## LANGUAGE \& LINGUISTICS IN MELANESIA

Journal of the Linguistic Society of Papua New Guinea ISSN: 0023-1959
Vol. 37, 2019


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# The Phonological History of Nese, a Northern Malakula Language 

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#### Abstract

Nese is a moribund Vanuatu language belonging to the Northern Malakula subgroup. This paper outlines the historical development of its phonology, paying particular attention to two unusual features: (i) the development of a series of linguolabial (or apicolabial) consonants from Proto-Oceanic (POC) bilabials when before non-back vowels; and (ii) the addition of a paragogic vowel word-finally to POC forms that contained a high vowel in a preceding syllable, that high vowel being subsequently deleted.


## 1. INTRODUCTION ${ }^{1}$

This is the second in a projected series of three papers describing the phonological history of individual languages of Malakula, each from a different major subgroup or linkage. There are three such groupings-the Northern subgroup, the Eastern linkage, and the Western linkage-and this paper describes the phonological history of Nese, a Northern language. ${ }^{2}$

The internal structure of the Northern subgroup is shown in Figure 1. The situation may be more complex than is shown there. The linguistic situation in the north and northwest of Malakula was outlined by Lynch and Crowley (2001:82), but at that stage the existence of Nese was unknown. There are, indeed, yet other named or identified varieties, whose exact status is uncertain, given the paucity of research in the area: there is an Espiegles Bay communalect, which may be a variant of the Malua Bay language; and there are also communalects named Najit, Naha, and Njav, and one spoken in Alovas village, which may be dialects of Nese or Vovo. These are not included in Figure 1, which will probably need revision once more data become available on languages in this area.

FIGURE 1. THE NORTHERN MALAKULA SUBGROUP


Nese is a moribund language originating in the Matanvat area of northwest Malakula. Though about 300 people live in this area, almost all are (the descendants of) people who have in-migrated for religious and/or economic reasons. Nese itself is actively spoken on a daily basis by fewer than five people, though around ten others in Matanvat and a few in the urban centres of Port Vila and Luganville speak it to varying degrees (Crowley 2006:1-3, Takau 2016:15-21).

Nese was chosen as a representative of the Northern Malakula subgroup because there is a good descriptive sketch and a reasonable amount of lexical data (Crowley 2006) and a much more detailed, though currently

[^0]unpublished, grammatical description (Takau 2016); the other languages are less well described. (No member of this subgroup is featured in Clark's (2009) coverage of North-Central Vanuatu.)

## 2. BACKGROUND

### 2.1 Synchronic phonology

This description of Nese synchronic phonology follows Crowley (2006:38-43) and Takau (2016:36-91). There are a few minor differences between these two analyses, which I will discuss after presenting the commonalities.

Nese can be analysed as having the following consonant and vowel phonemes:


The consonants in the first column (/d $\partial \mathrm{n} /$ ) are linguolabials (sometimes called apicolabials), made with the tip of the tongue touching the upper lip. These are extremely rare in the languages of the world. Outside Vanuatu, they apparently occur only in the Brazilian language Umotina, the Kajoko variety of Bijago (GuineaBissau), "in a couple of expressive words" in the Mochi variety of Chaga in Tanzania, "in disordered speech" (Olson et al. 2013:63), and in Pirahã, a Mura language of Brazil (Maddieson 1989:350). All other languages with linguolabials are spoken in the Santo-Malakula region of Vanuatu: four languages on small islands off Santo and four on Malakula, plus another seven where it appears that linguolabials developed from bilabials but then underwent a further development, becoming apicals (Lynch 2019a).

The voiceless stops /t k/ are unaspirated, the voiced stops /d $\mathrm{b} \mathrm{d} \mathrm{g} /$ are prenasalised initially and when preceded by a vowel or a non-nasal consonant, while /c/ is a voiceless alveopalatal affricate [ t f ]. The bilabial obstruents $/ \mathrm{b} /$ and $/ \mathrm{v} /$ have freely varying labiovelar allophones in various environments, suggesting that a distinction between bilabials and labiovelars might once have been present in the language. The voiced fricatives have voiceless allophones word-finally. There is a contrast between a trill /r/ and a flap/r/; however, Takau (2016:55) notes that, while "older speakers living in Matanvat generally make a distinction between the flap and the trill, $\ldots$ younger speakers and older speakers who live in Port Vila have lost the distinction in their speech and tend to use $/ \mathrm{r} / \mathrm{rather}$ than $/ \mathrm{r} / \prime$ ".

Crowley suggested that there might be two additional phonemes, $/ \mathrm{g} / \mathrm{and} / \mathrm{h} /$, each of which occurred in only a couple of words. Takau (2016:36) notes that Crowley's examples illustrating /h/ "are in fact words from the Naha speech variety which is spoken in nearby Vovo". As to /g/, Crowley had only two examples, both in an alienable possessive paradigm; however, Takau analyses these as consisting of the relational classifier jinfollowed by a $k$-initial suffix, with the resulting $n k$ cluster approximating a prenasalised voiced velar stop.

Words rarely begin with vowels. Two-consonant clusters are frequent word-medially, and may also occur word-initially, rather more frequently in Takau's analysis than in Crowley's: thus she has forms like /mre/ 'ripe', /syasyo/ 'sing', and /vso/ 'white', while Crowley's equivalents are /mire/, /suүasyo/, and /vuso/. Stress is generally penultimate.

I follow Crowley's (2006:49) and Takau's (2016:89-91) orthography in representing the linguolabials with a following apostrophe ( $b^{\prime}, v^{\prime}, m^{\prime}$ ), /c/ as $j$, the flap as $r$ and the trill as $r r$. However, I use $x$ instead of their $k h$ for the velar fricative, and retain $\eta$ rather than their $n g$ for the velar nasal.

There is a pervasive process of ablaut in Nese in which /a/ is regularly shifted to /e/ in a number of contexts. A few examples are given below:
(1) Nominal compounds: nalan 'wind' + rrub 'kill' > nelen-rrub 'cyclone'

Noun + adjective:
Verbal compounds: narram 'yam + darav 'long' > nerrem darav 'long yam'

Possessive constructions: natan 'basket' > netey ne lextarr 'the woman's basket'

### 2.2 Developments in word structure

To assist the reader in following the data in the sections dealing with individual consonants and vowels, I very briefly outline here a few processes that affect the shape of inherited lexical items. Full details are given in section 5 .

- POc final consonants are often lost (e.g., *tasik 'sea' > na/tas), but about one-third of POc items that had a final consonant retain that consonant (e.g., *p ${ }^{(\mathrm{w})}$ ilak 'lightning' $>$ ne/v'ilax).
- A paragogic vowel is added after a retained POC word-final consonant if the preceding vowel was high (e.g., *ñamuk 'mosquito' > namxo).
- POC post-consonantal final vowels are generally lost in word-final position (e.g., *barapu 'long' > darav); when a final consonant was deleted the preceding vowel was often also deleted (e.g., *salan 'path' > $n a / s a l$ ), though there are many cases where it was retained (e.g., *qutan 'inland' > a/ute).
- Root-final vowels are not lost when the form was followed by a (possessive or transitive) suffix (e.g., *mata- 'eye' > na/nata-).
- Most noun roots are prefaced with $n$ or $n V$, deriving from POC *na, the common article, which has become an integral part of the noun in Nese, as in other Malakula languages (e.g., *molis 'citrus' > na/mul).


## 3. CONSONANTS

POC word-final consonants are sometimes lost, sometimes retained in Nese (see §5.1). This discussion of consonants largely deals with their occurrence in non-final position, though their reflexes in final position when they are retained are not different from their non-final reflexes.

### 3.1 The POC labials

Like many Malakula languages, Nese has lost the synchronic phonemic distinction between the labiovelars ( ${ }^{*} \mathrm{p}^{\mathrm{w}}$, ${ }^{*} \mathrm{~b}^{\mathrm{w}}$ and ${ }^{\mathrm{m}} \mathrm{m}^{\mathrm{w}}$ ) and the simple bilabials $(* \mathrm{p}, * \mathrm{~b}$ and $* \mathrm{~m})$, having no labiovelar phonemes. However, the diachronic distinction between these two sets of consonants is maintained.

The voiced labiovelars are reflected as bilabials, with $*^{\mathrm{w}}>b(2 \mathrm{a})$, and $*^{\mathrm{w}}>m(2 \mathrm{~b}):^{3}$

 tell' > varr.

When before a POc back vowel, the bilabials merged with the corresponding labiovelars: *p became $v$ (3a), $* \mathrm{~b}>b(3 \mathrm{~b})$ and $* \mathrm{~m}>m(3 \mathrm{c})$.

| a. | *pose 'a paddle' | no/vos |
| :--- | :--- | :--- |
| *lipo- 'tooth' | no/luvo- |  |
| *pulan 'moon, month' | na/vle |  |
| *tapuRiq 'conch, triton' | tavu |  |
| c. | *molis 'citrus' | na/mul |
| *lumut 'moss, algae' | na/lum |  |
| *ñamuk 'mosquito' | namxo |  |
| *muqa- 'before, in front' | a/mu |  |

b. *boni 'night'
buy
$\mathrm{N} *$ katabola 'dragon plum' xatabol
*buto- 'navel'
N* makobu 'skink, gecko' na/naxub 'Emoia sp.'

[^1]There are, however, two cases where *p unexpectedly becomes $w$ : *ponuq 'fill, full' > wun and *maqurip 'be alive' > norrwo.

