones of several locations in Nghệ An and Hà Tĩnh (Honda 2008).

Understanding these dialects is a topic of interest (i) for Vietnamese dialectology, (ii) for the study of the Vietic subbranch as a whole, and (iii) for general linguistic models. Concerning point (ii), a better knowledge of local Vietnamese dialects is necessary for further progress in the analysis of layers of borrowings into Vietic languages that have been heavily influenced by language contact, such as Arem (Ferus 2014) and Thổ (Ferus 2001).

2. METHOD

For administrative reasons related to research authorizations, elicitation sessions were conducted in Hanoi and not in Quảng Bình. Pr. Trần Hữu Đạo, of the Department of Linguistics of Vietnam National University in Hanoi, kindly went to Phong Nha in person to invite two consultants: Mr. Trần Văn Họp (hereafter M1), born in 1957, and Mr. Hoàng Minh Chiêm (hereafter M2), born in 1962. Both have lived continuously in Phong Nha.

The elicitation sessions took place at the recording studio of the International Research Institute MICA. The consultants were given explanations about the purpose of the work: to record the speech of their native village, as distinct from

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2 The Vietic group consists of (i) Maleng, (ii) Arem, (iii) Chữ, (iv) Aheu, (v) Hung, (vi) Thổ, (vii) Mường and (viii) Vietnamese. This group was referred to as “Việt-Mường” by Thomas and Headley (1970), followed by Ferlus (1996; 1999; 2004). Nguyễn Tài Cảnh (1995) aptly proposed the term “Việt-Chữ”, a compound of the names of the two most distant languages within the group; but the term “Vietic”, proposed by Hayes (1982; 1992), has now become commonly accepted for the entire group, and we follow this usage. Hayes’s proposal is to use “Việt-Mường” as a label for the lower-level grouping containing Vietnamese and Mường.
other varieties of Vietnamese of which they have some command, such as Hanoi Vietnamese – the current national standard – and dialects of Central Northern Vietnamese spoken elsewhere in Quảng Bình. Basic words were selected from Michel Ferlus’s word list (an expanded version of the EFEO-CNRS-SOAS word list for linguistic fieldwork in Southeast Asia, available online: Pain et al. 2014). The words were said by the third author (a speaker of Hanoi Vietnamese), and translated orally by the consultants.

An inherent difficulty under such a setup is that consultants have certain representations about their native dialect and its status respective to standards of correctness. It has long been known that, when an investigator from the city elicits data from rural people, they tend to modify their way of speaking, avoiding pronunciations which they think may sound ridiculous to the investigator. As a result of situations of non-egalitarian bilingualism, it can be difficult to elicit the full set of the oppositions present in the phonological system of the target dialect (see e.g. Haudricourt 1973: 23; on the importance of this issue when studying heterodox Vietnamese dialects: Thompson 1984: 79). A related difficulty is that the consultants have representations about the investigators’ expectations, methods and abilities, which also influence their behaviour. In the case of the present study, it is only on the second day that the speakers reported the existence of a local pronunciation – now frowned upon locally as coarse – which they had not indicated to us because they thought we would be unable to write it down: a voiced dental spirant, IPA [ð], found as a variant – alongside [ʑ], currently more frequent – in certain words written with orthographic d. The consultants, who are literate in Vietnamese, had observed that there is no distinct character for this sound (as they interpret orthographic d as [ʑ]). In the belief that “there is no way to write it down”, they considered that the investigators should dispense with it altogether, and they avoided this pronunciation. When finally heard, this sound proved to be of the greatest interest to the investigators: from a diachronic point of view, the spirant variant [ð] is a conservative realization (as explained in section 3.1.4). As a result, it was necessary to go through the word list again to establish which lexical items allow the spirant variant.

The odds are that the present description of the phonemic system achieves a good degree of accuracy, thanks in particular to (i) the presence of two speakers rather than one and (ii) sustained exchanges with the investigators during elicitation. It should nonetheless be kept in mind that the present report is based on a short (two-day) foray. There clearly remains room for a more in-depth study involving systematic vocabulary collection and a study of continuous speech.

We plan to make the recorded materials available online through the Pangloss Collection (Michailovsky et al. 2014) in 2016, if not before.
3. RESULTS
Phong Nha syllables have a (C_i)(G)V(C_f)+T structure, where C_i is an initial consonant, G a glide /w/, V a vowel nucleus, C_f a final consonant, and T a tone. Brackets indicate optional constituents.

3.1. Consonants

3.1.1. Inventory
An inventory of consonants is shown in Table 1.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Plosive</th>
<th>Nasal</th>
<th>Trill</th>
<th>Fricative</th>
<th>Approximant</th>
<th>Implosive</th>
</tr>
</thead>
<tbody>
<tr>
<td>coronal</td>
<td>bilabial</td>
<td>labiodental</td>
<td>dental</td>
<td>alveolar</td>
<td>retroflex</td>
<td>palatal</td>
</tr>
<tr>
<td>plosive</td>
<td>t</td>
<td>tʰ</td>
<td>ŋ</td>
<td>c</td>
<td>k</td>
<td>ɾ</td>
</tr>
<tr>
<td>nasal</td>
<td>m</td>
<td>n</td>
<td>r</td>
<td>s</td>
<td>ɕ</td>
<td>x</td>
</tr>
<tr>
<td>trill</td>
<td>d</td>
<td>f</td>
<td>v</td>
<td>c</td>
<td>z</td>
<td>ɬ</td>
</tr>
<tr>
<td>fricative</td>
<td>b</td>
<td>f</td>
<td>v</td>
<td>s</td>
<td>ɕ</td>
<td>ɣ</td>
</tr>
<tr>
<td>approximant</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
</tr>
<tr>
<td>implosive</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
</tr>
</tbody>
</table>

Table 1. Inventory of consonants

Alveolo-palatal ɕ and z are placed in the ‘alveolar’ column for convenience. Initial /ɕ/ was only found in the syllable /ɕɔ/ (/ɕɔ C¹ la B¹/ ‘dishonest’). It may turn out, upon further examination, to be no more than an allophone of /s/; Phong Nha /s/ is sometimes realized close to [ɕ] in various contexts. Initial /ʑ/ is sometimes realized as a voiced palatal fricative [ɭ].

The dental trill /ɾ/ is realized as a retroflex fricative [z] in the speech of consultant M1; in the speech of M2, it is sometimes realized as a trill, [ɾ], and sometimes as a tap, [r].

Speak M2 often has a stop realization for /kʰ/, whereas speaker M1 generally realizes it as a fricative, [x~xʰ]. In the documented history of Vietnamese, aspirated *pʰ evolved to /f/, and *kʰ to /x/, leaving /tʰ/ as the only aspirated stop in the system. M2’s /kʰ/ is a conservative characteristic. In cases such as this one, where the two speakers have different phonetic realizations, the more conservative is chosen for phonemic notations.

Speaker M1 has some affrication in the realization of retroflex /tʰ/.

Syllable-final consonants will be dealt with as part of the discussion of rhymes.
3.1.2. Reminders about the spirantization of medial stops in Vietnamese

The initial consonant system of Vietnamese is characterized by the presence of spirants (weak fricatives) resulting from the lenition of medial obstruents within sesquisyllables: the second consonant in CCV(C). This was noted by Haudricourt (1965: 171) and worked out in detail some time later (Ferlus 1982; supportive evidence is provided by Shimizu 2011). The following changes took place: \[p\] $\rightarrow$ \[β\], \[t\] $\rightarrow$ \[ð\], \[c\] $\rightarrow$ \[ʝ\] and \[k\] $\rightarrow$ \[ɣ\]. These spirant consonants, intrinsically unstable, then evolved towards more stable units in Modern Vietnamese: \[β\] stabilized to \[v\], and \[ð\] and \[ʝ\] merged to \[z\] in Northern Vietnamese and to \[j\] in Southern Vietnamese, as shown in Table 2. This consonantal stabilization is quite recent, as Alexandre de Rhodes’ dictionary (1651) still shows evidence of the presence of the spirants.

### Table 2. A recapitulation of the evolution of stops in Vietnamese: initial stops in CV(C) monosyllables, and medial stops in sesquisyllables (C-CV(C), later simplified to CV(C))

<table>
<thead>
<tr>
<th>non-spirantized (initial stops)</th>
<th>Proto-Vietic obstruents</th>
<th>p-b</th>
<th>t-d</th>
<th>s</th>
<th>c-j</th>
<th>k-g</th>
</tr>
</thead>
<tbody>
<tr>
<td>modern phonetic value</td>
<td>β</td>
<td>d</td>
<td>t</td>
<td>c</td>
<td>k</td>
<td></td>
</tr>
<tr>
<td>Vietnamese spelling (identical to Rhodes 1651)</td>
<td>b</td>
<td>d</td>
<td>t</td>
<td>ch</td>
<td>c/k</td>
<td></td>
</tr>
<tr>
<td>spirantized (formerly medial stops)</td>
<td>Middle Vietnamese</td>
<td>β</td>
<td>δ</td>
<td>r</td>
<td>j</td>
<td>γ</td>
</tr>
<tr>
<td>spelling in Rhodes (1651)</td>
<td>b, u</td>
<td>d</td>
<td>r</td>
<td>gi</td>
<td>g/gh</td>
<td></td>
</tr>
<tr>
<td>modern phonetic value</td>
<td>v</td>
<td>z/j</td>
<td>z/r</td>
<td>z/j</td>
<td>γ</td>
<td></td>
</tr>
<tr>
<td>modern Vietnamese spelling</td>
<td>v</td>
<td>d</td>
<td>r</td>
<td>gi</td>
<td>g/gh</td>
<td></td>
</tr>
</tbody>
</table>

Numerous exceptions were noted by Nguyễn Tài Cảnh (2000): correspondences between monosyllables in Vietic languages and spirant initials in Vietnamese, instead of what the model predicts. According to the model, spirants originate in the lenition of medial consonants. These counterexamples led Nguyễn Tài Cảnh to

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3 Martinet distinguishes fricatives, which involve distinctly audible friction, from spirants, which are identified through the “resonances of voice” (“la qualité de résonances de la voix”), i.e. a formant pattern. Diachronic studies provide compelling evidence that, among the sounds that fall into the IPA category of fricatives, some pattern with obstruents and others with continuants. Martinet recommends the use of Greek letters for spirants, e.g. \[δ\] and \[θ\] for interdental spirants, vs. \[ð\] and \[Þ\] for the corresponding fricatives (Martinet 2005: 100–101). Synchronically, however, it may turn out that the range of observed situations constitutes a continuum, and that a hard-and-fast encoding by different IPA symbols for fricatives vs. spirants would raise difficulties for transcribers. This would be parallel to the notion of fortis/lenis (Kohler 1979; Kohler 1984), likewise not encoded in IPA. In this article, we adhere to IPA symbols; the intended meaning can be clarified by phrases such as “the spirant \[ɣ\]” or “the spirant \[ð\]”.

