# Malayalam (Namboodiri Dialect) 

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 spoken by over 33 million people in India, predominantly in Kerala (Lewis, Simmons \& Fenning 2013). The language is diglossic, with the formal register used in written media and orally in formal settings. Colloquial Malayalam, for which there is no standard orthography, varies by region and social community (Asher \& Kumari 1997). The speech illustrated below is representative of the variety spoken by the Namboodiri subcaste of Brahmins in and around Kochi, a city in central Kerala. The Namboodiri subcaste was traditionally a land-owning priestly class, and until relatively recently, the community was very insular. Consequently, the dialect differed from standard Malayalam as it is spoken today; this is discussed in some detail in U. Namboodiripad (1989, personal communication).

The recordings were made in San Diego by a female native speaker born and raised near Kochi. Although the variety of Malayalam illustrated here is colloquial, the citation forms are usually found in the formal register as well. The transcribed passage, on the other hand, contains many colloquialisms not found in the formal register, but they are representative of the variety of Malayalam illustrated here.

The transcriptions are phonemic, comprising only the symbols included in the consonant and vowel charts. Details regarding the phonetic realization of several phonemes are discussed in the text, with phonetic transcriptions of the example words provided. The Malayalam orthography is included for the citation words as well as for the passage. In cases where words are non-standard in the formal register (and therefore are usually not written), the Malayalam orthography represents the formal register.

## Consonants

|  | Bilabial | Labio－ dental | Dental | Alveolar | Lamino－ postalveolar | Retroflex | Palatal | Velar | Glottal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plosive | $\begin{array}{\|ll\|} \hline \mathrm{p} & \mathrm{~b} \\ \mathrm{p}^{\mathrm{h}} & \left(\mathrm{~b}^{\mathrm{f}}\right) \\ \hline \end{array}$ |  | $\begin{array}{\|lc\|} \hline \mathrm{t} & \mathrm{~d} \\ \mathrm{t}^{\mathrm{h}} & \left(\mathrm{~d}^{\mathrm{f}}\right) \end{array}$ | t |  | $\begin{array}{\|cc\|} \hline \mathrm{t} & \mathrm{~d} \\ \mathrm{t}^{\mathrm{h}} & \left(\mathrm{~d}^{\mathrm{f}}\right) \\ \hline \end{array}$ |  | $\begin{array}{\|lc\|} \hline \mathrm{k} & \mathrm{~g} \\ \mathrm{k}^{\mathrm{h}} & \left(\mathrm{~g}^{\mathrm{h}}\right) \\ \hline \end{array}$ |  |
| Affricate |  |  |  |  |  |  |  |  |  |
| Nasal | m |  | n | n |  | $\eta$ | n | $\begin{gathered} \mathrm{y} \\ \left(\mathrm{n}^{\mathrm{j}}\right) \end{gathered}$ |  |
| Trill |  |  |  | r |  |  |  |  |  |
| Tap or flap |  |  |  | r |  |  |  |  |  |
| Fricative |  | （f） | s |  | 6 | S |  |  | h |
| Approximant |  | $v$ |  |  |  | Ł | j |  |  |
| Lateral approximant |  |  |  | 1 |  | 1 |  |  |  |


| ／p／ | ／paıam／ | 』¢。 | ＇banana，fruit＇ |
| :---: | :---: | :---: | :---: |
| $/ \mathrm{p}^{\text {h／}}$ | ／p ${ }^{\text {a alam／}}$ | مص－ | ＇positive result＇ |
| ／b／ | ／balam／ | ஸை๐ | ＇strength，sturdiness＇ |
| $/ \mathrm{b}^{\text {h／}}$ | ／b ${ }^{\text {fajajam／}}$ | ¢®。 | ＇fear＇ |
| ／t／ | ／tala／ | மை | ＇head＇ |
| ／t／ | ／pata／ | வn | ＇froth，bubbles＇ |
| $/ \mathrm{t}^{\text {h／}}$ | ／kat ${ }^{\text {ha／}}$ | கம | ＇story＇ |
| ／d／ | ／dalam／ | B8O | ＇petal，leaf＇ |
| $/ d^{\text {fr }}$／ | ／d ${ }^{\text {finanu／}}$ | 山⿴囗 | ＇fifth month of the Malayalam calendar＇ |
| ／t／ | ／ente／ | 毋๑バை | ＇mine＇ |
| ／t／ | ／utra：tam／ | อ（6）S | ＇twenty－first day of month＇ |
| ／t ${ }^{\text {／}}$ | ／pa：t＇am／ | ऽ30。 | ＇lesson＇ |
| ／d／ | ／ma：dam／ | ロวை。 | ＇madam，a type of palm tree used to make fishing hooks＇ |
| $/ d^{\text {fr }}$ | ／ga：d ${ }^{\text {fam }}$ | ๑วヘ9。 | ＇fervor＇ |
| ／k／ | ／kani／ | வைை | ＇first sight of the new year＇ |
| $/ \mathrm{k}^{\text {h／}}$ | ／k ${ }^{\text {hani／}}$ | வセி | ＇cave，mine＇ |
| ／g／ | ／ganapatri／ | ๑ளைபmி | ＇Ganapati（a name）＇ |
| $/ \mathrm{g}^{\mathrm{h}}$／ | ／g ${ }^{\text {fi}}{ }^{\text {anam／}}$ | உ冂ை | ＇weight＇ |
| ［t6／ | Itcanta／ | 」ாm | ＇market＇ |
| tct ${ }^{\text {h }}$ | tt ${ }^{\text {h }}$ andam／ | ๑ハイ\％ | ＇desire，opinion＇ |
| ／dz／ | ／dzata／ | ロS | ＇hair tangle＇ |
| ／dz ${ }^{\text {h／}}$ | ／ dz $^{\text {hata／}}$ | cus | ＇a medicinal plant＇（＇stonebreaker＇） |
| ／s／ | ／resam／ | omo | ＇a watery tomato dish＇ |
| ／6／ | ／vecam／ | வைை๐。 | ＇is adept＇ |
| ／s／ | ／vesam／ | ๑ைกัロ | ＇poison＇ |
| ／h／ | ／mahal | வก๐び | ＇daughter of the family＇ |