When before a non-back vowel ( $*_{\mathrm{i}}$, *e or $* \mathrm{a}$ ), however, the bilabials underwent a shift, initially to linguolabials, ${ }^{5}$ in some lexical items, ${ }^{*} \mathrm{~b}$ and ${ }^{*} \mathrm{~m}$ (but not ${ }^{*} \mathrm{p}$ ) shifted further to alveolars; thus:

|  | Initial shift | Subsequent shift |
| :---: | :---: | :---: |
| *p | $\mathrm{v}^{\prime}$ | - |
| *b | $\mathrm{b}^{\prime}$ | d |
| *m $^{\mathrm{m}}$ | m |  |

The initial shift is illustrated in (5):
a. *piRaq 'k.o. taro'
N * vinuti 'skin'
*kape 'crab' *patuR-i 'weave' *pat 'four' $\quad v$ 'at *pano 'go' $v$ 'an
c. *kamaliR 'meeting house' *malayo 'sea eel
$\mathrm{N} *$ meme- 'tongue'
*-miu '2PL.POSS' -m'i na/v'i
ne/v'in-
na/xav'
v'ati
v'at
v'an na/xm'al, ne/xm'el na/m'al 'k.o. eel'

```
ne/m'em'-
```

The subsequent shift to alveolars is illustrated in (6):

| a. | $\mathrm{N} *$ bitu (< *pitu) 'seven' | xo/dit |
| :--- | :--- | :--- |
| N*bea (< *pea) 'where?' | xa/de |  |
| *siba 'cut' | side |  |
| *barapu 'long' | darav |  |
| N*baiga 'green snail' | na/daike |  |


| b. *kamiu 'you PL' | kani |
| :--- | :--- |
| *kamami 'we INC.PL' | kanan |
| *lima 'five' | line |
| *manuk 'bird' | na/nanxo |
| N*matuqa 'right (side)' | na/natu |

There appears to be no way in which we can predict which occurrences of a proto-bilabial became linguolabials and which became alveolars. It appears that the shift is either an ongoing one, or else was interrupted before it worked all the way through the lexicon, since some lexical items show bilabial (> linguolabial) > alveolar and others just bilabial > linguolabial. Indeed, there are a few cases of $* \mathrm{~b}$ and $* \mathrm{~m}$ in the relevant environment that show no evidence of the shift at all: ${ }^{6}$
a. N*bei 'Polyscias scutellaria' norru-be
$\mathrm{N} *$ baraya 'blind'
bar
b. ${ }^{\mathrm{N} * \text { zumi 'kiss' }}$
*saman 'outrigger'
*maRi 'come'
*Ruma= 'chest'

$$
\begin{align*}
& \text { jum }  \tag{7}\\
& \text { na/jam } \\
& \text { ma } \\
& \text { no/rruma }
\end{align*}
$$

And about half the occurrences of *p show no shift:

| (8) | *Rapi(-Rapi) 'late afternoon' | revrav | *para- 'arm, hand' | na/vara- |
| :--- | :--- | :--- | :--- | :--- |
|  | *pica 'how many?' | vise | N*tuva 'belt, waistband' | ne/tve |
|  | *sipi(r,R)i 'coconut lory' | ni/jivirr | *paka- 'multiplicative' | vaxa- |

In addition, there is some variation between Crowley's and Takau's recorded data, suggesting that (i) the change from linguolabial to alveolar may still be in progress, and (ii) reversal-the change from linguolabial back to

[^2]bilabial-may also be in progress. ${ }^{7}$ Consider the following; the first column indicates the two phonemes involved in the variation:

|  | Crowley | Takau |  |
| :--- | :--- | :--- | :--- |
| v': v | nev'in <br> nevin <br> tavat | tav'at | 'arrow' |
| b'anakh | vanakh | 'soman' |  |

This shift does not occur in Malua Bay, and so is not common to the whole Northern group. However, all members of the North Coast subgroup show evidence of the shift, but once again there is inconsistency (at least in Vovo and Botovro), as illustrated in Table 1. In that table, forms with bilabials are unshaded, forms with linguolabials are shaded mauvish-lilac, and forms with alveolars are shaded blue. The inconsistency is highlighted by the fact that, of 21 items, not a single one shows the same colour across the whole row.

TABLE 1. THE LINGUOLABIAL SHIFT IN THE NORTH COAST SUBGROUP

|  | POc | Nese | Vovo | Botovro | Vao |
| :---: | :---: | :---: | :---: | :---: | :---: |
| *p: | *kaba-> ${ }^{\text {* }}$ kabau 'wing' | na/xab'e- | na/xabenavaven vat na/vat xe-vihe | na/p'ent | xanp'ev'av'ine xe-v'at na/v'at xe-v'ihe |
|  | *papine 'female' | - |  | neðaðen |  |
|  | *pat 'four' |  |  |  |  |
|  | *patu 'stone' | na/v'at |  | na/v'at |  |
|  | *pica 'how many?' | vise |  | v 'ihe |  |
| * b : | *bakewa 'shark <br> *barapu 'long' <br> N *batavu 'breadfruit' <br> N*bea 'where?' <br> *siba 'cut, knife' | na/b'ake | na/baxo barav | na/p'ahei <br> np'arap <br> na/p'atav <br> a/np'ei <br> ne/hinp'e | p'axo |
|  |  | darav |  |  | barav |
|  |  | na/b'atav | na/datav |  |  |
|  |  | xa/de <br> side | a/de <br> hibe, ne/hibe |  | a/np'e ne/hinp'e |
|  |  |  |  |  |  |
| *m: | *mamaca 'dry' <br> *manuk 'bird' <br> *ma-osak 'cooked’ <br> *maqetom 'black' <br> *maqurip 'alive' <br> *mata- 'eye’ <br> *mate 'die' <br> *maturuR 'sleep' <br> $\mathrm{N} *$ mazi 'fish' <br> $\mathrm{N} *$ mea- 'tongue' <br> *tama- 'father' | nanas <br> na/nanxo <br> nasxe | mamah na/man | m'am'a na/m'anuho m'ahke | m'am'ah na/m'an |
|  |  |  |  |  |  |
|  |  |  | nox |  | - |
|  |  | m'ot | not | - | mom'ot <br> m'aur <br> m'ata- <br> m'at |
|  |  | norrwo | naur | nerve |  |
|  |  | na/nata- | na/mata- | na/mata- |  |
|  |  | nas | nat, nah natur | m'ah |  |
|  |  | naturr |  | natur | - |
|  |  | na/naj | na/mas ne.meme-tama- | na/m'ats <br> m'em'e- <br> tam'a- | na/m'as <br> m'em'ə- <br> tam'a- |
|  |  | ne/m'em'- |  |  |  |
|  |  | tana- |  |  |  |

These developments of the POC bilabials in Nese (and other Northern languages) have been discussed in some detail in Lynch (2005b, 2019a).

POc ${ }^{*}$ w tends to be reflected as $u$ or $w$ after a consonant (10a) and as $v$ or $v^{\prime}$ elsewhere (10b):

[^3]a. *waga 'canoe'
*waso 'digging stick'
*kawaRi 'root'
n/uak nix/was no/xwarr-
b. *siwa 'nine' xe/sve $\mathrm{N}_{*}$ wenu 'whistle' $\quad \mathrm{v}$ 'inv'in
$\mathrm{N}_{\text {* sukawa 'year' }}$ ne/suxav vavay

Note also ${ }^{\mathrm{N} *}$ daweRu 'coconut crab'> na/rrau, with $u$ for expected $v$.

### 3.2 The POc coronals

### 3.2.1 POc *t and *d

The alveolar stops palatalised when before front vowels, with the palatal reflex of $*_{\mathrm{t}}$ merging with $*_{\mathrm{s}}$ and $*_{\mathrm{c}}$ as $s$ (11a), and that of $* \mathrm{~d}$ with $* \mathrm{j}$ as $j(11 \mathrm{~b})$.
a. *tiana 'pregnant'
sian
*tinaqe- 'intestines’
ne/sin- 'belly'
*poti- 'seed'
no/vos-
*[ma]puti(q) 'white' vuso
*mate 'die' nas
*qata-mate 'devil' tanas

The default reflex of $* \mathrm{t}$, however, is $t(12)$, and the default reflex of $* \mathrm{~d}$ is the trill $r r(13)$ :
$\left.\begin{array}{lllll}\text { (12) } & \text { *tama- 'father' } & \text { tana- } & \text { *mata- 'eye' } & \text { na/nata- } \\ \text { *tapuRiq 'conch, triton' } & \text { tavu } & \text { *mnata 'snake' } & \text { na/mat } & \\ \text { *toqa 'fowl' } & \text { nato } & \text { til } & \text { *buto- 'navel' } & \text { ne/bito- }\end{array}\right]$

However, there are a number of cases of what is known in the literature as "oral/nasal grade crossover" (see Clark 2009:14-15), whereby an oral grade phoneme (in this case *t) is reflected as if it were nasal grade (in this case $* \mathrm{~d}$ ). Note the following cases of $* \mathrm{t}>r r$, the regular reflex of $* \mathrm{~d}$ :

| (14) | *tuli 'earwax' | na/rrlo | *qatoluR 'egg' | n/orrul- |
| :---: | :---: | :---: | :---: | :---: |
|  | *tuRi[-] 'sew' | rrurr 'prick, inject' | *mataqa(1,R)a 'Kleinhovia hospita' | no/murrak |
|  | *toyoR 'mangrove' | na/rron |  |  |

And there are also a few cases where ${ }^{*}$ t in a palatalising environment became $j$ where $s$ might be expected, also suggesting oral/nasal grade crossover:

$$
\begin{array}{lll}
* \text { taqe- 'excrement' } & >* \text { te- }>* \text { de- } & \text { na/ji, na/j- }  \tag{15}\\
\text { N*tib }{ }^{\text {wari }} \text { 'touch' } & >\text { dibari } & \text { jidar } \\
\text { E*kete 'basket' } & >* \text { kede } & \text { na/xaj }
\end{array}
$$

### 3.2.2 POC *s and ${ }^{*} j$

POC ${ }^{*} \mathrm{~s}$ and ${ }^{\mathrm{j}}$ remained distinct in Nese. The regular reflex of ${ }^{\mathrm{s}}\left(\mathrm{and}{ }^{*} \mathrm{c}\right)$ is $s:{ }^{9}$

[^4](16)

| *saliR 'to float' | sal |
| :--- | :--- |
| *sei 'who?' | xi/se |
| *siko 'kingfisher' | $\mathrm{na} / \mathrm{sxe}$ |
| N *solo 'a sore, boil' | $\mathrm{na} / \mathrm{sol}$ |
| *susu 'breast' | $\mathrm{na} / \mathrm{sus}$, ne/sus- |
| *taci- 'younger same sex | tas- |
| sibling' |  |


| *pwasa 'a sore' | na/vas- |
| :--- | :--- |
| *pose 'a paddle' | no/vos |
| *tasik 'sea' | na/tas |
| *lasoR 'testicles' | na/laso- |
| *qasu 'smoke' | n/ies |
| *pica 'how many?' | vise |

And the regular reflex of ${ }^{\mathrm{j}}(\approx \mathrm{PNCV} * \mathrm{z})$ is $j$ :
(17) $\mathrm{F}_{\mathrm{jajal}}$ 'croton' $\quad$ rro/jaj (rro $=$ 'leaf')

| $\mathrm{N} *$ zome 'beads, shell money' | na/jum 'bead' |
| :--- | :--- |
| N zovi 'fall' | jov |
| $\mathrm{N} *$ zumi 'kiss' | jum, jujmu |

$\begin{array}{ll}\mathrm{N} * \text { mazi 'fish' } & \text { na/naj } \\ \text { *keja, }{ }^{\mathrm{N} * \text { malakeza }} \begin{array}{l}\text { nalaxej } \\ \text { 'blue, green' }\end{array} & \end{array}$

N *zovi 'fall'
${ }^{\mathrm{N}}$ z zumi $^{\prime}$ 'kiss'

Once again, we find some cases of oral/nasal grade crossover, in which ${ }^{\text {s }}$ is reflected as if it were $* \mathrm{j}$-i.e., as $j$ :

| (18) | *suRuq 'fluid, juice' | ne/jirra- 'semen' ${ }^{10}$ | *saman 'outrigger' | na/jam |
| :--- | :--- | :--- | :--- | :--- |
|  | *sipi(r,R)i 'coconut lory' | ni/jivirr | *sobu 'go down' | jubu/l |

and possibly also ${ }^{\mathrm{N} *}{ }^{\text {savu }}$ 'compressed air' $>j i v / x e$ 'sneeze', ${ }^{11}$ as well as ${ }^{*}$ suRi- 'bone' $>$ ne/jin-.