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the conclusion that the model must be wrong: that it is mistaken to reconstruct a pre-syllable for all the words that developed a spirant initial in Vietnamese.

A key point, however, is that the model predicts the existence of numerous exceptions. Presyllables can be lost without compensation – unlike the property of voicing in an initial consonant, for instance. In consonant shifts involving voicing properties of initial consonants (Haudricourt 1965; Ferlus 1979), great regularity is expected in the output; on the other hand, monosyllabicization can proceed in a more haphazard way. It is quite possible for presyllables to disappear from a set of words whereas other words (including homophonous words of different morphological makeup, e.g. those in which the presyllable is not morpho-semantically distinct from the main syllable) are unaffected. This is shown by the gradient of sesquisyllabicity among Vietic languages: no sesquisyllables in Vietnamese and Mường; 10% of sesquisyllables in Pong; about 35% in Thavung, Maleng and Sách/Rúc; and over 50% in Arem (Ferlus 2014). Real counterexamples to the proposed generalization about spirantization in Vietnamese would come from words that have a presyllable (i.e. sesquisyllabic structure) in some Vietic languages, and a non-spirantized initial (orthographic b-, d, ch-, k/-c-) in Vietnamese. In the absence of such counterexamples, the theory of spirantization of medial consonants cannot be considered disproved.

3.1.3. The preservation of nonspirantized initials in Phong Nha Vietnamese

Phong Nha Vietnamese preserves non-spirantized initials corresponding to spirantized initials in Middle Vietnamese, as shown in Tables 3 and 5-8. This means that, in these syllables, presyllables were lost without compensation. This is one of several possible evolutionary paths for presyllables, in the course of monosyllabicization: (i) loss without compensation; (ii) modification of medial consonants, as in orthodox Vietnamese; (iii) development of consonantal clusters, themselves yielding geminated consonants, then a tense/lax opposition among initials, which can later evolve into a split of the vowel system or of the tone system (Haudricourt 1991; Ferlus 1997a; for a synthesis: Michaud 2012: 119–120).

Henceforth, letters in superscript (B1, B2) indicate the etymological lexical tone categories; for information about tones, see section 3.3.
<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>t.keː</td>
<td>thorn</td>
<td>gai</td>
<td>ɣaj\textsuperscript{A1}</td>
</tr>
<tr>
<td>C.giʔ</td>
<td>dibble</td>
<td>gāy</td>
<td>ɣáj\textsuperscript{B2}</td>
</tr>
<tr>
<td>t.keʔ</td>
<td>girl</td>
<td>(con) gāi</td>
<td>ɣaj\textsuperscript{B1}</td>
</tr>
<tr>
<td>t.ku:lʔ</td>
<td>knee</td>
<td>gōi</td>
<td>ɣo\textsuperscript{B1}</td>
</tr>
<tr>
<td>to carry on the back in a basket</td>
<td>gūi</td>
<td>ɣu\textsuperscript{A2}</td>
<td>kuj\textsuperscript{A2}</td>
</tr>
<tr>
<td>kamʔ / gamʔ</td>
<td>to bite</td>
<td>gām</td>
<td>ɣām\textsuperscript{B2}</td>
</tr>
<tr>
<td>C.ka:s</td>
<td>to scratch</td>
<td>gāi</td>
<td>ɣaj\textsuperscript{C1}</td>
</tr>
<tr>
<td>t.kɔːc</td>
<td>to whittle</td>
<td>got</td>
<td>ɣɔt\textsuperscript{D1}</td>
</tr>
</tbody>
</table>

Table 3. Correspondences between Proto-Vietic *k/g, Middle Vietnamese ɣ/, and Phong Nha Vietnamese /k/.

Aspiration in the last two examples, Phong Nha /kʰaj\textsuperscript{C1}/ ‘to scratch’ and /kʰɔt\textsuperscript{D1}/ ‘to whittle’, corresponding to spirant initials in Middle Vietnamese, will catch the attention of linguists familiar with the Vinh dialect of Vietnamese, another heterodox dialect: see Table 4 (from Ferlus 1991).
The Phong Nha dialect of Vietnamese

Middle Vietnamese

<table>
<thead>
<tr>
<th>Vietnamese spelling</th>
<th>IPA</th>
<th>Vinh dialect</th>
<th>IPA</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>vũng</td>
<td>vʊŋ B2</td>
<td>phùng</td>
<td>phʊŋ D1</td>
<td>on the sly</td>
</tr>
<tr>
<td>vặt</td>
<td>vɐt D2</td>
<td>phút</td>
<td>phʊt D1</td>
<td>to pick, to pluck</td>
</tr>
<tr>
<td>vọt</td>
<td>vɔt D2</td>
<td>phọt</td>
<td>phɔt D1</td>
<td>to gush forth</td>
</tr>
<tr>
<td>vờ</td>
<td>və C2</td>
<td>phó</td>
<td>phɔ D1</td>
<td>to clap (shrubs)</td>
</tr>
<tr>
<td>dột</td>
<td>ᵃdɔt D2</td>
<td>thột</td>
<td>thɔt D1</td>
<td>to drip</td>
</tr>
<tr>
<td>dăm</td>
<td>ᵃdəm A2</td>
<td>thårm</td>
<td>thʌm A1</td>
<td>drizzle</td>
</tr>
<tr>
<td>ᵇdũ</td>
<td>ᵇdũ C2</td>
<td>thوحد</td>
<td>thʊh D1</td>
<td>to entice, to seduce</td>
</tr>
<tr>
<td>gàn</td>
<td>ɣan A2</td>
<td>khan</td>
<td>kʰan A1</td>
<td>silly</td>
</tr>
<tr>
<td>got</td>
<td>ɣɔt D2</td>
<td>khọt</td>
<td>kʰɔt D1</td>
<td>to peel</td>
</tr>
<tr>
<td>gãi</td>
<td>ɣə C2</td>
<td>kh airflow</td>
<td>kʰə C1</td>
<td>to scratch (with nails)</td>
</tr>
<tr>
<td>gỡ</td>
<td>ɣə C2</td>
<td>kho airflow</td>
<td>kʰə C1</td>
<td>to clear up</td>
</tr>
<tr>
<td>gắp</td>
<td>ɣəp D2</td>
<td>kh FixedUpdate</td>
<td>kʰəp D1</td>
<td>to knock</td>
</tr>
<tr>
<td>gut</td>
<td>ɣut D1</td>
<td>khút</td>
<td>kʰut D1</td>
<td>knot</td>
</tr>
<tr>
<td>gậy</td>
<td>ɣəj C1</td>
<td>khây</td>
<td>kʰəj C1</td>
<td>to pluck (a string)</td>
</tr>
</tbody>
</table>

Table 4. Correspondences between aspirated initials in the Vinh dialect of Vietnamese and spirants in Middle Vietnamese

The interpretation of these correspondences proposed by Ferlus (1991) is that they result from a situation of contact in which local speakers tried to imitate spirant realizations by speakers of Northern Vietnamese, and ended up producing aspirated stops. (On the irregular tone correspondences, whereby the Standard Vietnamese word has a low-register tone and the Central-Northern Vietnamese word has a high register tone, see section 3.3.3.)

How come Phong Nha has similar correspondences, but in a handful of words only? This clearly looks like a case of borrowing, not regular sound change. The aspiration found in the last two examples in Table 3 are arguably due to the adoption of dialectal forms from Vinh or from another neighbouring dialect that possesses similar forms. While Vinh is inferior to Northern Vietnamese in terms of sociolinguistic prestige, it is a regionally influential variety, and it is therefore not implausible that such forms trickled into Phong Nha Vietnamese. The irregular tonal correspondences (for ‘to bite’ in Table 3, and for all items in Table 5 except ‘to hold’) will be explained in section 3.3.3.
Table 5. Correspondences between Proto-Vietic *c/j, Middle Vietnamese /j/, and Phong Nha Vietnamese /c/ or /ʧ/

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>spiny amaranth</td>
<td>gi’en⁴</td>
<td>jen A²</td>
<td>jen A²</td>
<td>c’en A¹</td>
</tr>
<tr>
<td>middle</td>
<td>gi’B</td>
<td>jua C²</td>
<td>t’u B²/C²</td>
<td></td>
</tr>
<tr>
<td>k.cih</td>
<td>to keep, to hold</td>
<td>giû</td>
<td>jiu C²</td>
<td>t’u A¹</td>
</tr>
<tr>
<td>k.cu:j</td>
<td>to pierce, to bore; awl</td>
<td>giũ (lử)</td>
<td>juj A²</td>
<td>cuj A¹</td>
</tr>
<tr>
<td>k.ra:</td>
<td>old</td>
<td>già</td>
<td>ja A²</td>
<td>ta A¹</td>
</tr>
</tbody>
</table>

Table 6. Correspondences between Proto-Vietic *s, Middle Vietnamese r, and Phong Nha Vietnamese /r/ or /t/)

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>p.seːʔ</td>
<td>otter</td>
<td>(con) rái</td>
<td>raj B¹</td>
<td>t’h B¹</td>
</tr>
<tr>
<td>m.ranʔ</td>
<td>louse</td>
<td>r’an</td>
<td>r’n B²</td>
<td>ṭ’n B¹</td>
</tr>
<tr>
<td>C.seːt</td>
<td>centipede</td>
<td>rê’t / rit</td>
<td>ret D¹ / rit D¹</td>
<td>ñ’t D¹</td>
</tr>
<tr>
<td>p.sanʔ</td>
<td>snake</td>
<td>r’an</td>
<td>r’an B¹</td>
<td>t’a B¹</td>
</tr>
<tr>
<td>p.suːɲʔ</td>
<td>navel</td>
<td>r’un</td>
<td>run B¹</td>
<td>ᵢ’un B¹</td>
</tr>
</tbody>
</table>

‘Louse’ is an odd-man-out in this set, as it is not reconstructed with a *s in Proto-Vietic. It may be due to a process of hypercorrection or borrowing. The initial /ɾ/ in ‘navel’ is also unexpected; likewise, in Table 7, the initial correspondence between initials for ‘cushion’ is unexpected. The aspirated initial for ‘leak (in the roof)’ (last line in Table 7) is likely to be due to dialectal influence from a dialect sharing the characteristic of the Vinh dialect brought out in Table 4.

---

⁴ In present-day Vietnamese texts, the spelling dèn is far more common than gi’en for ‘amaranth’, and dùi at least as common as giùi for ‘awl’. Since the two Middle Vietnamese phonemes at issue, /ð/ and /ʝ/, merged in (standard) modern dialects, there tends to be hesitation as to which is the correct spelling (this is mentioned e.g. by Mai Ngọc Chù et al. 2005: 123). The palatal found in Phong Nha constitutes strong evidence that the earlier forms had an initial palatal, not a dental, and that the spellings gi’en and giùi are etymologically appropriate.
Table 7. Correspondences between Proto-Vietic *t/d, Middle Vietnamese /ʒ/, and Phong Nha Vietnamese /ɗ/.

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>k.niɔw</td>
<td>gizzard</td>
<td>diɛu (gà)</td>
<td>δiɔw^{A2}</td>
<td>diɔw^{A2}</td>
</tr>
<tr>
<td>?</td>
<td>eagle</td>
<td>diɛu</td>
<td>δiɔw^{A2}</td>
<td>diɔw^{A2}</td>
</tr>
<tr>
<td>k.taːl^{b}</td>
<td>scrotum, testicles</td>
<td>dái</td>
<td>dąj^{B1}</td>
<td>dąj^{B1}</td>
</tr>
<tr>
<td>k.taːl</td>
<td>tough (meat)</td>
<td>(thịt) dái</td>
<td>dąj^{A1}</td>
<td>dąj^{A1}</td>
</tr>
<tr>
<td>?</td>
<td>slobber, slaver</td>
<td>dăi</td>
<td>dąj^{C2}</td>
<td>dįj^{B1}</td>
</tr>
<tr>
<td>k.taːw</td>
<td>knife</td>
<td>dao</td>
<td>dąw^{A1}</td>
<td>dąw^{A1}</td>
</tr>
<tr>
<td>C.taː</td>
<td>skin</td>
<td>da</td>
<td>dąa</td>
<td>dąa^{A1} ; dąa^{A1}</td>
</tr>
<tr>
<td>?</td>
<td>leak (in the roof)</td>
<td>(mài) dót</td>
<td>dąt^{D2}</td>
<td>tʰot^{D1}</td>
</tr>
</tbody>
</table>

Table 8. Correspondences between Proto-Vietic *p/b, Middle Vietnamese /v/, and Phong Nha Vietnamese /ɓ/.

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>buː? / puː?</td>
<td>breast</td>
<td>vú</td>
<td>vú^{B1}</td>
<td>bʊ^{B1}</td>
</tr>
<tr>
<td></td>
<td>to wash (rice)</td>
<td>vo (gao)</td>
<td>vʊ^{A1}</td>
<td>bʊ^{A1}</td>
</tr>
</tbody>
</table>

Table 9. Items calling for further investigation.

Additionally, Table 9 presents various items that call for further investigation. Their peculiar characteristics may be due to hypercorrection, or to the phonetic interpretation of sounds from other dialects under situations of language contact.

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>k.ɾň</td>
<td>horn</td>
<td>sʊŋ</td>
<td>ʂʊŋ^{A2}</td>
<td>ʈʊŋ^{A2}</td>
</tr>
<tr>
<td>ɾoːň</td>
<td>weasel</td>
<td>cʰʊn</td>
<td>cʊn^{A2}</td>
<td>cʊn^{A2}</td>
</tr>
<tr>
<td>k.roːɲ̌</td>
<td>back of the blade</td>
<td>(cái) sʊŋ (dao)</td>
<td>ʂʊŋ^{B1}</td>
<td>ʈʊŋ^{B1}</td>
</tr>
<tr>
<td>ɾaːɲ̌</td>
<td>insect</td>
<td>sʊ (bʊ)</td>
<td>ʂʊw^{A1} (bʊ^{B2})</td>
<td>ʈʊw^{A1} (bʊ^{B2/C2})</td>
</tr>
<tr>
<td>p.ɾaːɲ̌</td>
<td>rack (over the fire)</td>
<td>gɪj</td>
<td>jən^{A2}</td>
<td>şən^{A2}</td>
</tr>
<tr>
<td>ɡəl / kəl</td>
<td>tree</td>
<td>cɨy</td>
<td>kɨj^{A1}</td>
<td>kɨn^{A1}</td>
</tr>
<tr>
<td>k.reːs / k.reːs</td>
<td>root</td>
<td>rɛ̝</td>
<td>re^{C2}</td>
<td>ren^{B2/C2}</td>
</tr>
</tbody>
</table>

Table 9. Items calling for further investigation.

To venture some speculations about these items, the Phong Nha forms with initial /ʈ/- suggest an evolution from *k.ɾň to *k.ləŋ, the cluster *kl eventually developing into a retroflex (*k.ɾň > *k.ləŋ, and *k.roːɲ̌ > *k.loːɲ̌).
3.1.4. The preservation of the spirant [ð] in Phong Nha Vietnamese

The Middle Vietnamese phoneme transcribed as \textit{d} in the orthography was a spirant (weak fricative), /ð/. This phoneme is now realized as /z/ in Hanoi Vietnamese and /j/ in Southern Vietnamese. In Phong Nha Vietnamese, cognates of \textit{d}-words can all be pronounced with initial /z/; additionally, some of these words can be pronounced with an initial voiced dental fricative [ð], now frowned upon locally as coarse and ridiculous. Table 10 shows the words at issue, distinguishing those that display synchronic variation (allowing a [ð] variant) from those that do not.

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Middle Vietnamese</th>
<th>IPA interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>spelling</td>
<td></td>
</tr>
<tr>
<td>slope</td>
<td>đốc</td>
<td>đốk\textsuperscript{D1}</td>
<td>đốk\textsuperscript{D1}</td>
</tr>
<tr>
<td>to put out the fire</td>
<td>đập</td>
<td>đợp\textsuperscript{D2}</td>
<td>đợp\textsuperscript{D2}</td>
</tr>
<tr>
<td>ju:</td>
<td>(con) đâu</td>
<td>đỹ\textsuperscript{W\text{\textsubscript{A1}}}</td>
<td>đỹ\textsuperscript{W\text{\textsubscript{A1}}}</td>
</tr>
<tr>
<td>C.ta:</td>
<td>đĩ</td>
<td>đĩ\textsuperscript{A1}</td>
<td>đĩ\textsuperscript{A1}</td>
</tr>
<tr>
<td>skin, leather</td>
<td>đa</td>
<td>đa\textsuperscript{A1}</td>
<td>đa\textsuperscript{A1}</td>
</tr>
<tr>
<td>mother’s elder sister</td>
<td>đội</td>
<td>đọ\textsuperscript{A2}</td>
<td>đọ\textsuperscript{A2}</td>
</tr>
<tr>
<td>sausage</td>
<td>đở</td>
<td>đỹ\textsuperscript{C\text{\textsubscript{2}}}</td>
<td>đỹ\textsuperscript{B\text{\textsubscript{2/C\text{\textsubscript{2}}}}}</td>
</tr>
<tr>
<td>to demolish</td>
<td>đê</td>
<td>đề\textsuperscript{C\text{\textsubscript{2}}}</td>
<td>đề\textsuperscript{B\text{\textsubscript{2/C\text{\textsubscript{2}}}}}</td>
</tr>
<tr>
<td>C.ta:</td>
<td>đười</td>
<td>đươ̄\textsuperscript{W\text{\textsubscript{A1}}}</td>
<td>đươ̄\textsuperscript{B\text{\textsubscript{1}}} / đươ̄\textsuperscript{B\text{\textsubscript{1}}}</td>
</tr>
</tbody>
</table>

Table 10. Phong Nha cognates of \textit{d}-initial words in Middle Vietnamese

Finally, Phong Nha presents an interesting treatment of the Proto-Vietic voiced palatal implosive *ʄ. Proto-Vietic is reconstructed with three voiced implosives: *ɓ, *ɗ and *ʄ. They are reflected in Middle Vietnamese (and Modern Vietnamese) as /m/, /n/ and /ɲ/. In Phong Nha, the first two likewise become /m/ and /n/; on the other hand, Phong Nha words derived from Proto-Vietic *ʄ-initial words display free variation between /ɲ/- and /ʑ/-, e.g. ‘tinder’, Middle Vietnamese \textit{nhùi} /ɲu\textsuperscript{A\text{\textsubscript{2}}}/, Phong Nha /ʑu\textsuperscript{A\text{\textsubscript{2}}} ~ nuj\textsuperscript{A\text{\textsubscript{2}}}./

3.2. Rhymes

3.2.1. Inventory

The fourteen vowel nuclei of Phong Nha Vietnamese are the same as in Standard Vietnamese: nine vowels /i e ɛ a ʊ u γ o ɔ/, two of which have phonemically distinct short counterparts: /ă/ and /ɨ̄/, and three diphthongs, /āa/ uə uə/. Short vowels are a majority in the system: there only exist two short vowels (Haudricourt 1952), and it is therefore economical to use a diacritic for these two short vowels and leave long vowels unmarked.
In syllable-final position, the following consonants are found: /-p -t -k -m -n -ɲ -ŋ -j -w/. Combinations of vowels with the medial glide /ʷ/ and with final consonants follow the same patterns as in Middle Vietnamese. For ease of reference, Table 11 provides a phonemic analysis of the rhymes of Middle Vietnamese. This table was created by Michel Ferlus in 1991; the analysis is essentially the same as that proposed by Cao Xuân Hao (2007: 102). The hyphen (-) in the top row (in -k, w-m, etc.) materializes the position of the vowel within the consonantal structure of the syllable. The notion of rime is understood in a broad sense that includes the rounding of labialized initials. This rounding is transcribed as a superscript w to the left of the symbol C (for Consonant). Thus, the rime uê, as in the word quê ‘countryside, home village’, is located in column Cʷ, line e. A dash (—) indicates that the combination at issue is not found in the language. Some of the complexities of the orthography are not reflected in the table, such as the encoding of the contrast between the rhymes /ʷa/ and /uə/ by the use of different consonant symbols (and identical vowel symbols) in qua /kwa/ vs. cua /kuə/.