### 3.2.3 POC *l, *r, *dr and *R

Although *R was not a coronal consonant, I deal with it here since, when it is not lost, it merges with *r.
POC * 1 is reflected as $l$ in all environments:

| (19) | *lipo- 'tooth' | na/lve, no/luvo- | *tuli 'earwax' |
| :--- | :--- | :--- | :--- | na/rrlo

POC *R is lost in many lexical items in Vanuatu languages, and unpredictably retained in others. ${ }^{12}$ Examples of loss of $* \mathrm{R}$ in Nese include:

$$
(20)
$$

| S*qayaRi 'Canarium' | n/ena | *kaRat-i 'bite' | xas |
| :--- | :--- | :--- | :--- |
| *tapuRiq 'conch, triton' | tavu | E*tavoRa 'Terminalia catappa' | tavo |
| *kuRita 'octopus' | ne/xte | *piRaq 'giant taro' | na/v'i |
| *quRis 'Spondias dulcis' | na/us | *Rum'waq 'house' | naine, $\mathrm{n} / \mathrm{em}$ - |
| *puRe 'morning glory' | norro-vwo/vu | N*daweRu 'coconut crab' | na/rrau |
| *maturuR 'sleep' | naturr | *Runut 'sheath around base | na/un 'coconut fibre' |

S*qayaRi 'Canarium'
*tapuRiq 'conch, triton'
*kuRita 'octopus'
*quRis 'Spondias dulcis'
*puRe 'morning glory'
*maturuR ‘sleep’
n/ena
ne/xte
na/us
но-vwo/vu naturr
*kaRat-i 'bite’
xas
E*tavoRa 'Terminalia catappa'
*piRaq ‘giant taro’ na/v’i
*Rum ${ }^{\text {waq }}$ 'house' naine, $\mathrm{n} / \mathrm{em}$ -
$\mathrm{N} *$ daweRu 'coconut crab' na/rrau
*Runut 'sheath around base na/un 'coconut fibre' of coconut frond'
na/rrlo
sal na/nalux sul

When *R is retained (21a), it merges with *r (21b) and *dr (21c) as $r$ r:
(21)
a. *kawaRi 'root'
*tuRi[-] 'sew'
*suRuq ‘fluid, juice’
${ }^{E} *^{\text {w }}{ }^{\mathrm{w}} \mathrm{eRa}$ 'child, person of'
no/xwarr- 'handle'
rrurr 'prick, inject'
ne/jirra- 'semen'
ne/merrt/e 'person'

$$
\begin{array}{lll}
\text { b. } & \mathrm{N} \text { *sari 'spear' } & \text { ne/sarr (N) } \\
\mathrm{N} \text { *tarere 'to crow' } & \text { tetarrorr } \\
\text { *raun 'leaf' } & \text { no/rro/xa } \\
\text { *rarap 'Erythrina' } & \text { na/rrarrav' }
\end{array}
$$

[^5]| *biRapa 'surgeonfish' | ne/b'irrav | *nora 'snore' | jorr |
| :---: | :---: | :---: | :---: |
| *Rapi 'evening' | rrevrrav | *quray 'prawn, lobster' | na/urre |
| *qaRa(r) 'fence' | $\mathrm{n} / \mathrm{iarr}$ | ${ }^{N}$ * varas-i 'step on' | varrasi |
| *bakuRa 'Calophyllum ' | na/b'axrro | N*karavi 'crawl' | xarrav |
| *toRas 'Intsia bijuga' | na/torr | *(k)ira 'they.PL' | xarr |
| ${ }^{\text {E* }}$ kaRuve 'k.o. crab' | na /xariv | N*koro 'shelter' | no/xorrxorr/ial |
| *Ruma- 'chest ' | no/rruma- | $\mathrm{N} * \mathrm{~b}^{\text {w }}$ ero 'ear' | na/borr |
|  |  | *royoR 'hear' | rroy |
| c. *draRaq 'blood' | $\mathrm{na} / \mathrm{rre}$, nerre- | N*masoru 'hiccup' | nasorr |
| *rodrom 'think, remember' ${ }^{13}$ | rrumrrum, rromrromi | *maturuR 'sleep' | naturr |
| ${ }^{\text {S* }}$ draRa(k,q,n)i ' Myristica' | $\mathrm{na} / \mathrm{rra}$ | *rua 'two' | rru |
| *madraR 'ripe’ | mrre ${ }^{14}$ | *tuqur 'stand' | trro, tutrro |
|  |  | ${ }^{\mathrm{N} *} \mathrm{v}^{\mathrm{w}}$ ara 'say, tell' | varr |

And, recalling that the regular reflex of *d (in a non-palatalising environment) is $r$, this means that all of *d, *r, $* \mathrm{dr}$, and $* \mathrm{R}$ (when retained) merge in Nese. This innovation is in fact shared by Malua Bay, Vovo, Botovro and Vao, and thus distinguishes the members of the Northern subgroup from other Malakula languages (Lynch 2016a:410).

There are, however, some items in which *r is reflected as the flap $r$ rather than the trill $r r$ (and one where this applies to $* \mathrm{R}$ ):

| (22) | *pirin 'throw (stone at) ${ }^{15}$ | vrey | S*garai 'flying-fox' | na/kara |
| :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N} * \mathrm{koRi}$ 'to grate' | xor | $\mathrm{R} *$ maraya 'eel' | ne/nere |
|  | ${ }^{N}$ *sere '(wind) blow' | sirsir | ${ }^{\mathrm{N}}$ zara 'sweep' | jijir |
|  | S*ba(r,l)e 'blind' | bar | *barapu 'long' | darav |
|  | $\mathrm{N} * \mathrm{~b}^{\mathrm{w}}$ ara-b${ }^{\text {w }}$ ara ${ }^{\text {'(female) }} \mathrm{pig}$ | na/var '(tusked) pig' |  |  |

No conditioning can be established for this: note, for example, that there are five occurrences in (21) of *r $>r r$ in the environment $*_{\mathrm{a}}$ a and five of $*_{\mathrm{r}}>r$ in (22) in exactly the same environment.

Recall from §2.1 Takau's statement that the distinction between the flap and the trill appears to be being lost in Nese, with younger and urban speakers merging the two as the trill $r r$. Indeed, the distinction between the two does not go back to any phonemic distinction in POC: the flap derives from the same set of phonemes as does the trill, and conditioning of the different reflexes cannot be established. One possibility is that the original reflex was $r$, but that due to the influence of other languages, especially Bislama, $r$ slowly came to be pronounced as $r r$.

### 3.2.4 POC *n, * $\tilde{n}$ and $* y$

POC $* \mathrm{n}(23 \mathrm{a})$ and $* \tilde{n}(23 \mathrm{~b})$ merge, as $n$ in all environments. (This is true of all Malakula languages and, indeed, most NCV languages.)

| a. | *niuR 'coconut' | na/ni | *kona 'sour, bitter' |
| :--- | :--- | :--- | :--- | xaxon

The few cases of $* y$ seem to be reflected as $i\left(* y a R u\right.$ 'casuarina' $>n / i a r r,{ }^{N}$ *yalo 'sun' $\left.>n / i a l\right)$, with some coalescence of $* \mathrm{a}$ and ${ }^{*} \mathrm{y}$ as $e\left({ }^{\mathrm{R} *}\right.$ maraya 'eel' > ne/nere). Note, however, unexplained loss of $* \mathrm{y}$, or failure of $* \mathrm{a}$ and \%y to coalesce, in *kayu 'tree, wood' $>n a / x a$.

[^6]
### 3.3 The POC dorsals

POC $* \mathrm{~g}$ is regularly reflected as $k$ in all environments:

| N*ganisu- 'nose' | nu/kuns- |
| :--- | :--- |
| S*garai 'flying-fox' | na/kara |
| *waga 'canoe' | n/uak |
| *baga 'banyan' | na/b'ak |
| N*buaga 'swamp taro' | boak |
| S*(j,g)alato 'devil nettle'16 | norro/kalat |


| $\mathrm{N} *$ baig(a,e) 'turban shell' | na/daike |
| :--- | :--- |
| $\mathrm{N} * \mathrm{~m}$ walagelo 'young person' | na/malakel |
| $\mathrm{N} *$ logo 'pudding, laplap' | na/lok |
| $\mathrm{N} *$ lagu 'outrigger pegs/struts' | na/lak |
| *-gu'1sG POss' | -k |
| $\mathrm{N} *$ guRio 'dolphin' | $\mathrm{na} / \mathrm{ku}$ |

while ${ }^{\mathrm{y}} \mathrm{y}$ is regularly reflected as $\eta$ :

| N*nara 'cry' | yarr | *taya 'basket' | na/tay |
| :--- | :--- | :--- | :--- |
| *yora 'snore' | yorr | N*zino- 'mouth' | ne/juyo- |
| N*lani 'wind' | na/lay | *layo 'a fly' | na/lay |
| *boni 'night' | buy (=24 hours) | *ronoR 'hear' | rroy |
| N*lena 'sing, dance' | na/len 'ceremonial dance' | *away 'open' | vavay |

In the vast majority of cases, POC *k is reflected as $x$ in all environments:

| (26) | *(k)ira 'they ' | xarr | *laki 'marry' |
| :--- | :--- | :--- | :--- |
| E*kete 'basket' | na/xaj | *bilake 'banded rail' | lax |
| *kamaliR 'meeting house' | na/xm'al | *toka 'be in a place' | ni/bilax |
| *ko(r,R)as-i 'scrape, grate' | xorrxorr 'itch' | *siko 'kingfisher' | na/sxe |
| *kutu 'louse' | na/xut | *makubu- 'grandchild' | nuxudu- |
| *manuk 'bird' | na/nanxo | *ñamuk 'mosquito' | namxo |

As is widespread in Vanuatu, however, the non-3rd person plural pronouns show oral/nasal grade crossover, and behave as if the initial consonant was *g rather than $* \mathrm{k}$ (27a); and there are also a couple of other words that reflect $* \mathrm{k}$ as $k$ rather than $x(27 \mathrm{~b})$. However, $* \mathrm{k} / * \mathrm{~g}$ crossover seems to be rarer in Nese than it is in many other Malakula languages.
(27)
a. *kita 'we.INC' ne/krre
*kamami 'we.EXC' kanan
*kamiu 'you.PL' kani
b. *kinit 'pinch'
kinkinit
novo/tob'ak

Finally, there are two cases of unexplained loss of *k: *takere 'fantail' > neveltarrtarr 'bird sp. w. yellow tongue' and ${ }^{\mathrm{N} *}$ kabani 'a sail' $>n / a b$ 'an.

POc $* \mathrm{q}$ is normally lost, in all positions:

## (28)

| *qatoluR 'egg' | n/orrul- |
| :--- | :--- |
| S*qayaRi 'Canarium' | n/ena |
| N*q(i,a)vua 'turtle' | n/avu |
| *qone 'sand, beach' | na/on |
| *quran 'prawn, lobster' | na/urre |
| *quRis 'Spondias dulcis' | na/us |
| *qusan 'rain' | na/use |
| *qutan 'bush,. inland' | na/ute'place' |


| *muqa- 'formerly, before, in front' | a/mu |
| :--- | :--- |
| *raqani 'daytime, daylight' | rrinrran |
| *leqos 'see, look at' | les |
| *tuqur 'see, look at' | trro, tutrro |
| *saqat 'bad' | sat |
| *maqetom 'black' | m'ot |
| *sisiq, 'nerite +' | neve/sis |
| *ponuq 'fill, full' | wun |
| *Rumwaq 'house' | na/ine, n/em- |

However, there are a few cases of initial $* \mathrm{q}>i$ before $* \mathrm{a}$ : ${ }^{17}$

[^7]| *qaRa(r) 'fence' | $\mathrm{n} / \mathrm{iarr}$ |
| :--- | :--- |
| *qase 'jaw' | $\mathrm{n} / \mathrm{ias}, \mathrm{n} / \mathrm{ias}-$ |


| *qasu 'smoke' | $\mathrm{n} / \mathrm{ies}(\mathrm{N})$, ies (V) |
| :--- | :--- |
| *qatop 'Metroxylon, thatch' | $\mathrm{n} / \mathrm{iat}$ |

### 3.4 Consonants: Summary

The preceding sections are summarised in Table 2. Default reflexes are given first; a comma separates conditioned reflexes, and unconditioned reflexes are in parentheses.

## TABLE 2. CONSONANT CORRESPONDENCES

| $\begin{aligned} & \hline \text { POC } \\ & \text { Nese } \\ & \hline \end{aligned}$ | $\begin{aligned} & { }^{*} \mathrm{p}^{\mathrm{w}} \\ & \mathrm{v} \end{aligned}$ | $\begin{gathered} { }^{* p} \\ \mathrm{v}, \mathrm{v}^{\prime}(\mathrm{w}) \end{gathered}$ | $\begin{gathered} *_{\mathrm{t}} \\ \mathrm{t}, \mathrm{~s}(\mathrm{rr}, \mathrm{j}) \end{gathered}$ |  | $\begin{gathered} { }^{* \mathrm{~s},} \text { *c } \\ \mathrm{s}(\mathrm{j}) \\ \hline \end{gathered}$ | $\begin{gathered} * \mathrm{k} \\ \mathrm{x}(\emptyset, \mathrm{k}) \\ \hline \end{gathered}$ | $\begin{gathered} * q \\ \emptyset(\mathrm{i}) \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POC | * ${ }^{\text {w }}$ | * b | $\begin{gathered} * \mathrm{~d}, * \mathrm{dr} \\ \text { rr } \\ \hline \end{gathered}$ |  | * ${ }^{\text {j }}$ | *g |  |
| Nese | b | b, b' (d) |  |  | j | k |  |
| POC | * ${ }^{\text {w }}$ | *m | $\begin{gathered} *_{\mathrm{n}} \\ \mathrm{n} \end{gathered}$ |  | *ñ | * y |  |
| Nese | m | $\mathrm{m}, \mathrm{m}$ ' ( n ) |  |  | n | 1 |  |
| POC | *W |  | *1 | *r | *y |  | *R |
| Nese | (u,w), (v, v') |  | 1 | rr (r) | i, *ay >e |  | $\emptyset(\mathrm{rr}(\mathrm{r})$ ) |

## 4. VOWELS

I will show in $\S 5$ that POc word-final vowels exhibit some unusual behaviour in Nese (and the three other languages of the North Coast subgroup) - unusual, that is, in comparison with other Malakula (and NCV) languages. I will largely leave final vowels out of the discussion in this section, and concentrate on vowels in other positions in the word.

### 4.1 POC *i

POc $*$ i tends to be backed to $u$ before $* \mathrm{Co}$ :

| $\mathrm{N} *$ zino- 'mouth' | ne/juyo- |
| :--- | :--- |
| *lipo- 'tooth' | no/luvo- |
| $\mathrm{N} * \mathrm{~m}^{\text {widolo }}$ 'short' | murrol |

and there are a couple of cases where the reflex is $e$ for reasons I cannot explain:
(31)
$\mathrm{N} *$ livuka 'middle, between'
*pirin 'throw (stone at)'
$\mathrm{N} *$ lini 'put, leave'
lev'xan
vren rrom-neleni 'forget'

However, in the vast majority of cases, $*_{i}>i$ :

| (32) | *bi(rR)i-bi(rR)i 'Hernandia sp.' | ne/b'irrb'irr | *pica 'how many?' |
| :--- | :--- | :--- | :--- | vise 1 ne/b'irrav $\quad$ *pitu 'seven' $\quad$ xo/dit

### 4.2 POC *e

There are a couple of cases of $* \mathrm{e}>i(33 \mathrm{a})$, and a couple of $* \mathrm{e}>o(33 \mathrm{~b})$, whose conditioning I can't establish:
(33)

| $\mathrm{a} .^{\mathrm{N} *}$ sere '(wind) blow' | sirsir |
| :--- | :--- |
| *taqe- 'excrement' | na/ji |
| $\mathrm{N} *$ wenu 'whistle' | v 'inv'in |

b. ${ }^{S *}{ }^{\text {b }}$ wal(a,o)ke- 'leg, foot'
$\mathrm{N} *$ tarere 'to crow' tetarrorr
na/balako

In virtually all other cases, POc *e became $e$ :

| (34) | *bakewa 'shark' |
| :---: | :---: |
|  | *bebe 'butterfly' |
|  | N*bei 'Polyscias sp.' |
|  | *keja, ${ }^{\text {* }}$ malakeza 'green, blue' |
|  | *leqo 'language, voice, word' |
|  | *leqos 'see, look at |


| na/b'axe | $\mathrm{N} *$ meme- 'tongue' |
| :--- | :--- |
| na/veb | $\mathrm{N} * \mathrm{~m}^{\text {w }}$ ala-gelo 'young person' |
| no/rrube | 'm $^{\text {w }}$ 'Ra 'young person' |
| nalaxej | *pea 'where?' |
| na/le | *(q)abe 'body' |
| les | N sagele 'sit on' |

ne/m'em'-
namalakel
ne/merrte 'person'
$x a / d e$
n/eb'e-
sakel '(fowl) roost'

### 4.3 POC *u

POc *u sporadically fronts to $i$ in a number of lexical items. This fronting is common in Malakula, occurring in a number of languages in the same items (see Lynch 2019a). It often occurs after a bilabial obstruent, but there are forms where ${ }^{*} u>u$ in this same environment, ${ }^{18}$ and also forms with ${ }^{*} u>i$ in other environments. Some comparisons are given in Table 3, with both $* \mathrm{u}>i$ and $* \mathrm{u}>\ddot{u}$ shown.

TABLE 3. SPORADIC FRONTING OF *u

| POC | NeSE | OTHER MALAKULA: *u > i | OTHER MALAKULA: *u > ü |
| :---: | :---: | :---: | :---: |
| *buto- 'navel' | ne/bito- | Botovro n/mpito-, Neve'ei ne/bite-, Unua bito- | Pt Sandwich bürö̈-, Nāti ne/mpütü-, Maskelynes na/bütд- |
| N*muki 'earthquake' | na/mi | Botovro na/mi, Naman nu/mi, Unua, V'ënen Taut na/mi | - |
| *pudi 'banana’ | no/v'ij | Botovro, Tirax na/vis, Uripiv na/vij, Neve'ei na/vins | Pt Sandwich, Avok navüc, Ninde n/üs |
| $\begin{aligned} & \text { *pulu- 'hair (of } \\ & \text { head)' } \end{aligned}$ | ne/vil/bat | Botovro ni/vil, V'ënen Taut n/il-, Tape $n$ /ila- ${ }^{19}$ | Nisvai na/vülvül, Mskelynes, Banam Bay na/vürü- |
| *Rum ${ }^{\text {waq }}$ 'house' | na/ine | Botovro ne/ime, Avava iim, Neve'ei ni/yim, Naman ne/im | - |
| *sayapuluq | sayav'il | Botovro hayav'il, Tirax hyavil, Aveteian i-layavil | Axamb, Nasvang səךavür, Maskelynes seŋavür |
| *suRi- 'bone' | ne/ji/n- ? | Botovro ni/si-, Larëvat nsi-, UPV ji- | - |

Apart from a couple of irregular cases where *u becomes $o$, the regular reflex of $* \mathrm{u}$ is $u$ :

| N*bue 'bamboo' | na/bu | *quaray 'prawn, lobster' | na/urre |
| :--- | :--- | :--- | :--- |
| *kutu 'louse' | na/xut | *qutan 'bush, inland' | a/ute 'inland, ashore' |
| *luaq 'vomit' | lulu | *rua 'two' | rru |
| *makubu- 'grandchild' | nuxudu- | *Ruma- 'chest' | no/rruma- |
| *maturuR 'sleep' | naturr | *susu 'breast' | na/sus |
| *muqa- 'before, in front' | a//mu | *tapuRiq 'conch, triton' | tavu |
| *puRe 'Ipomoea sp.' | norro-vwovu ${ }^{20}$ | N*tukunu 'tell story' | uxtuxun |