The choice of IPA symbols for vowels is based on Kirby (2011). It is not a narrow notation aiming at the greatest synchronic phonetic precision. For instance, the vowels ơ and â are transcribed as /ɤ/ and /ɤ̆/ respectively, reflecting their interpretation as a vowel pair distinguished by phonemic length, and overlooking the slight difference between them in terms of vowel quality – a difference which led Gsell (1980) to adopt a transcription by /ɤ/ and /ʌ/ respectively.

Velar finals after the back rounded vowels, /u o ɔ/, have an additional labial closure, as in Hanoi Vietnamese. For instance, ‘slope’, /ðɔk24/, is realized as [ðɔkʰ24], and ‘to use’, /ðuŋ32/, as [ðuŋm32]. In Hanoi Vietnamese, the vowel quality of /o/ and /ɔ/ is affected: the actual pronunciation of /ok/ /ɔk/ /oŋ/ /ɔŋ/ is approximated as [ɔʊkʰ] [uŋkʰ] [ɔŋm] [uŋm] by Thompson (1984), and as [ɔukʰ] [uŋkʰ] [ɔŋm] [uŋm] by Henderson (1985: 21). It can also be transcribed as [ɔŋkʰ] [ɔŋm] [ɔŋm], “to reflect the intuition that lip rounding is moved to the right, the onset of the diphthong consisting in the unrounding of the original vowel: from [o] to [ɔ], from [ɔ] to [ɔ]” (Michaud 2004). In Phong Nha, on the other hand, the change is less advanced, and the quality of the vowel before velar finals is still readily identifiable.
<table>
<thead>
<tr>
<th>C- Cⁿ-</th>
<th>C-k Cⁿ-k</th>
<th>C-ŋ Cⁿ-ŋ</th>
<th>C-t Cⁿ-t</th>
<th>C-n Cⁿ-n</th>
<th>C-p</th>
<th>C-m Cⁿ-m</th>
<th>C-j Cⁿ-j</th>
<th>C-w Cⁿ-w</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>uy</td>
<td>ich</td>
<td>uych</td>
<td>inh</td>
<td>uynh</td>
<td>it</td>
<td>uyt</td>
<td>in</td>
</tr>
<tr>
<td>e</td>
<td>ëùèe</td>
<td>éch</td>
<td>uêch</td>
<td>énh</td>
<td>uênh</td>
<td>ët</td>
<td>uêt</td>
<td>èn</td>
</tr>
<tr>
<td>ë</td>
<td>oe</td>
<td>ach</td>
<td>oach</td>
<td>anh</td>
<td>oanh</td>
<td>çet</td>
<td>oet</td>
<td>en</td>
</tr>
<tr>
<td>iœ</td>
<td>ia</td>
<td>uya</td>
<td>iège</td>
<td>iêng</td>
<td>iênh</td>
<td>iêt</td>
<td>uyt</td>
<td>iên</td>
</tr>
<tr>
<td>u</td>
<td>u —</td>
<td>u —</td>
<td>ung —</td>
<td>u —</td>
<td>un —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>r</td>
<td>œu œr</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>ũ</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>a</td>
<td>a a œa</td>
<td>ac</td>
<td>oac</td>
<td>ang</td>
<td>oang</td>
<td>at</td>
<td>oat</td>
<td>an</td>
</tr>
<tr>
<td>ũ̃</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>aœ</td>
<td>rœuœ</td>
<td>rœuc</td>
<td>rœuœc</td>
<td>rœuœc</td>
<td>rœuœc</td>
<td>rœuœc</td>
<td>rœuœc</td>
<td>rœuœc</td>
</tr>
<tr>
<td>u</td>
<td>u —</td>
<td>u —</td>
<td>u —</td>
<td>u —</td>
<td>u —</td>
<td>up —</td>
<td>un —</td>
<td>um —</td>
</tr>
<tr>
<td>o</td>
<td>ō —</td>
<td>ōc —</td>
<td>ōcng</td>
<td>ōt —</td>
<td>ōn —</td>
<td>ōp —</td>
<td>ōp —</td>
<td>Őm —</td>
</tr>
<tr>
<td>õ</td>
<td>óc —</td>
<td>óc —</td>
<td>ócng</td>
<td>ót —</td>
<td>ón —</td>
<td>óp —</td>
<td>óp —</td>
<td>óm —</td>
</tr>
<tr>
<td>uœ</td>
<td>uœuœ</td>
<td>uœuc</td>
<td>uœuœc</td>
<td>uœuœc</td>
<td>uœuœc</td>
<td>uœuœc</td>
<td>uœuœc</td>
<td>uœuœc</td>
</tr>
</tbody>
</table>

*Table 10. The rhymes of Middle Vietnamese*
3.2.2. Comparative perspectives

Rhyme correspondences between Middle Vietnamese and “heterodox” dialects show a number of irregularities. The Vietnamese system is highly innovative: two Vietnamese vowels typically correspond to a single vowel in proto-Vietic (Ferlus 1997b). This two-way split does not correspond to the familiar effects of consonant shifts. It has been proposed that it results from dialect mixture (Ferlus 1997b:50): two dialects came in contact, one of which was conservative whereas the other had undergone opening diphthongization of low vowels /iː/, /uː/, /i/, /ɨ/, followed by closing diphthongization of open vowels /aː/, /oː/ and /ɔː/. The coexistence and eventual merger of these two dialects – presumably in the Red River delta – resulted in a haphazard lexical distribution of the two vowel sets, and hence in a multiplication of the number of contrastive vowels. The resulting language variety endured to become dominant; all the language varieties resulting from its gradual spread, which constitute the core present-day Vietnamese dialects, possess this large inventory of vowels. Some “heterodox” dialects, however, do not show the diphthongized forms characteristic of Standard Vietnamese (from Middle Vietnamese to the present-day “orthodox” Northern and Southern dialects). Phong Nha is a case in point: it preserves reflexes of Proto-Vietic *aː*; *ɔː*; and *ɛː*; that appear essentially unchanged since Proto-Vietic. Examples are provided in Tables 12 to 15. Note that all Proto-Vietic reconstructions in the present article are from ongoing comparative work (Ferlus in preparation).

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>daːŋ</td>
<td>path</td>
<td>đường</td>
<td>ðươŋ A2</td>
<td>ðañ A2</td>
</tr>
<tr>
<td>daːk</td>
<td>water</td>
<td>nước</td>
<td>ðuok D1</td>
<td>nak D1</td>
</tr>
<tr>
<td>*C.laːs</td>
<td>fire</td>
<td>lụa</td>
<td>lụa C1</td>
<td>la C1</td>
</tr>
<tr>
<td>ŋaːj</td>
<td>human being</td>
<td>người</td>
<td>ðụŋ A2</td>
<td>ðaj A2</td>
</tr>
<tr>
<td>m.raːʔ</td>
<td>bush-hook</td>
<td>rụa</td>
<td>rụa B2</td>
<td>ra B2/C2</td>
</tr>
<tr>
<td>*C.laːjʔ</td>
<td>net</td>
<td>luội</td>
<td>luội B1</td>
<td>laj B1</td>
</tr>
<tr>
<td>laːs</td>
<td>tongue; ploughshare; blade</td>
<td>luội</td>
<td>luội C2</td>
<td>laj B2/C2</td>
</tr>
<tr>
<td>maːɲʔ</td>
<td>to borrow</td>
<td>mượn</td>
<td>mượn B2</td>
<td>man B2/C2</td>
</tr>
</tbody>
</table>

Table 12. Proto-Vietic *aː*, Middle Vietnamese /ua/ (spelling: ụa/ươ), Phong Nha /a/

---

5 These three words constitute developments from the same root, not just homophones.
<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.ta:l</td>
<td>under</td>
<td>đưới</td>
<td>đướı́ B1</td>
<td>đướı́ B1 / đướí B1</td>
</tr>
<tr>
<td>g.lαːt/b.lαːt</td>
<td>to slip</td>
<td>trάt</td>
<td>tʊ̯ə́t B2</td>
<td>tʊ̯í B2</td>
</tr>
</tbody>
</table>

Table 13. Proto-Vietic *əː/*aː, Middle Vietnamese /əə/ (spelling: ưa/ua), Phong Nha /ə/.

It may be that the vowel /ə/ in the Phong Nha examples in Table 13 represents the result of the reinterpretation of the vowel /usahaan/ of orthodox dialects, rather than a regular phonetic development.

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>rɔːŋˀ</td>
<td>paddy field</td>
<td>ruột</td>
<td>рɔ́t B2</td>
<td>рɔ́t B2/C2</td>
</tr>
<tr>
<td>m.rɔj</td>
<td>flea</td>
<td>ruọ́i</td>
<td>ruọ́j A2</td>
<td>рɔ́j A2</td>
</tr>
<tr>
<td>ə.ɾɔː</td>
<td>tortoise</td>
<td>rìa</td>
<td>rọ̀ A2</td>
<td>rɔ́ A2</td>
</tr>
<tr>
<td>rɔːc</td>
<td>intestines</td>
<td>ruọ́t</td>
<td>ruọ́t D2</td>
<td>rɔ́t D2</td>
</tr>
<tr>
<td>ɓɔːjˀ</td>
<td>salt</td>
<td>muọ́i</td>
<td>muọ́j B1</td>
<td>moj B1</td>
</tr>
<tr>
<td>mɔːs</td>
<td>mosquito</td>
<td>muọ́i</td>
<td>muọ́j C2</td>
<td>moj B2/C2</td>
</tr>
<tr>
<td>ə.lɔːˀ</td>
<td>paddy</td>
<td>lìa</td>
<td>lʊə́ B1</td>
<td>lʊ́́ B1</td>
</tr>
<tr>
<td>dɔːc</td>
<td>to swallow</td>
<td>nụ́ọ́t</td>
<td>nʊə́t D1</td>
<td>nʊ́t D1</td>
</tr>
</tbody>
</table>

Table 14. Proto-Vietic *ɛː, Hanoi Vietnamese uò/ua (IPA /əə/), Phong Nha /ə/.