### 4.4 POC *o

POc $*_{\mathrm{O}}$ is often reflected as $u$ adjacent to a proto-labial (36a); but there are also some cases where *o remained $o$ (36b): ${ }^{21}$

nu/bu- (N) (but cf.also (36b))
nete/bulabulo 'k.o. basket'
buy 'day' (= 24 hours)
nu/but naj-

[^8]```
    N*makobu 'skink, gecko'
    *molis 'Citrus sp.'
    *poli 'buy, sell'
    *ponuq 'full'
    *rodrom, N*domi 'think, remember'
    *sobu 'go down'
    N*sova 'cough, breathe w. difficulty'
    N*zomu + 'shell money'
b. *bo 'smell, stink'
    S*b(*)
    N*katabola 'Dracontomelon'
    *lipo- 'tooth'
    *pose 'a paddle'
    *poti- 'seed'
    E*tavoRa 'Terminalia sp.'
    N*tobaka 'fruit dove'
    N*zovi 'fall'
    na/naxub 'Emoia sp.'
        na/mul
        vul
        wun
        rrumrrum, rromrromi
        jubu/l
        ne/suv- 'breath'
        na/jum 'bead(s)'
        bo (v) (but cf.also (36a))
        na/bob
        xatabol
        no/luvo-
        no/vos
        no/vos-
        tavo
        novo/tob'ak
        jov
```

Otherwise, the default reflex of $*_{\mathrm{O}}$ is $o$ :

| *buto- 'navel' | ne/bito- |
| :--- | :--- |
| *kona 'sour, bitter' | xaxon |
| *ko(r,R) as-i 'scrape, grate' | xorrxorr 'itch' |
| $\mathrm{N} *$ koro 'temporary shelter' | no/xorrxorr/ial |
| $\mathrm{N} *$ koRi 'grate' | xor |
| *lasoR 'testicles' | na/laso- |
| $\mathrm{N} *$ logo 'pudding, laplap' | na/lok |
| $\mathrm{N} * \mathrm{~m}^{\text {w }}$ asoru 'hiccup' | nasorr |
| $\mathrm{N} * \mathrm{~m}^{w}$ idolo 'short' | murrol |
| *nako- 'face' | naxo- |


| *nora 'snore' | yorr |
| :--- | :--- |
| *onom 'six' | xon |
| *qone 'sand, beach' | na/on |
| *ronoR 'hear' | rron |
| N *solo 'sore, boil' | na/sol |
| *toka 'live, stay, exist' | tox |
| *tonoR 'mangrove' | na/rron |
| *toqa 'fowl' | na/to |
| *toRas 'Intsia bijuga' | na/torr |
| *dotoq 'Excoecaria sp.' | na/tot 'tree sp.' |

### 4.5 POC *a

Over 80 percent of occurrences of *a are reflected as $a$. There are a few sporadic cases where *a was apparently
 *makubu- 'grandchild' > nuxudu-), but there aren't enough of these to allow us to establish any patterns.

There are also rather more cases of $* \mathrm{a}>e$, about ten percent of occurrences in all. Some admit of no explanation, like *(q)abe- 'body' > n/eb'e-, *ta(k.g)o 'a hook' > ne/tex, or *qasu 'smoke' > ies (v), n/ies ( N ). More significantly, many of these suggest low vowel dissimilation, a process widespread in Central Vanuatu by which *a before *Ca dissimilated, usually to $e$ (Lynch 2003). Examples are given below; unlike in most Vanuatu languages-e.g., Naman (Lynch 2019b:32)—however, a neighbouring labiovelar, velar or postvelar does not block the dissimilation (38b)
a. *marawa 'green parrotfish' ne/nerr/vusave ${ }^{22}$
R*maraya 'eel' ne/nere
N *sawa 'dance' ne-sev-ian 'k.o. dance'
*talai 'clam' *tata 'father (address)' tete

| b. | *draRaq 'blood' |
| :--- | :--- |
| N*ba(vb)a 'carry/bear child'23 | narre, nerre- |
| b'eb' 'born' |  |
| S*qayaRi 'Canarium sp.' | neya |
| S*raja- 'branch' | nerrey- |
| N*taRaqi 'cut' | tei |
| N*zamwa 'chew' | jem |

On the other hand, there are numerous other cases of words containing $* \mathrm{aCa}$ sequences where the first $* \mathrm{a}$ remains $a$ : (39a) lists forms that one would expect to dissimilate, since there is no intervening "blocking consonant", while (39b) contains such blocking consonants in the relevant environment.

[^9]| a. *barapu 'long' | darav |
| :---: | :---: |
| N* batavu ' breadfruit' | na/b'atav |
| *mamaca '(tide) ebb; dry’ | nanas |
| *mata- 'eye' | na/nata- |
| *nanaq 'pus’ | nane- |
| *rarap 'Erythrina sp.' | na/rrarrav, |
| *salan 'path' | $\mathrm{na} / \mathrm{sal}$ |
| *saman 'outrigger' | na/jam |
| *tama- 'father' | tana- |
| *tiana 'pregnant' | sian |

In other environments, too, $* a>a$ :
(40) *bwatu(k)- 'head'

$$
\begin{array}{ll}
\text { *kape 'reef/rock crab' } & \text { na/xav' } \\
\text { *katou 'hermit crab' } & \text { na/xate } \\
\text { *layo 'a fly' } & \text { na/lay } \\
\text { *manuk 'bird' } & \text { na/nanxo } \\
\text { *mate 'die' } & \text { nas } \\
\text { *maturuR 'sleep' } & \text { na/turr } \\
\text { *nako- 'face' } & \text { naxo- }
\end{array}
$$


*kaba- 'wing' na/xab'e-
*maRayo 'dry' naray
*m ${ }^{\text {wala( }}{ }^{\text {w}}$ ala) 'naked' malmal
${ }^{\mathrm{N} *} \mathrm{~m}^{\text {w}}$ alagelo 'young person' $\mathrm{na} /$ malakel
N * y ara 'cry'
*p wasa 'a sore'
*saqat 'bad'
*ta(k,g)a 'marry'
${ }^{N} * \operatorname{tam}^{w}$ at $(a, e)$ 'peace, calm'
narr
na/vas-
sat
tax- 'brother-in-law' tamat

### 4.6 Vowels: Summary

The preceding sections are summarised in Table 4. As in Table 2, default reflexes are given first; a comma separates conditioned reflexes, unconditioned reflexes are in parentheses and a notation like $x,(y)$ means that $x$ is the default reflex, while $y$ is a conditioned reflex but there are numerous exceptions.

TABLE 4. VOWEL CORRESPONDENCES

| POC <br> Nese | $\begin{gathered} *_{\mathrm{i}} \\ \mathrm{i}, \mathrm{u}(\mathrm{e}) \end{gathered}$ | $\begin{gathered} * \mathrm{e} \\ \mathrm{e}(\mathrm{i}, \mathrm{o}) \end{gathered}$ | $\begin{gathered} * \mathrm{a} \\ \mathrm{a},(\mathrm{e}) \end{gathered}$ | $\begin{gathered} *_{\mathrm{o}} \\ \mathrm{o}, \mathrm{u} \end{gathered}$ | $\begin{gathered} *_{\mathrm{u}} \\ \mathrm{u}(\mathrm{i}) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |

## 5. WORD STRUCTURE

Now that we have an understanding of how the POC consonants and vowels developed in non-final position, this section provides much fuller details of the developments in word structure than were extremely briefly outlined in §2.2.

### 5.1 Final consonants

Not all consonants were permitted to occur word-finally in POC: those which were so permitted were the voiceless obstruents $/ \mathrm{ptcskq} /$, three of the nasals $/ \mathrm{mn} \mathrm{y} /$, the lateral $/ \mathrm{l} /$, and the rhotics $/ \mathrm{r} \mathrm{R} /$.

The languages of Malakula vary widely in relation to the retention of POC final consonants. Some, like the Western linkage languages Naman (Lynch 2019b), Nāti and Nahavaq, or the Eastern linkage language Unua, show almost total loss of final consonants. Others, like the Western linkage languages Tirax and V'ënen Taut, lose only about 50 percent of the occurrences of final consonants. Other Malakula languages fall somewhere in between.

Nese is closer to the Tirax-V'ënen Taut end of the spectrum, with a retention rate of about 35 percent. While distinct patterns can be observed with some consonants, loss or retention is more unpredictable with others. Two general patterns of loss can be established:
(i) final *R (41a) and *q (41b) are universally lost; and
(ii) final $*_{\mathrm{n}}(41 \mathrm{c})$ and $*_{\mathrm{m}}(41 \mathrm{~d})$ are also universally lost.
a. *kamaliR 'meeting house' na/xm'al *maturuR 'sleep' naturr
b. *draRaq 'blood' *lawaq 'spider(web)’
na/rre ne/la 'spider'

| *niuR 'coconut' | na/ni | *luaq 'vomit' | lulu |
| :---: | :---: | :---: | :---: |
| *qatoluR 'egg' | n/orrul- | *nanaq 'pus' | nane- |
| *royoR 'hear' | rron | *piRaq 'giant taro' | $\mathrm{na} / \mathrm{v}$ 'i |
| *tonoR 'mangrove' | na/rron | *ponuq 'full' | wun |
| *waiR 'water' | n/ua | *puaq 'fruit' | no/vo-, nu/vu- |
|  |  | *p( ${ }^{\text {w }}$ )anaq 'arrow' | ne/v'in |
| c. * ${ }^{\text {annu}}(\mathrm{q})$ an 'Macaranga' | ne/v'ine | *Rum ${ }^{\text {waq }}$ 'house' | na/ine |
| *pulan 'moon, month' | na/vle | *sisiq 'nerite +' | neve/sis |
| *qusan 'rain' | na/use | *tanoq 'earth, ground' | na/tan |
| *qutan 'bush, inland' | a/ute | *tapuRiq 'conch, triton' | tavu |
| *raun 'leaf' | no/rro/xa | *dotoq 'Excoecaria sp' | na/tot 'tree sp.' |
| *salan 'path' | na/sal |  |  |
| *saman 'outrigger' | na/jam | d. *(dr,r)anum 'water, submerged' *maqetom 'black' | $\begin{aligned} & \text { rron 'sink' } \\ & \text { m'ot } \end{aligned}$ |
|  |  | *onom 'six' | x/on |

However, we cannot generalise pattern (ii) above to all nasals (as we can in some languages of Malakula). While ${ }^{*} \mathrm{y}$ is lost in *quray 'prawn, lobster' > na/urre, it is retained in *away 'open' > vavay and *pirin 'throw (stone at)' $>$ vrey. ${ }^{24}$

The fate of the remaining POc consonants that were permitted to occur finally is shown in Table 5. In some cases (e.g., *kadik 'black biting ant' > na/xajx/e, *tuqur 'stand' > trr/o) there is an additional vowel following the historical final consonant: that vowel will be explained in $\S 5.2$.

TABLE 5. RETENTION AND LOSS OF SOME POC FINAL CONSONANTS

|  | Final * C retained |  | Final * C lost |  |
| :---: | :---: | :---: | :---: | :---: |
| *p | *mawap 'yawn' <br> *maqurip 'alive' <br> *rarap 'Erythrina' | nanav norrwo na/rrarrav ${ }^{25}$ | ${ }^{\text {S* }}$ va-(laka)lakav 'Zosterops sp.' <br> *qatop 'Metroxylon' | neve/lelax norro-yat |
| *t | *pat 'four ${ }^{26}$ <br> *kinit 'pinch' <br> *saqat 'bad' | v'at kinkinit sat | *lumut 'moss, algae' <br> *raput 'hit, strike' <br> *lapuat 'big, large' <br> *Runut 'sheath around base of coconut frond' | na/lum <br> rrub <br> lab' <br> na/un 'coconut fibre' |
| *k | *manuk 'bird' <br> *ñamuk 'mosquito' <br> *kadik 'black biting ant' <br> *ma-osak 'cooked' <br> *p ${ }^{\text {w }}{ }^{\text {}}$ ilak 'lightning' <br> *tutuk 'break open, hit' | na/nanxo <br> namxo <br> na/xajxe <br> nasxe <br> ne/v'ilax <br> tux 'break open <br> (Canarium)' | *kaba- 'wing' <br> *tasik 'sea' | na/xab'e- <br> na/tas |
| *s | *leqos 'see, look at' | les | *molis 'Citrus sp.' <br> *toRas 'Intsia bijuga'' | na/mul <br> na/torr |
| *1 |  |  | *jajal 'croton' | rro-jaj |
| *r | *guba(r,R) 'storm cloud ${ }^{27}$ <br> *tuqur 'stand' | n/abar <br> trro, tutrro |  |  |

[^10]No real pattern can be discerned from Table 5: it does not seem possible to predict when a particular final consonant will be retained, and when that same consonant will be lost. For example, the table lists some forms ending in ${ }^{*}$-ap ( $={ }^{N *}$ av $),{ }^{*}$-at, and ${ }^{*}$-ak showing retention, and others showing loss; thus the immediate vocalic environment seems not to be a conditioning factor. All we can probably say is that there was a tendency for final consonants to be lost in all Malakula languages, but that that process of loss is nowhere near as complete in Nese as it is in languages like Naman (Lynch 2019b), for example.

### 5.2 Vowels in the final syllable ${ }^{28}$

This is a complex area in the phonological history of Nese (and other languages of the North Coast subgroup), more complex than in many other Malakula languages, where there are simple, blanket rules: (i) $*-\mathrm{V}_{1} \mathrm{~V}_{2} \#>\mathrm{V}_{1}$; (ii) *-CV\# > C\#; (iii) *-VC\# > Ø\# when *C was lost.

Rule (i) does apply in Nese: the second vowel in a final *VV sequence was lost, while the first was retained, as illustrated in (42):

```
    S*garai 'flying-fox'
    *talai 'clam'
    N*vilai 'Pterocarpus indicus'
    N*nau 'I'
    *mwalau 'megapode'
```

na/kara
tala 'battle axe'
na/v'ila
x /ina
to/mola
*luaq 'vomit'
$\mathrm{N} * \mathrm{q}(\mathrm{i}, \mathrm{a})$ vua 'turtle'
*rua 'two'
*panua 'land, territory' na/v'anu
*pea $>\mathrm{N}$ *bea 'where? $\quad$ a/de

However, rules (ii) and (iii) apply only partly, and only in some cases and not others.

### 5.2.1 Words ending in a consonant

Let me start with words whose final syllable was closed by a consonant, which was not lost. If the vowel in the final syllable was non-high (43a), or if penult and final were both high (43b), then the vowel of the final syllable was retained ${ }^{29}$ and no paragogic vowel was added to the final consonant. If, however, the vowel in the penult was non-high and the vowel in the final syllable was high, that final vowel was lost, but a paragogic vowel was added after the final consonant (43c). The paragogic vowel is $e$ if the final vowel was $* \mathrm{i}$ and $o$ if it was $* \mathrm{u}$.

a. | *rarap 'coral tree' | na/rrarrav' |
| :--- | :--- |
| *saqat 'bad' | sat |
| *pwilak 'lightning' | ne/v'ilax |
| *mawap 'yawn' | nanav |
| *leqos 'see, look at', | les | lin

b. *kinit 'pinch' kinkinit *tutuk 'break open, hit' tux 'break open
c. *kadik 'fire ant' na/xajxe ${ }^{30}$
*manuk 'bird’ na/nanxo
*ñamuk 'mosquito' namxo
The conditions for the appearance of the paragogic vowel can be schematised as follows (where $\mathrm{L}=$ nonhigh vowel, $\mathrm{H}=$ high vowel, and $\mathrm{E}=e$ or $o$ added after the final consonant $)$ :
..CLCHC\# $\rightarrow$..CLCCE\#
The vowel must have been added before the high vowel in the final syllable was deleted, since the frontness/ backness of this vowel determines the frontness/backness of the added vowel. It is possible that stress, which would initially have been on the final closed syllable in POC (Lynch 2000), may have shifted to the penult in cases like (43c) where the penult was more sonorous than the final. The weakened final high vowel precipitated a potential final consonant cluster, not allowed by the phonotactic rules of the language, and avoided by adding a vowel of the same frontness as the soon-to-be-deleted final vowel. Thus:

[^11]| (45) | POC | Stress shift ${ }^{31}$ | Weakening | V addition ${ }^{32}$ | Output |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | *na-kadík | na-xájix | na-xáj ${ }^{\text {ix }}$ |  | naxajxe |
|  | *na-manúk | na-nánux | na-nán ${ }^{\text {u }}$ | na-nán"ko | nananxo |

### 5.2.2 Words ending in a vowel

Let me now deal with POC words which were vowel-final, or which came to be vowel-final due to the loss of a final consonant. ${ }^{33}$

If the penult and the word-final vowel were both high (47a), or if the penult was non-high (47b), then the final vowel was lost: ${ }^{34}$


Note that this loss of the final vowel occurred irrespective of whether only the bare root was inherited, or the root was preceded by some additional material (most commonly the article in a noun). Thus *tunu > tun (47a) and *mate > nas (47b) show a bare root only, while *kutu > na/xut (47a) and *tanoq > na/tan (47b) show a root preceded by an additional syllable.

These cases are all compatible with a situation in which stress occurred regularly on the penult, with a final unstressed vowel weakening to the extent that it was lost (and stress then shifting to the new penult in polysyllabic words). This would assume that stress shifted after the loss of a final consonant: thus with *nasaman 'outrigger', for example, stress would have initially been final due to the closed syllable (*na-samán), but loss of final *n would have precipitated a stress shift (*na-sáma), with the final unstressed vowel now a candidate for deletion.

But if the penult was high and the final vowel was non-high, something different occurred-something similar to what was described for consonant-final roots in $\S 5.2 .1$. If the consonant preceding the penult was not word-initial-either because the root was trisyllabic or due to the addition of another morpheme to a disyllabic root - then the penult was lost, but the final vowel seems to have been retained, as either $e(48 \mathrm{a}, \mathrm{b})$ or $o(48 \mathrm{c}) .{ }^{35}$
$\begin{array}{lll}\text { a. } & \text { *piso 'Saccharum sp.' } & \text { na/vse } \\ \text { *siko 'kingfisher' } & \text { na/sxe } \\ \text { *kuRita 'octopus' } & \text { ne/xte } \\ \text { *siba 'cut, knife' } & \text { ne/sde } \\ \text { *siwa 'nine' } & \text { xe/sve }\end{array}$
b. *puko $>*$ piko 'morning'
ne/v'xe
$\mathrm{N} *$ tuva 'belt' ne/tve *pulan 'moon' na/vle
c. *bakuRa 'Calophyllum sp.'
na/b'axrro
*ku(i)ba 'imperial pigeon'
no/xb'o

[^12]Again, the final vowel can only be $e$ or $o: e$ occurs if the soon-to-be-deleted penult is $i$, and also with some cases of penultimate $u$; o occurs after other cases of penultimate $u$. The rule appears to be as in (49), where $\mathrm{V}=$ vowel of any height and $(\ell)$ indicates a final consonant that was deleted. I have given it as a two -stage process: I believe the final vowel (represented as E) was added later, and did not derive from the historical final vowel; this will be justified in §5.2.3.

```
..CVCHCL(\ell)# -> ..CVCHC# -> ..CVCCE#
```

Finally, if only the bare root was inherited-if, in other words, the consonant preceding the penult was word-initial-then both the penult and the final vowel seem to have been retained, but the final vowel still seems to match the frontness/backness of the penult:

```
(50)
```

```
*siba 'cut' side
```

*siba 'cut' side
*lima 'five' line
*lima 'five' line
*pica 'how many?' vise
*pica 'how many?' vise
*maputi(q) 'white' > *puti(q) vuso ~ vso