<table>
<thead>
<tr>
<th>Proto-Vietic</th>
<th>gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>?e̝h ‘to defecate’</td>
<td>diarrhoea</td>
<td>iə́ chày</td>
<td>iɔ́ C1 teaj C1</td>
<td>e C1 caj C1</td>
</tr>
<tr>
<td>cas ‘to flow’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15. Proto-Vietic *ɛː, Middle Vietnamese /ə/ (spelling: iê/iə), Phong Nha /ɛ/ (the relevant syllable is the first in the disyllabic form).

There is only one example in Table 15: this is the only example found so far of Phong Nha /ɛ/ corresponding to Proto-Vietic *ɛː and Vietnamese /iə/ (iê/iə).

Another notable feature of the system is the presence of a short /a/ or /ə/ in some syllables with a /-aj/ rhyme in Middle Vietnamese. Table 16 presents relevant examples, and clarifies that they derive from Proto-Vietic *eː whereas Proto-Vietic *a: plus final *s or *l yields a main vowel /a/ in Phong Nha. Note that Proto-Vietic *jaːl ‘casting-net’ is an early borrowing from Sanskrit jāla.
The double set of reflexes of Proto-Vietic *e in Phong Nha (/ă/ and /ɤ̆/) is unexplained, but not especially surprising. “Orthodox” Vietnamese did not undergo a linear development from Proto-Vietic; while Proto-Vietic *e mostly evolves into /aj/ (orthographic ai), there are also numerous instances of /ɤ̆/ (orthographic ây). Likewise, Proto-Vietic *o has two reflexes, /aw/ (orthographic ao) and /ɤ̆w/ (orthographic âu).

As for Proto-Vietic *o, only two examples are presented in Table 17; further data, comprising Phong Nha cognates for words such as bao ‘dream’, will be necessary to pursue the analysis. The mention ‘local voc.’ indicates that the word at issue (‘stream, river’) is part of local vocabulary that cannot be traced back to Proto-Vietic.

### Table 16. Correspondences for syllables with a /-aj/ rhyme in Middle Vietnamese

<table>
<thead>
<tr>
<th>Proto-Vietic rhyme</th>
<th>Proto-Vietic form</th>
<th>Vietnamese gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese</th>
<th>Phong Nha main vowel</th>
</tr>
</thead>
<tbody>
<tr>
<td>*e:</td>
<td>tke:</td>
<td>thorn</td>
<td>gai</td>
<td>ţaj A1</td>
<td>kaj A1</td>
<td>ā</td>
</tr>
<tr>
<td></td>
<td>t.ke?:</td>
<td>female</td>
<td>cái</td>
<td>kaj B1</td>
<td>kaj B1</td>
<td>ā</td>
</tr>
<tr>
<td></td>
<td>ke?:</td>
<td>CLF</td>
<td>cái</td>
<td>kaj B1</td>
<td>kaj B1</td>
<td>ā</td>
</tr>
<tr>
<td></td>
<td>płe?</td>
<td>fruit</td>
<td>trái</td>
<td>[a]j B1</td>
<td>[t]j B1</td>
<td>ŭ</td>
</tr>
<tr>
<td></td>
<td>pse?:</td>
<td>otter</td>
<td>rái</td>
<td>raj B1</td>
<td>tʃj B1</td>
<td>ŭ</td>
</tr>
<tr>
<td></td>
<td>kde?:</td>
<td>stag, deer</td>
<td>(con) nai</td>
<td>naj A1</td>
<td>nʃj A1</td>
<td>ŭ</td>
</tr>
<tr>
<td>*a: plus final *s or *l</td>
<td></td>
<td>casting-net</td>
<td>chài</td>
<td>caj A2</td>
<td>caj A2</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>p.la:l</td>
<td>son</td>
<td>(con) nai</td>
<td>naj A1</td>
<td>nʃj A1</td>
<td>ŭ</td>
</tr>
<tr>
<td></td>
<td>C.ka:s</td>
<td>to scratch</td>
<td>gài</td>
<td>yaj C2</td>
<td>k₃jaj C1</td>
<td>a</td>
</tr>
</tbody>
</table>

### Table 17. Correspondences for reflexes of Proto-Vietic *o

<table>
<thead>
<tr>
<th>Proto-Vietic vowel</th>
<th>Proto-Vietic form</th>
<th>Vietnamese gloss</th>
<th>Vietnamese spelling</th>
<th>Middle Vietnamese</th>
<th>Phong Nha Vietnamese main vowel</th>
<th>form</th>
</tr>
</thead>
<tbody>
<tr>
<td>*o</td>
<td>local voc.</td>
<td>stream, river</td>
<td>rào</td>
<td>raw A2</td>
<td>a</td>
<td>raw A2</td>
</tr>
<tr>
<td>*o</td>
<td>t.ko?:</td>
<td>husked rice</td>
<td>gao</td>
<td>ţaw B2</td>
<td>a</td>
<td>ţaw B2/C2</td>
</tr>
<tr>
<td>*o</td>
<td>s.po:</td>
<td>to dream</td>
<td>bao</td>
<td>baw A1</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

### 3.3. The tone system

#### 3.3.1. Inventory

The tonal system is presented in Table 18. The table is arranged by etymological categories, A1 to D2 (Haudricourt 1972; Gedney 1972). The phonetic labels use Chao Yuen-ren’s scale from 1 (lowest) to 5 (highest); they approximate our auditory impression of the tones, pending further examination of their acoustic and perceptual properties. Tone A1 is rising, in the higher part of the speaker’s
range; A2 is lower, and slightly falling; B1 sounds falling-rising; the tone that results from the merger of B2 and C2 is very low; and tone C1 ends in glottal constriction. No tone sandhi was observed (on tone coarticulation in Vietnamese, see Brunelle 2003, 2009).

Table 18. Phong Nha tones. Categories A, B, C: non-checked syllables (smooth syllables); category D: checked syllables (stop-final syllables)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45</td>
<td>324</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>32</td>
<td>1</td>
<td>53</td>
<td></td>
</tr>
</tbody>
</table>

3.3.2. Origin of the five tones: four tones plus one, or six tones minus one?
In the Vietic languages Pong/Phong (Laos) and Toum and Liha (spoken in the north-central provinces of Vietnam), there exist four-tone systems, following the confusion of etymological B1 with C1, and B2 with C2 (Ferlus 1998). A four-tone system (on non-checked syllables) is also found in the Cao Lao Hạ dialect of Vietnamese (Ferlus 1995), in which the etymological C category (originating in syllables with final *-h) is now confused with etymological B2: i.e. Vietnamese B2, C1 and C2 are all reflected as the same tone in Cao Lao Hạ. Seen in this light, the five-tone system of Phong Nha Vietnamese may be due to the preservation of five of the six etymological categories; or it may be due to later borrowings that reintroduced a fifth category into a four-tone system (reintroducing a formerly lost opposition between B1 and C1). The way to test these two hypotheses is to evaluate the degree of regularity in tonal correspondences with Middle Vietnamese: if a category was reintroduced through borrowing, irregular correspondences are expected. Comparison argues in favour of the former hypothesis: Phong Nha has never been a member of the set of four-tone dialects.

3.3.3. Irregular tonal correspondences across dialects
Overall, tonal correspondences between Phong Nha and Middle Vietnamese are straightforward. There are a few cases of irregular tonal correspondences, falling in several categories. A reminder may be in order concerning about the three types of irregular tonal correspondences brought out by Ferlus (1999).

(i) The first type is due to the devoicing of sonorants in sesquisyllables in Proto-Việt-Muông, resulting in high-register reflexes in Northern Vietic (Vietnamese and Mường) vs. low-register in Southern Vietic (all the other languages of the group). For example, sesquisyllabic Proto-Vietic *k.ma ‘rain’ yielded a high-series tone (A1) in Vietnamese: /mɯə A1/ (orthography: mua). The proposed explanation is that, under the influence of Chinese (which had already undergone monosyllabicization), *k and *m came to be articulated as an initial consonant cluster *km-, and their strong coarticulation detracted from the voicing of the nasal, so that it patterned together with voiceless onsets at the stage when a
consonant shift among initials took place (Haudricourt 1965, 1972). In Southern Vietic, on the other hand, voicing of the *m was preserved through the sesquisyllabic realization of *k.ma as *[kˈma], hence the development of a low-series tone, e.g. Pong /kˈmaA2/ and Liha /maA2/.

(ii) The second type is due to the voicing of medial stops in Vietnamese after an initial *r, resulting in low-register reflexes in Vietnamese vs. high-register in all the other languages (including Mường). For example, *r.ka ‘chicken’ yields Vietnamese gà [yaA2], vs. Mường, Cuội, Pong and Thavung /kaA1/, Sách/Rúc /rˈkaA1/, Arem /lˈka(I)/, and Mạ Liềng /ũkaA1/.

(iii) The third type is due to the loss of Proto-Austroasiatic initial voicing in Northern Vietic languages, resulting in high-register reflexes, as against the expected low-register reflexes in Southern Vietic. This is interpreted by Ferlus (1999) as a substratum effect dating back to the time when Proto-Vietic spread northwards onto an Austroasiatic substratum of languages that lacked voiced stops (a set of languages of which the Khmuic language Ksing Mul arguably constitutes a remnant).

Some Phong Nha words illustrate the above types of irregular tonal correspondences categories. For instance, the word ‘louse’, Phong Nha /tɤ̆nB1/, constitutes an instance of the second type of irregularity. It differs from Standard Vietnamese /rɤ̆nB2/ rạn by its initial and by its tone. In Vietnamese, the medial stop became voiced as a consequence of spirantization, resulting in the development of a low-series tone. Other examples include ‘to whittle, to cut out’, Phong Nha /kʰɔt D1/, and ‘to bite’, Phong Nha /kăm B1/, that have non-spirantized initials and high-register tones; compare Standard Vietnamese /ɣɔt D2/ ṣot and /ɣăm B2/ gãm.

In addition to these three types, some mixed correspondences are found, however: cases where the word is a hybrid – a combination of phonological materials from Vietnamese and from another Vietic language. The Phong Nha word for ‘bedbug’, /repD1/, is identical to the Standard Vietnamese word, except for its tone (Standard Vietnamese /repD2/ rếp). Tone D1 is the regular tone of this word in all Vietic languages except Vietnamese: Mường /se:t D1/ or /tʰe:t D1/, Pong /si:p D1/, Thavung, Sách and Rúc /kʰsi:p D1/, Maleng Bro /kɾsi:p D1/. The Phong Nha word thus contains Standard Vietnamese segments (including the telltale spirant which caused the irregular tonal correspondence with the rest of Vietic) and a typically non-Vietnamese tone. Given the higher prestige of Vietnamese, it is a safe guess that /repD1/ results from the modification of an earlier form, which had an initial /*s-/, by speakers who adopted the segments of the Standard Vietnamese word, while retaining the tone of the earlier form. The initial, and perhaps the vowel, were acquired through a process of standardization, which did not affect the tone.

Such a change is documented in other dialects. In Hanoi, ‘coffee’ was initially borrowed from the French /kafɛ/ as trà phê /ترا:A2.ʃɛA1/ (Martini 1958: 337–338). The first syllable is a phonetic stretcher, as the tone is different from that (A1)
affected by default to borrowings from toneless languages, and the initial /ʈ/ does not match the /k/ in /kafe/. This syllable is semantically motivated: it is none other than the Sino-Vietnamese word for ‘tea’, /ʈaA2/ trà. Labelling coffee as a type of tea acclimatizes the new beverage, introducing it into a set that previously included trà tàu ‘Chinese tea (black tea)’, trà Huế ‘Annamese tea (green tea)’, trà hoa ‘camellia tea’, trà rừng ‘three-seeded mercury (herbal) tea’, and so on. As for the second syllable, /feA1/ phê, it constitutes both a straightforward phonetic rendering of the syllable /fe/ and a semantically appropriate syllable, as coffee is apt to produce a sensation of elation not entirely unlike that produced by opium – another commodity associated with foreigners, which was actively promoted by colonial authorities (Le Failler 2001) –, whose psychotropic effects are evoked in Vietnamese through the expressive form phê phê. On the other hand, Vietnamese people with a command of French would pronounce the foreign word as /kaA1 feA1/, with tone A1 (a level, non-low tone, used as the default for foreign syllables without a final stop). A hybrid of the two forms emerged: /kaA2 feA1/ cà phê, correcting the initial to /k/ as in the donor language, but retaining the tone of /ʈaA2/ trà ‘tea’. This form became standard (see e.g. Nguyễn Như Ý 1999), to the puzzlement of the linguist Emeneau, who tentatively hypothesized that the A2 tone in /kaA2 feA1/ must be due to an (implausible) assimilation to /kaA2/ cà ‘eggplant’ (Emeneau 1951: 4, 158). The process is similar to that found in Phong Nha for the word ‘bedbug’: the partial correction of a form to make it sound closer to a perceived standard form, without replacing it altogether.

4. NOTES ABOUT THE MIGRATION HISTORY OF PHONG NHA

This section proposes notes on ways to analyze the historical situation that resulted in the linguistic patterns currently observed in Vietnamese dialects. A key issue in studying dialects is language contact among related language varieties.

4.1. The paucity of available information about migrations

The history of migration can shed light on situations of language contact. But historical records about population movements in the area of present-day Northern and Central-Northern Vietnam mostly concern the southerly flux of settlers from present-day South China into present-day Northern Vietnam, reported in Chinese chronicles. These sources are recapitulated in the form of a

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6 In the 3rd century BC, a group from the Shu (蜀) kingdom (Sino-Vietnamese reading: Thục), in the Sichuan basin, moved south and established a dynasty in the Red River delta; this attempt to escape from the domination of the kingdom of Qin (秦), which had conquered Shu, paradoxically resulted in the eventual integration of the Red River delta to the emerging Chinese empire. Ma Yuan 马援, sent by the Eastern Han dynasty in 42 to 43 AD, crushed a
six-volume *History of Migrations in China* (Ge Jianxiong 1997). No compendium of comparable scope is available at present concerning the history of population movements inside Vietnam. The overall pattern during the past millenium is clear – the settling of the centre and south of present-day Vietnam through rural migration from North to South – but the process remains little-documented in its details. It seems as if few large-scale efforts had been made, during the successive Vietnamese dynasties, to compile detailed documentation on topics of local history – one of the consequences of the preference of successive Vietnamese emperors for Chinese culture and Chinese history. (See e.g. Langlet 1990: 105–184 on the constant emphasis placed on Chinese cultural models by emperor Gia Long, and the consequences for the last Vietnamese dynasty.) Useful information can occasionally be gleaned from imperial annals, and regional monographs by mandarins (for a detailed example, see Ferlus 2003); but these sources essentially testify to the fact that areas were ill-understood by imperial authorities, and of little interest to them (Le Faillier 2014: 16). By the first half of the 20th century, the assessment of the situation by the geographer Pierre Gourou (1936: 179) was that “the official statistics are based on too fanciful data to provide any adequate idea of the evolution of the population”. Data collection was complicated by the fact that local communities were distrustful of population surveys as foreboding increases in taxes and other demands. The 1989 census has been considered as the first truly reliable census (Banens 2000), and contemporary studies of migration mostly concern developments since the 20th century (e.g. about the settlement of the highlands by migrants from the Red River delta: Hardy 2003; and present-day Chinese immigration: Nguyen 2013).

4.2. Piecemeal information about the settlement of Phong Nha

As a first step towards understanding the history of the settlement of Phong Nha, information provided by the Phong Nha speakers clarifies that the Phong Nha area used to be known by the name of Chùa Nghe, and inhabited by Chữt populations, i.e. speakers of languages of the Southern Vietic subgroup of Austroasiatic (“Chữt” includes the following subgroups: Rúc, Máy, Sách, Arem, and Mã Liềng). Ethnic Vietnamese (Kinh) settlers only moved into the area four to five generations ago. The first to settle in Phong Nha are reported to have carried the family name Dương (楊, or perhaps陽 or 羊), and to have moved in from a neighbouring village, Cù Lặc, located in the same county (xóm Cù Lặc, xã rebellion against the Chinese administration, and established the Red River delta as a Chinese province (Maspero 1918: 14–24), “thereby initiating the process whereby it acquired the solid Chinese framework that allowed it to play the leading role in East Indochina from the 10th century onward” (Maspero 1918: 28).
Son Trạch, huyện Bố Trạch, Quảng Bình). Other settlers from various areas of Nghệ An and Hà Tĩnh provinces gradually joined the village, by small groups of about one to three families. Family names found in Phong Nha are, by reported order of successive arrival: Dương, Lê (黎 or 梨), Đình (丁), Nguyễn (阮), Trần (陳) and Hoàng (黄). Mr. Hoàng Minh Chiêm reported that his ancestors had moved to Phong Nha three to four generations ago, coming from the commune of Quảng Văn, Quảng Trạch county (xã Quảng Văn, huyện Quảng Trạch, tỉnh Quảng Bình). Language contact appears to have taken place predominantly among the Vietnamese dialects of the settlers, as no marriages are reported between the “majority” (Kinh) and “minority” (Arem and Chự) populations. The first Kinh settlers in Quảng Bình are reported to have arrived around the year 1300 AD, with an increase in migratory inflow in the 15th and 16th centuries, mostly occupying the more level lands (Nguyễn Văn Lôi & Nguyễn Văn Mạnh 2010: 27–34).

The history of the settlement of Phong Nha by speakers from different areas of North-Central Vietnam would call for detailed comparison with these dialects, in order to understand phonological correspondences one after the other. The road ahead is clear: a fine-grained study of processes of diffusion across dialects would require in-depth descriptions of the dialects spoken in the places of origin of the migrants – and a reconstruction of the state of these dialects at the time of migration.

5. CONCLUSION

Examination of Phong Nha data suggests the presence of several strata of standardization: layers of influence from prestige varieties of the language. Some words are currently identical with Standard Vietnamese, presumably through relatively recent adoption (borrowing). The word for ‘husked rice’, Phong Nha /ɣaw^B2/C2/, displays spirantization and a low-series tone, like in Standard Vietnamese: /ɣaw^B2/ gao. Others are not of Vietnamese stock, but originate in another Vietic language, for instance ‘to plant (a tree)’, Phong Nha /loŋ^A1/, Middle Vietnamese tròng [toŋ^A2]. The word is reconstructed to Proto-Vietic *m.loŋ; among Vietic languages, Vietnamese alone has a high-series tone for this word.\footnote{The comparative word list proposed by Nguyễn Văn Tài (2005: 283) has tone A2 for almost half of the 29 language varieties for which a form for ‘to plant’ is reported. In detail, tonal notations in the late Pr. Nguyễn Văn Tài’s volume need to be used with caution, however, as it seems that this author found it difficult to leave aside the prism of his native language’s tone system when categorizing aurally the tones of other Vietic languages. There may also have been an issue of “contaminated tonal transcriptions” (Phan 2012: 6; Phan 2013: 315–316) due to the consultants’ production of words with their (“orthodox”) Vietnamese tone (used by the investigator at elicitation) instead of the tone in the language variety under study.} No explanation can be proposed at present concerning the development of
The Phong Nha dialect of Vietnamese

tone for this item in Vietic; this is an example of the many issues that remain to be investigated in the field of Vietic studies. A concern here is that, in view of the small number of linguists at work in this area, it is far from certain that in-depth linguistic surveys can be carried out before the influence of more prestigious dialects erases the features that constitute keys to historical reconstruction (for an overview: Trần Trí Đợi 2000, 2003). Here as in other parts of the world, the importance of classical linguistic fieldwork (Dixon 2007) cannot be overemphasized.