```
    *maputi(q) 'white' > *puti(q) vuso ~ vso
```

In relation to the last example in (50), note that there are some cases in which Crowley (C) records a word beginning with CVC... where Takau (T) has a word-initial consonant cluster: one such is vuso (C) ~ vso (T) 'white', where Takau's form shows loss of the penult in the typical context ("typical" as far as this set of developments is concerned). This suggests that the penult even here was subject to deletion, but that there was some resistance to having a word-initial consonant cluster:
(51) \#CHCL()\# $\rightarrow$ \#C(H)CE\#

### 5.2.3 The final vowel

The three rules relating to final vowels are shown in (52):


The final vowel is front $e$ if the penult was front $*_{\mathrm{i}}$; if the penult was back $*_{\mathrm{u}}$, the final vowel is sometimes front $e$, sometimes back $o$. The shape of the final vowel bears no relation to the shape of the last vowel in the POC form: rather, its shape can be at least in part predicted from the nature of the penult. This suggests strongly that the final vowel was an added vowel rather than a retained one. It appears, then, that one of the following scenarios occurred:
(a) $e$ was added to the end of all words of these shapes, and an assimilation rule then began to operate by which this $e$ assimilated to the backness and roundness of a preceding *u, becoming $o$; or
(b) a mid vowel identical in frontness/rounding to the high penult was added at the end of these words, and a rule generalising all such vowels to $e$ began to operate (such that some cases of $o$ after *u became $e$ ) but has not as yet finished operating.
I have no way of preferring one of these scenarios over the other.

### 5.2.4 Some exceptions

A number of exceptional cases should be noted here.
First, there is an additional sub-regularity to the discussion in §5.2.2 and in relation to the examples in (48): this occurs when the consonant preceding the penult was itself lost (being *q or $* \mathrm{R}$ ). In this case, both the penult and the final vowel seem to have been retained:

$$
\begin{array}{ll}
\text { *quray 'prawn, lobster' } & \text { na/urre }  \tag{53}\\
\text { *qusan 'rain' } & \text { na/use }
\end{array}
$$

$$
\begin{array}{ll}
\text { *qutan 'inland' } & \text { a/ute } \\
\text { *Rum"aq 'house' } & \text { na/ine }
\end{array}
$$

Some other exceptions are listed in (54):
$\begin{array}{ll}\text { a. *pusuR 'bow' } & \text { no/vso } \\ \text { *tuli 'earwax' } & \text { na/rrlo } \\ \text { b. *tuqur 'stand' } & \text { trro, tutrro }\end{array}$
c. *maqurip 'alive’
*ma-osak 'cooked' nasxe
norrwo
d. *madraR 'ripe'
mirre (C) / mrre (T)

- With the words in (54a), with both vowels high, one would expect the penult to be retained and the ultima to be lost, as in (47a) in §5.2.2: thus the expected forms are ${ }^{* *} n o / v u s$ and ${ }^{* *} n a / r r u l$.
- In the case of (54b), the discussion in §5.2.1 and examples in (45b) suggest that, when the final consonant is retained and both vowels are high, both are retained; thus the expected form is $* *$ turr.
- With (54c), (i) in the case of *maqurip, one would expect norrwe, with final $e$ conditioned by the preceding $*_{i}$; it may be that this form underwent an idiosyncratic assimilatory change to *maqurup; ${ }^{36}$ and (ii) with *ma-osak, no paragogic vowel is expected-as in (43a)—since the vowel in the final syllable is non-high. ${ }^{37}$
- Finally, the case of *madraR in ( 54 d ) is exceptional in that the final vowel is expected to be lost and the form is expected to be consonant-final (see (47b) in §5.2.2): the expected form is something like ${ }^{*}$ marr. The raising of the first vowel to $i$ is irregular, but would have precipitated the addition of the final vowel.


### 5.3 The accreted article

"Just over $80 \%$ of nouns in Nese begin with $n V$-, a syllable which originates as a noun phrase marker [POC *na] which has been reanalysed as an almost completely inseparable part of noun roots. About the only context in which there is any evidence synchronically for the separability of this accreted article involves nominal compounds. In this respect, Nese exhibits the same kind of pattern of vestigial separability of the accreted noun phrase article that we commonly encounter in the languages of Vanuatu" (Crowley 2006:50). With the exception of many nouns referring to humans and a few referring to higher animates (e.g., tavai- 'friend, brother', lextarr 'woman, wife', muloun 'chief', tanas 'devil', tamav 'castrated animal'), a reflex of *na is attached to almost all other nouns, though there are some exceptional cases which do not admit of a semantic explanation.

The historical article appears as $n(V)$ : that is, there are cases of simply $n-+$ root, and there are cases of $n a-$, $n e-$, $n i-$, no-, and $n u-+$ root. By far the commonest is $n a-$, and I will assume that this was the original form and try to explain the others.

When the noun root was or became vowel-initial (55a), or began with *y (>i), *w (>u) or *q (occasionally $>i)(55 b)$, the accreted article was simply $n$-:
a. ${ }^{\mathrm{N} * u r e}$ 'island'
*(q)abe- 'body'
s*qayaRi 'Canarium'
n/orrourr
n/eb'e-
n/eya
b. *yaRu 'casuarina' n/iarr
N *yalo 'sun' $\quad \mathrm{n} / \mathrm{ial}$ *waiR 'water' n/ua *waga 'canoe' n/uak *qaRa(r) 'fence' n/iarr *qase 'jaw' n/ias, n/ias*qatop 'Metroxylon, thatch' n/iat

However, it is common also for words that were, or came to be, vowel-initial to take na- rather than simply $n$-:

| (56) | *qone 'sand, beach' | na/on | *qutan 'bush, inland' | na/ute 'place' |
| :---: | :---: | :---: | :---: | :---: |
|  | *quray 'prawn, lobster' | na/urre | *Rum ${ }^{\text {waq 'house' }}$ | na/ine |
|  | *quRis 'Spondias dulcis' | na/us | *Runut 'sheath around base | na/un 'coconut fibre' |
|  | *qusan 'rain' | na/use | of coconut frond' |  |

These forms would have begun as *na-qV... or *na-RV..., and it is likely that the *a remained after the *q or *R was later lost.

Assimilation is responsible for the shape of the article with some other nouns. For example, ni- only occurs with modern Nese noun roots whose first vowel is $i$ : (57a) shows those where I am aware of a POc etymology, and (57b) all other such nouns in the data:

[^13]a. *bilake 'banded rail'
ni/bilax
ni/jivirr
b. ni/v'iljuyote 'lip' ni/v'ilvok 'tinea versicolor'

Similarly, $n u$ - seems to occur only when the first vowel of the root is $u$, or when the root begins with $C w$. Forms with a POC etymology are given in (58a), and those where I am not aware of such an etymology in (58b).
a. *b(o,u)kas(i) 'pig'
nu/buxas 'boar' nu/but naj-nu/kuns-nu/vu- [also novo-] nu/suwu- 'juice'
b. nu/buyo- 'piece'
nu/buvok 'fish sp.'
nu/xusxus 'sweat' nu/vus boak 'hill taro' nu/lwobetarr 'molar'

And no- occurs almost exclusively when the first vowel of the modern form of the root (not necessarily the POC form) is $o$ or $u$, or when the root begins with $C w$.
a. *k(u)iba 'imperial pigeon'

N *koro 'temporary shelter'
*pose 'a paddle'
*pusuR 'bow and arrow'
*lipo- 'tooth'
*Ruma- 'chest'
no/xb'o
no/xorrxorr/ial
no/vos
no/vso 'bow'
no/luvo-
no/rruma-
*mataqa(l,R)a 'Kleinhovia sp.' no/murrak
*kawaRi 'root' no/xwarr- 'handle'
*waso 'digging-stick' no/xwas
$\begin{array}{ll}\text { b. no/boborr } & \text { 'cloud' } \\ \text { no/bono- } & \text { '(fowl) comb' } \\ \text { no/vosvoso- } & \text { 'hip' } \\ \text { no/run } & \text { 'large abscess' } \\ \text { no/vunvun } & \text { 'Castanospermum sp.' }\end{array}$

However, while we can state with reasonable certainty where $n i-$, $n u$ - and no- will occur. we can not make "reverse" statements like "Ci-initial noun roots will take ni- as the form of the article". Note first that a Cu initial root may be preceded by $n u$-, as in (58), or no-, as in (59). Note also that Ci -, Cu - and Co -initial nouns may also be preceded by na-(60a), and Ci- and Cu -initial nouns (though apparently not Co -initial nouns) by ne(60b):
(60)

| a. | *taqe- 'excrement' |
| :--- | :--- |
| N*muki 'earthquake' | $\mathrm{na} / \mathrm{ji}$ |
| *niuR 'coconut' | $\mathrm{na} / \mathrm{mi}$ |
| N zomu 'bead(s), shell money' | na/ni |
| na/jum |  |
| *kutu 'louse' | na/xut |
| *tiqo 'goatfish' | na/to |
| $\mathrm{N} *$ solo 'sore, boil' | na/sol |
| N logo 'pudding, laplap' | na/lok |

b. ${ }^{\mathrm{S}}$ *ma(r,R)iu 'Acacia sp.' davi- 'snot' ne/rriv-ne *biRapa 'surgeonfish' ne/b'irrav
${ }^{\mathrm{N} * \text { sova 'cough, breathe w. difficulty' ne/suv- 'breath' }}$
${ }^{\mathrm{N} *}$ sukawa 'year'
N*zino- 'mouth'
ne/suxav
ne/juno-

Finally, both $n a$ - (61a) and $n e$ - (61b) may occur before $C a$ - and $C e$-initial roots:
a. *bwatu(k)- 'head' na/bat-
*mata- 'eye' na/nata-
*p ${ }^{\text {w }}$ asa- ;a sore' na/vas-
*draRaq 'blood' na/rre
*siko 'kingfisher' na/sxe
*pulan 'moon' na/vle
b. *lawaq 'spider(web)' *i(s,c)ay >**nisa- 'name' *maya- $>{ }^{\mathrm{S}}$ *meme- 'tongue' .
${ }^{\mathrm{E} *} \mathrm{~m}^{\mathrm{w}} \mathrm{eRa}$ 'child, person of place'
${ }^{\mathrm{R} * \text { maraya 'eel' }}$
S*raja- 'branch'
ne/la 'spider'
ne/nsa-
ne/m'em'-
ne/nerrnarr 'boy'
ne/nere
ne/rrey-

I have the impression that (i) $n a$ - is common before $C a$ but much less common before $C e$, and, (ii) in reverse, $n e$ - is common before $C e$ but much less common before $C a-$; so the assimilatory tendency still obtains. But it is very much a tendency: given the first vowel of a root, we can probably say what forms of the article will likely not occur, but not what forms will occur.

## 6. CONCLUDING REMARKS

This discussion of the historical phonology of Nese is intended to help illustrate how the phonologies of Northern Malakula linkage languages developed.