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**APPENDIX: WORD LIST**

This list is arranged by alphabetic order of IPA forms. Tones are noted phonetically; for the correspondences with the etymological categories A1 to D2, see section 3.3.1 of the article. The glosses constitute translations, not necessarily cognates. In many cases the Phong Nha forms are cognate with the Vietnamese form used for elicitation, e.g. ‘three’ /ɓa45/ (tone: A1) corresponding exactly to Vietnamese ba /ɓaA1/; but no attempt was made to provide cognates systematically in the list below, e.g. by verifying whether Phong Nha /ɓăj45/ for ‘to jump (tiger)’ is a semantic development from Standard Vietnamese bay /ɓăjA1/ ‘to fly’.

<table>
<thead>
<tr>
<th>English</th>
<th>Vietnamese orthography</th>
<th>Phong Nha</th>
</tr>
</thead>
<tbody>
<tr>
<td>elder sister</td>
<td>chí</td>
<td>a2ˀ do32</td>
</tr>
<tr>
<td>three</td>
<td>ba</td>
<td>ɓa45</td>
</tr>
<tr>
<td>to jump (tiger)</td>
<td>cop và, tát</td>
<td>ɓăj45</td>
</tr>
<tr>
<td>silver</td>
<td>bac</td>
<td>ɓak53</td>
</tr>
<tr>
<td>to chop up</td>
<td>bảm, vảm</td>
<td>ɓảm32</td>
</tr>
<tr>
<td>to say</td>
<td>nói, bão</td>
<td>ɓaw2ˀ</td>
</tr>
<tr>
<td>flea</td>
<td>bọ chét</td>
<td>ɓo1 cet24</td>
</tr>
<tr>
<td>ox</td>
<td>bò</td>
<td>ɓo32</td>
</tr>
<tr>
<td>zebu</td>
<td>bò u</td>
<td>ɓo32 u45</td>
</tr>
<tr>
<td>to wash (rice)</td>
<td>vo (gào)</td>
<td>ɓo45</td>
</tr>
<tr>
<td>to milk</td>
<td>vát sìra</td>
<td>ɓo53 ʂua2ˀ, nản1 ʂua2ˀ</td>
</tr>
<tr>
<td>to break, to interrupt</td>
<td>bè gay, làm dứt, làm vô</td>
<td>ɓe2ˀ laj1</td>
</tr>
<tr>
<td>seven</td>
<td>bảy</td>
<td>ɓej2ˀ</td>
</tr>
<tr>
<td>we</td>
<td>chúng tôi</td>
<td>ɓej32 tuj45</td>
</tr>
<tr>
<td>sea</td>
<td>biên</td>
<td>ɓiən2ˀ</td>
</tr>
</tbody>
</table>
butterfly \textit{buom} \textit{buöm} \textit{ɓɯə}m45 \textit{ɓɯə}m324
four \textit{bón} \textit{ɓon}324
breast (female) \textit{vi} \textit{ɓu}324
mud \textit{bùn} \textit{ɓun}32

to run \textit{chây} \textit{căj}1
casting net \textit{chài} \textit{caj}32
bamboo strips \textit{dày lạt} \textit{cak}53 \textit{lat}53

to thread \textit{xâu kim} \textit{ɕɔ}2 \textit{ˀ} \textit{ɕɔ}2 \textit{ˀ} \textit{la}324
dishonest \textit{gian xào} \textit{ɕɔ}2 \textit{ˀ} \textit{ɕɔ}2 \textit{ˀ} \textit{la}324

dog \textit{chó} \textit{ɕɔ}324

to split bamboo into tape \textit{chè lạt} \textit{ɕɔ}32 \textit{ˀ} \textit{ɕɔ}32 \textit{ˀ} \textit{la}53

to wedge \textit{chèm} \textit{cem}45
spiny amaranth \textit{rau giềng} \textit{ɕɔ}324
lightning \textit{chớp} \textit{ɕɔp}24
lead \textit{chì} \textit{ci}32
head louse \textit{chí, chây} \textit{ɕɔ}324
bird \textit{chim} \textit{ɕim}45

to sing (of birds) \textit{(chim) hót} \textit{hot}24
nine \textit{lây} \textit{ɕu}1

to take \textit{long mắt} \textit{ɕŋ}45 \textit{mšt}53
bee \textit{chôn} \textit{ɕu}32
weasel \textit{chuột} \textit{ɕuaj}32
banana \textit{chuối} \textit{ɕuaj}32
broom \textit{cải chổi} \textit{ɕuj}24

to pierce, to bore \textit{giữ lỗ, khoan lỗ} \textit{ɕuj}45
rat \textit{chuột} \textit{ɕuot}53
stone \textit{dá} \textit{ɗa}324

testicles \textit{họn dái, trứng dái} \textit{ɗaj}324
knife \textit{dao con} \textit{ɗaw}45 / \textit{zaw}45

to lead by a lunge \textit{đei} \textit{ɗák}45
way, path \textit{đường} \textit{ɗaŋ}32

to give birth; to lay (eggs) \textit{đẻ (đẻ sinh; đẻ trứng)} \textit{ɗe}24
urine \textit{nước tiểu} \textit{ɗe}j324
slobber, slaver \textit{nước dãi, bot miệng} \textit{ɗe}j324

to pound rice \textit{giã gạo} \textit{ɗrₘ₄}5 \textit{yaw}1
earth, land \textit{đất} \textit{ɗr₄}5

to go \textit{đi} \textit{ɗi}45
footprints \textit{đấu, vết chân} \textit{ɗr₃}24

to water leech \textit{con dia, tác} \textit{ɗi}45
beans (general) \textit{đậu, dỗ} \textit{ɗo}1

groundnut, peanut \textit{lac, đậu phộng} \textit{ɗo}1 \textit{ˀ} \textit{ɗo}24
footprint \textit{đấu chân} \textit{ɗo}324
plain  đờ bàng
cope  đòng
bronze  đờm thanh, đờm đĩu
ridgepole  xà nọc
to light a fire  đốt lửa
dot  đở
red  đờm gành
 Sylvia  đờm gà
east  (phiá) đờm
duôi
tail  đờm gành
to pack  gói lại
cowel  cái run, rón
to draw up, to set up  đờm lên, đờm đất
leather, hide  da thuốc
dài
long  đờm gà
slope  đờm
easy  đê
to demolish a house  phá, đỡ nhà
to put out a fire  đập (liệt)
dày
mother's elder sister  đỉ
cake, falcon, eagle  đĩu hâu
draw up, to set up  đờm lên, đờm đặt
saw  đờm gà
navel  đờm, đờm
proper name: Dung (sometimes spelt Dzung in English)

wet rice field bunds  bò ruộng
to use  đờm
to demolish a house  phá, đỡ nhà
below  bến dưới
to put out a fire  đập (liệt)
mother's elder sister  đỉ
cake, falcon, eagle  đĩu hâu
draw up, to set up  đờm lên, đờm đặt
saw  đờm gà