## APPENDIX. PROTO-SOUTHERN OCEANIC RECONSTRUCTIONS CITED IN THE TEXT

Data supporting reconstructions to Proto-Oceanic, Proto-Eastern Oceanic and Proto-Remote Oceanic can be found in Ross, Pawley and Osmond (1998, 2003, 2008, 2011, 2016), and to PNCV in Clark (2009). Below, I cite data supporting reconstructions to Proto-Southern Oceanic cited in this paper, from North-Central Vanuatu (NCV), Southern Vanuatu (SV) and New Caledonian (NC). Where the NCV data had led Clark to make a PNCV reconstruction in his 2009 work, I cite only that reconstruction; otherwise, I cite data from individual NCV languages.

The following PSOc forms cited in this paper were justified in Lynch (2019b) and will not be re-justified here: ${ }^{\mathrm{S} *}$ garai 'flying-fox', ${ }^{\text {S* }}$ qayaRi 'Canarium indicum', and ${ }^{\text {S* }}$ va-(laka)lakav 'Zosterops sp.'
${ }^{\mathrm{S} * \mathrm{~b}}\left({ }^{\mathrm{w}}\right) \mathrm{ob}\left({ }^{\mathrm{w}}\right) \mathrm{o}(\mathrm{n})$ 'sprouting coconut, coconut embryo'
NCV: Mota qoqoi 'bud of flower', qoqo/vara 'shoot of growing coconut', Araki popo, Naman bobən neni, Neve'ei no/bobon nani, Avava opon ani, V'ënen Taut na/pap
NC: Possibly Nyelâyu, Nêlêmwa pogo
The NC forms suggest * bob $^{w}$ o. It is not clear if the form was a directly possessed noun (in which case *-n represents the 3 SG suffix) or if the root ended in $*$-n.

S*ba(r,l)e 'blind'
PNCV *bare
SV: Kwamera vera
NC: Jawe baba
The medial consonant is ambiguous: Mota, Naman, Neve'ei, Avava, Tape, one dialect of Nakanamanga and South Efate suggest $*$ r; Nese, Paamese, Lewo and the other dialect of Nakanamanga suggest *l; and Kwamera is ambiguous.

S*bwal(a,o)ke- 'leg, foot'
PNCV * ${ }^{\text {w }}$ alo
But note Raga $b^{w}$ alaye, Naman beliga- 'thigh', Neve'ei ne/bwelege- 'thigh', Avava boloyo-, Larevat balga- 'thigh'
SV: Lenakel ne/lka- (?)
${ }^{\mathrm{s} *}$ dau 'Pometia pinnata'
PNCV *dau
SV: $\quad$ Sye ntau, Ura dau
Somewhat irregular development from POc *tawan.
${ }^{\mathrm{s} *} \mathrm{draRa}(\mathrm{k}, \mathrm{q}, \mathrm{n}) \mathrm{i}$ 'Myristica fatua, wild nutmeg'
NCV: Mwotlap na-dyay, Vera'a daraya, Vurës daray, Mwesen wo/naray, Mota naraya 'nutmeg', NE Ambae dadai, Raga va/oaya (?), Uripiv drrari, S Efate $n / r a$
SV: $\quad$ Sye na/nre, Lenakel ne/tan, Kwamera na/tan, Anejom̃ na/jeñ
Irregular development of POC *(dr,r)aRa(q,k)a
S*(j,g)alato 'Dendrocnide or Laportea spp., devil nettle'
PNCV *galato
SV: $\quad$ Sye, Anejom n/elyat
It has generally been assumed that initial $* \mathrm{j}$ of POC $*$ jalaton was replaced by $* \mathrm{~g}$ in NCV . However, some Banks languages reflect $*_{j}$ rather than $*_{\mathrm{g}}$ : Mwotlap na-hla,; Vurës silat, Mwesen salat, Dorig o slat, Mwerlap ne-silat. To complicate matters further, the SV forms show unexpected loss of the initial consonant
(and also an intrusive *y); but in the case of Sye at least, *(s,j)uliq 'shoot' > Sye nelye- also shows loss of *j and an intrusive $* y$. Clearly, there was some instability in the form of this etymon.

S*ma(r.R)iu 'Acacia sp.'
PNCV *mariu
SV: $\quad$ Sye mori, Ura ni/mli, Kwamera na/mari, Anejom n/merei
NC: Pije, Fwâi, Nemi hmee/k, Jawe hmee/k, maak, Nyelâyu maea/k, maaya/k; Nêlêmwa ma(x)aa/k; Iaai $h m \varepsilon$, Xârâcùù me
Loss of the second consonant in New Caledonian languages suggests that it may have been $* \mathrm{R}$ rather than *r, though the evidence is not compelling.

S*meme- 'tongue'
PNCV *mea
But note Nokuku, Kiai, Tamambo meme-, Araki m'em'e-, Tape mimi-; Larëvat məme-, Pt Sandwich meme-
NC: Pije kuve/hma-, Fwâi kue/hma-, Nemi kuve/hma-, Iaai bo/hme-
S *rana- 'branch'
PNCV *raya
SV: $\quad$ Sye $n /$ roŋo-. Ura deŋe-n ni (= 'hand'), Kwamera (ra)raŋi-
This form may derive irregularly from POc *raqan

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[^0]:    1 I am very grateful to Lana Takau for her assistance in the preparation of this paper, and for detailed and helpful comments on an earlier version of it, and to Catriona Malau, for comments on a final draft.
    2 For the most recent discussion of Malakula subgrouping, see Lynch (2016a,b).

[^1]:    3 Reconstructions are POc unless marked by a preceding raised letter (thus ${ }^{\mathrm{E} * \text { porak-i): these letters are E, Proto-Eastern }}$ Oceanic; N, Proto-North-Central Vanuatu; R, Proto-Remote Oceanic; and S, Proto-Southern Oceanic. Reconstructions for all these languages except Proto-Southern Oceanic may be found in Ross, Pawley and Osmond (1998, 2003, 2008, 2011, 2016), and for PNCV also in Clark (2009); specifically Proto-Southern Oceanic reconstructions are outlined in the appendix. Glosses of reconstructed forms are often abbreviated for reasons of space; Nese reflexes are usually unglossed, unless the meaning differs significantly from that of the reconstructed form.
    4 Clark (2009:96) feels this derives from * ${ }^{w}$ atu(k) 'head' with irregular loss of $*$ t, the idea being 'knee' $=$ 'head of leg'.

[^2]:    5 However, only some cases of *p underwent this shift: others did not (see the discussion relating to (8) below).
    6 There are two possible explanations for this: (i) the shift did not take place in these lexical items; (ii) the shift did take place, but was later reversed, with $* \mathrm{~b}>b^{\prime}$ and then $b^{\prime}>b$ (see Clark 1985:205-6 on this latter theory).

[^3]:    7 This second change, linguolabial > bilabial, may well be encouraged by the fact that all Nese speakers speak Bislama (which of course has no linguolabials), and most of them speak it far more frequently than they speak Nese. Lana Takau (pers, comm.) also comments that Nese speakers think linguolabials are "a bit silly" because they are so out of the ordinary, so they have consciously chosen to use the bilabial forms.

[^4]:    8 This form shows fronting of $* \mathrm{u}$ to $i$ and then the shift to linguolabial articulation, This fronting, which is widespread in Malakula, will be discussed in some detail in §4.3.
    $9 \quad$ POC $*$ c merged with $*_{\mathrm{s}}$ in languages east of Manus. When I refer to the behaviour of $*_{\mathrm{s}}$ in this paper, I am including also the behaviour of $* \mathrm{c}$.

[^5]:    10 Bur cf. an apparent doublet nu/suwu- 'juice', in which *s regularly became $s$.
    ${ }_{11}$ The reconstruction should probably be *savu(a)k or maybe *savuka rather than *savu(a). This would explain the $x$ in the Nese form, and also the velars in Naman nsivux, V'ënen Taut saxəv (metathesis), Tape jixəp (metathesis) and Unua jevux, all meaning 'sneeze', as well as Nguna saveu-ki 'whistle'.
    12 For a detailed discussion, see François (2011).

[^6]:    13 But cf. ${ }^{\mathrm{N} * \text { domi. }}$
    14 This is from Takau; Crowley has mirre.
    15 Ross, Pawley and Osmond (2016:453) reconstruct *piri(y), but the Nese reflex confirms the presence of the final consonant in POc.

[^7]:    16 Proto-Southern Oceanic data support two alternative reconstructions, one with initial $*$ (inherited from POc) and the other with initial *g (innovated): see the appendix for details. The Nese form clearly derives from the g -initial alternant.
    17 For a detailed discussion of the irregular retention of *q in Malakula languages, see Lynch (2009).

[^8]:    18 See, for example, the reflexes of ${ }^{\mathrm{N} * \text { bue, }}$ *makubu-, *pure and *tapuRiq in (35).
    19 POC *p is regularly lost before *u in V'ënen Taut, Tape and Ninde. (For a Ninde example in this table, see *pudi > n/üs.)
    ${ }^{20}$ Norro- is a prefix deriving from the article *na + *raun 'leaf' often added to plant names.
    ${ }_{21}$ There are two cases of $*_{0}>e$ before a labial: ${ }^{\mathrm{N} * \text { na-novi 'yesterday' }>\text { be/nanev, and } * \text { topu'sugarcane' }>\text { ne/betev. }}$

[^9]:    22 The actual reconstruction has an ambiguous initial consonant: *(m,k)arawa. The Nese form clearnly continues the *minitial form.
    23 An irregular development from * $\mathrm{p}^{w} \mathrm{ap}^{\mathrm{w}}$ a 'carry pick-a-back'.

[^10]:    ${ }^{24}$ POc *piriy would normally have been followed by the transitive suffix ${ }^{*}$-i, and this may have protected ${ }^{*} \mathrm{y}$ from deletion, since it would not have been word-final in a transitive construction. However, this argument does not apply in the case of the stative verb *away.
    25 The final $v$ ' in na/rrarrav' suggests a following non-back vowel. Clark (2009) has reconstructed PNCV *raravi, deriving from POC *rarap, and although I have disagreed with many of his decisions regarding additional final vowels (Lynch 2018), I believe that he was correct in this particular case.
    ${ }^{26}$ There are two POc forms meaning 'four', *pat and *pati. Nese v'at must derive from *pat; if it derived from *pati, the form would be $v$ 'as, with the *i causing the *t to palatalise.
    ${ }_{27}$ I am uncertain about this form, since the first syllable appears to have been unexpectedly lost.

[^11]:    28 For a detailed discussion of this topic, see Lynch (2011).
    29 There are slight differences when the medial consonant was lost, as in *leqos > les in (43a). These are not relevant to the main point of discussion here.
    30 This is the only example I have of paragogic $e$ following a retained final consonant. Other examples of paragogic $e$ in other environments will be found in §5.2.2.

[^12]:     not relevant..
    32 V addition may have been a two-part process: possibly the addition of $a$, or a, or some other neutral vowel came first, and was followed by fronting or backing conditioned by the soon to be deleted high vowel.
    ${ }_{33}$ There are a few exceptions to the general statements I will be making in this subsection, but I will ignore these for the moment, and concentrate on what seem to be generalisations that can be made. I will then discuss the apparent exceptions in §5.2.4.
    ${ }_{3}^{34}$ See also the reflexes in the right hand columns of Table 5.
    ${ }_{35}$ I will discuss the nature of this retained final vowel in $\S 5.2 .3$ below.

[^13]:    36 Botovro, however, shows expected final $e$ : nerve.
    37 This final vowel also appears in Botovro m'ahke.