proper name: Dung (sometimes spelt Dzung in English)
to cough  ho
wild boar, wild pig  heo, lơn rừng
pig (domestic)  heo, lơn
rapid  ghênh, thác ghênh
flower  bông, hoa
to marry (of a woman)  lấy chồng
cà
cà đẻ
chó (chó) cán, găm
bàn chân
găm, ngắm
cát
gặt hài
gặt lúa
cóc
cỏ
dung cừ choc lô tra hạt
dực, trọng
cá, mái
hươu
cánh
kêu (động vật)
khiên den
cút
(gày) ba toong
cái thang
côm
cây chê
cây chuối
cây cau
cây cói
cây ma
sứ chanh
cây đuổi
cây gai
cây lúa
gai
gái
cái cây
câu vòng
cù
côí già gao
tuber  củ
mortar (for pounding rice)  cố đi giã gão
owl (general)  cú mèo ku45
crab  cua ku45
to carry in a basket  gui32
knee  dua goi ku324
spur (of cock)  cua (ga trong) kuua2?
crow  qua kwa1
to scratch (with one's nail)  gai kʰaj2?
tiger  hai kʰaj324 ~ xaj324
pass, defile  deo; hem nui, he nui kʰe45
stream  suoi kʰe45
monkey (general)  khi kʰi2?
smoke  khoi kʰoj324
to whittle, to cut out  got, cham got kʰot24
sweet potato  khoai lang kʰwaj45 lan45
liar  nguroi noi doi kʰwet24
fire  lua la2?
leaf  la la324
gum  loi, noi laj1
blade  loi di laj1
net  loi dao laj1 daw45
village  lang laj32
to set (the sun sets)  lan (mat troi) lan53
fly, bluebottle  nhung lan45
embers  mau cui chay do lây1
to flower, bloom, blossom  ra hoa, no (hoa), tro bong lo2' hwa45
feather  long loj45
to plan a tree  tron can lo324
paddy  lua luan45
eel  lrom ma324
rice seedlings  (can) ma maj45 rə32
cat  mai rua maj45
shell (of tortoise)  mau rua man1
to borrow (object)  mat trang mat53 təŋ45
moon  mat roi mat53 təj32
sun  me ving me32
sesamum  phen men45
partition, bamboo panel  men vay mew32
cat  mèo mery45
cloud  may mery45
to cultivate a rice field  lam ruong myn32 rəŋ1
honey  mat mət53
bowl  mö, mà mo32 ; ma2'
where?  (di) dau mo45
<table>
<thead>
<tr>
<th>Term</th>
<th>Vietnamese</th>
<th>Pinyin</th>
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<tbody>
<tr>
<td>termite</td>
<td>con mối</td>
<td>moj24</td>
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<td>mouth</td>
<td>miếng</td>
<td>mom1</td>
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<tr>
<td>taro</td>
<td>khoai so, môn</td>
<td>mon45</td>
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<td>cockscorn, crest</td>
<td>mào (gà)</td>
<td>moj32 ya32</td>
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<tr>
<td>one</td>
<td>mot</td>
<td>mot53</td>
</tr>
<tr>
<td>beak</td>
<td>mó</td>
<td>mɔ2ˀ</td>
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<td>mosquito</td>
<td>muỗi</td>
<td>mɔj1</td>
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<tr>
<td>salt</td>
<td>muối</td>
<td>mɔj324</td>
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<td>to rise (the sun rises)</td>
<td>mọc (mặt trời)</td>
<td>mɔk53</td>
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<td>weevil</td>
<td>mot</td>
<td>mɔt53</td>
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<tr>
<td>lip</td>
<td>mői</td>
<td>mɑj45</td>
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<tr>
<td>cinders, ashes</td>
<td>tro</td>
<td>mun45</td>
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<tr>
<td>rain</td>
<td>mua</td>
<td>mua45</td>
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<td>water</td>
<td>niên</td>
<td>nan45</td>
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<td>year</td>
<td>năm</td>
<td>näm45</td>
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<tr>
<td>five</td>
<td>năm</td>
<td>näm45</td>
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<tr>
<td>this year</td>
<td>năm nay</td>
<td>näm45 ni45</td>
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<td>stopple, cork, plug</td>
<td>cài nút</td>
<td>nɑp24</td>
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<tr>
<td>branch</td>
<td>cảnh, nhánh</td>
<td>nɛɲ324</td>
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<td>anchor</td>
<td>mỏ neo</td>
<td>new45</td>
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<td>boat, ship</td>
<td>thuyên, tau</td>
<td>nok24</td>
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<tr>
<td>to swallow</td>
<td>nuốt</td>
<td>nɔt24</td>
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<tr>
<td>to give birth</td>
<td>sinh đế</td>
<td>nɔʔ2ˀ</td>
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<tr>
<td>to cook rice (water)</td>
<td>gạo</td>
<td>nvrw324 kɤm45</td>
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<tr>
<td>orchard</td>
<td>viếng hoa quả</td>
<td>nɯɛɲ45</td>
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<tr>
<td>dark sky</td>
<td>(trời) rẫm</td>
<td>nɾm45 ~ zɤm45</td>
</tr>
<tr>
<td>to weed</td>
<td>nhỏ, dấy cỏ</td>
<td>nɔʔ2ˀ kɔʔ2ˀ</td>
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<tr>
<td>small</td>
<td>nhỏ, bê</td>
<td>nɔʔ2ˀ</td>
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<tr>
<td>tusk, ivory</td>
<td>ngà</td>
<td>nɑ32</td>
</tr>
<tr>
<td>man (homo)</td>
<td>người ta, con người</td>
<td>nɛj32</td>
</tr>
<tr>
<td>far, distant (from)</td>
<td>xa (nói)</td>
<td>nɛj45</td>
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<td>day</td>
<td>ngày</td>
<td>nɛj45</td>
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<td>calf</td>
<td>(con) bê, nghé</td>
<td>nɛ324</td>
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<tr>
<td>young buffalo</td>
<td>nghé</td>
<td>nɛ324</td>
</tr>
<tr>
<td>to be pregnant</td>
<td>cò bâu, cò thai</td>
<td>nɛn324</td>
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<tr>
<td>near to</td>
<td>gần (nói)</td>
<td>nɛn45</td>
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<tr>
<td>horse</td>
<td>ngựa</td>
<td>nɯə1</td>
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<tr>
<td>star</td>
<td>ngôi sao</td>
<td>nɤj45 saw45</td>
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<tr>
<td>in front</td>
<td>đang, đang trước</td>
<td>n̚1 tɯsk24</td>
</tr>
<tr>
<td>to look at</td>
<td>nhìn</td>
<td>n̚324</td>
</tr>
<tr>
<td>nest</td>
<td>ỏ, tổ chim</td>
<td>ɔʔ2ˀ</td>
</tr>
<tr>
<td>father's elder sister</td>
<td>cò, bác, bà</td>
<td>ɔ45</td>
</tr>
<tr>
<td>billhook</td>
<td>rụa nhỏ</td>
<td>rɑ1</td>
</tr>
</tbody>
</table>
cattle pen, cow pen
river
fence
tooth
placenta (after birth)
bedbug
root
axe
dragon
tortoise
fly
gnat, midge
whip, lash
wet rice field (in the plains)
dry paddy field
intestines
fishnet
dry rice field
sieve
mountain, hill
forest
to husk rice
to wash (clothes)
rack (over the fire)
wax
to winnow paddy
manioc, tapioca, cassava
to hunt
iron
face to face
six
land leech
lotus
( hoa) sen
to hug
adhesive
wolf
squirrel
pot (for cooking rice)
thunder
milk
to carry on a pole
depth
ugly

chuông trâu
sông
rào, giầu
răng
nhau
rẹp
rề cây
riu
rồng
rùa
ruồi
muỗi mắt, muỗi nhỏ
cái roi
ruộng nước
ruộng lúa khô, ruộng can
ruột
rắm
rầy
rừng
núi, đồi
sắt
xay lúa
giặt quần áo
giàn trên bếp
sáp
sấy lúa
sắn
sắn mới
sắt
đối mặt
sấu
con vật
óm
dính
chó sói, sói đò
sóc
nôi nấu cơm
sấm
sỉ ra
gánh
sâu
gxâu
The Phong Nha dialect of Vietnamese

1. to bark: chó sủa
2. hand-held pestle: chày tay
3. snake: rắn
4. to put out a fire: tắt lửa
5. plantain leaf: tau lá chuối
6. rhinoceros: tê giác
7. crayfish: tôm sông, tôm nước ngọt
8. garlic: tỏi
9. to fight: đánh trả, chống trả
10. son: con trai
11. python: con rắn
12. white: trắng
13. above: bên trên
14. to weave straw wall: đan/bên tấm tranh
15. centipede: con rết, rít
16. prawn: tôm
17. cushion: gói đứa, gói đệm
18. sky: trời
19. otter: con rái cá
20. fruit: trái, quả
21. ear lobe: đai tai
22. areca nut (betel nut): trái cau
23. coconut: trái (quả) dừa
24. body louse: rắn
25. to slip: trượt, tuốt
26. buffalo: trâu
27. insect: sâu bọ
28. hare: thò rừng
29. trunk (of trees): thân cây
30. tin: thiec, kem
31. leak (from the roof):.dot (dot mái, mái dot)
32. head: đầu, tóc
33. back of the blade: cái sông dao
34. drum: Trọng
35. betel: trâu
36. mole: chuột chũi
37. earthworm: con tròn, giun
c. pangolin: con té té, trúc
d. to keep (buffalo): giữ trâu
e. middle, between: ở giữa
f. father's elder sister's husband: Dương
38. hornes (of buffalo): gac nai
39. prawn: tôm
40. cushion: gố kì dự, gố kì đệm
41. sky: tròi
42. ear lobe: dái tai
43. areca nut (betel nut): trái cau
44. coconut: trái (quả) dừa
45. body louse: rắn
46. to slip: trượt, tuốt
47. buffalo: trâu
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50. trunk (of trees): thân cây
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52. leak (from the roof):.dot (dot mái, mái dot)
53. head: đầu, tóc
54. back of the blade: cái sông dao
55. drum: Trọng
56. betel: trâu
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d. to keep (buffalo): giữ trâu
e. middle, between: ở giữa
f. father's elder sister's husband: Dương
59. hornes (of buffalo): gac nai
egg

to broadcast rice
gieo vãi luá
vaj1 lo324

scale (of fish...)
váy (cá, con té té...)
váj2

gold
vàng
vaj32

lime
vô
voj45

(wood) shavings
vô bào
vo1

elephant
vô voi
voj45

elephant's trunk
vô voi
voj32 voj45

to thin out bamboo tape
vót lát
vọt24 lat53

gibbon
vượn
vuν1

marsh
dâm lày
vuν32 lun45

yes
dạ
za1

false, untrue
giả
za2

house
nhà
za32

weeds
có dại
zaj1

mad dog
chó dại
zaj1

to chew
nhai
zaj45

to dare (to do sth.)
dám
zam324

to imprison
giam, bó tù ai
zam45

to paste, glue
dán lại
zan324

to disperse
xích, dang ra
zan45

to stroll
đi dạo, đi chơi
zaw45

to teach
dạy
zaj1

mountains
dày núi
zaj32

to jump, to leap (e.g. frog)
nhảy
zaj2~ nǎj2

thick
dày
zaj5

cricket
con dế
ze324

goat
dể
ze45

to hoard
dế đánh, đánh đùm, tiết kiệm
zen32

to weave
dệt, đan
zet53

tear grass, job's tears
bo bo, ý dĩ, cuộm Thảo
zil

divorced (husband)
bô chồng, lì dĩ
zil

sulfur
diêm sinh
zian45

to speak, make a speech
nhim
zim324

bad
xấu, dở
zx2

cucumber
dừa chuột, dừa leo
zv45 lew45

to play
chơi
zxj1

to get up
durrency, dầy
zỹj1

to struggle
vừng vây, dầy dưa
zỹj1

bat
dơi
zxj45

to lead
đản ai
zỹn1

villager
dản làng
zỹn45
<table>
<thead>
<tr>
<th>English</th>
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<tbody>
<tr>
<td>to make a sacrifice</td>
<td>cùng, hiên dâng</td>
<td>zyŋ45</td>
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<tr>
<td>to rise</td>
<td>dâng lên</td>
<td>zyŋ45</td>
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<td>castor oil tree</td>
<td>cây thâu dâu</td>
<td>zʁw32</td>
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<tr>
<td>daughter in law, son's wife</td>
<td>con dâu</td>
<td>zʁw45 ; ðu45</td>
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<tr>
<td>to observe</td>
<td>dò xét, quan sát</td>
<td>zo32</td>
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<tr>
<td>wind</td>
<td>gió</td>
<td>zo324</td>
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<td>rose-apple</td>
<td>roi, mận</td>
<td>zoŋ45</td>
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<td>thin</td>
<td>óm gậy</td>
<td>zɔm324</td>
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<td>somnambulism</td>
<td>mộng du</td>
<td>zu45</td>
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<td>Rhizomys sinensis</td>
<td>dũi</td>
<td>zuij1</td>
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<tr>
<td>tinder</td>
<td>bùi nhủ (để mùa lửa)</td>
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<td>evil</td>
<td>dứ tỏn</td>
<td>zu1</td>
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<td>fruit shell</td>
<td>vô cùng, gáo diạ</td>
<td>zua32</td>
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<td>antelope goral</td>
<td>ban linh, linh dương</td>
<td>zuanŋ45</td>
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