## Obstruents

Malayalam obstruents primarily contrast six places of articulation：bilabial，dental，alveolar， postalveolar，retroflex，and velar．The postalveolar affricates $\overline{\operatorname{tc} \epsilon} /$ ，$\overline{t c}{ }^{\mathrm{h}}$ ， ，$\overline{\mathrm{d}} \mathrm{z} /$ ，and $/ \bar{d} \mathrm{z}^{\mathrm{h}}$ ） have been reported to be palatalized or palatal plosives（U．Namboodiripad 1989，personal


Figure 1 Spectrograms showing / $\varsigma /$ vs. /ss/. The latter is characterized by stronger low-frequency energy.


Figure 2 Comparison of $/ \mathrm{p}^{\mathrm{h}} /$ vs. / $\mathrm{b}^{\text {h }} /$. For our speaker, both are voiceless aspirated plosives.
communication; Punnoose 2010), and Asher \& Kumari (1997) say they are lightly affricated. The distinction between / $/$ / in /vecam/ 'is adept' and / $\mathrm{s} / \mathrm{in} / \mathrm{vesam} /$ 'poison' is shown spectrographically in Figure 1. The energy concentration for $/ \epsilon /$ is strongest above the fourth formant of the adjacent vowels (around 3750 Hz , center of gravity $=4219 \mathrm{~Hz}$ ); for $/ \mathrm{s} / \mathrm{it}$ is strongest above the third formant of the adjacent vowels (around 2500 Hz , center of gravity $=4997 \mathrm{~Hz}$ ). However, this contrast is neutralized in some varieties (Asher \& Kumari 1997: 414). Sometimes / $¢ /$ is reported as $/ \delta /($ Punnoose 2010), whereas Asher \& Kumari (1997: 414) say that the two realizations are in free variation. In our recordings, the high center of gravity for $/ \epsilon /$ (see Figure 1) suggests that transcription of the sound as $/ \mathrm{J} /$ would be inappropriate for our speaker.

Voicing and aspiration in plosives are usually considered orthogonally contrastive in most varieties of Malayalam (except at the alveolar place of articulation, which has only $/ t /$ ), including the Namboodiri variety illustrated here. However, voiced aspirated plosives are often voiceless in casual speech (U. Namboodiripad, personal communication), and this is also true for our speaker (as seen in Figure 2). Although our speaker did not produce voiced aspirated plosives, we nonetheless include them in parentheses in the phoneme chart because they are attested for some speakers of Namboodiri Malayalam - including the first author, who is also a native speaker.

The absence of voiced aspirated plosives has been noted in other dialects as well (Velayudhan 1971, S. Kumari 1972, Valentine 1976, Mohanan \& Mohanan 1984, Asher \& Kumari 1997). This variation is perhaps a reflection of the two major influences on the grammar of Malayalam: that of Dravidian and Sanskrit. With regard to obstruents, only the voiceless unaspirated plosives are native to Dravidian, whereas aspirated and voiced obstruents are Sanskrit influences on Malayalam, and more variably produced by speakers (Asher \& Kumari 1997: 422).

As is common in other Dravidian languages (e.g. Tamil; Keane 2004), voiceless unaspirated singleton plosives are usually realized as voiced between vowels and after nasals, and may be further weakened to voiced fricatives or approximants (Asher \& Kumari 1997). For example, in the word 毋๑กฉ夂 /ente/ 'mine', the voiceless alveolar plosive /t/ is produced as [d], such that the word may be transcribed phonetically as [ende]. This contrasts with voiced dental [d] in ஃهm /enta/ 'what?', phonetically [eña].

Words ending in either a short vowel or a sonorant may optionally be followed by a wordfinal glottal plosive. Word-final aspiration is present orthographically in certain Sanskrit words, but we do not see phonetic evidence for it in this variety of Malayalam. For example, in our recordings both $๓ \bowtie \circ / n \mathrm{nama}^{(\mathrm{h}) /}$ 'salute, bow down to' and $\omega \varnothing / \mathrm{gama} /$ 'pride, aloofness' are realized with word-final [a?] as [nama?] and [gama?], indicating that orthographic 'wordfinal aspiration' does not block the occurrence of word-final glottal plosives.

Many obstruents have limited distributions. Marginal /f/ is rare (represented orthographically by $/ \mathrm{p}^{\mathrm{h}} /$ ), and is used by only some speakers in loanwords, where it can also be in free variation with [ph], [p], and [ $\phi$ ], e.g. همک /ka:pi/ 'coffee' may be pronounced as [k: fi] (with a retracted and raised [ s ] for the vowel/a:/) or (more frequently in the Namboodiri dialect) as [ka:pi] (Asher \& Kumari 1997: 414). Additionally, the contrast between /t/ and /d/ is marginal: neither sound appears word-finally; word-medially, both are voiced (and usually realized phonetically as [r]).

## Sonorants

Like obstruents, singleton nasals also contrast at six places of articulation. However, instead of a postalveolar nasal, there is a palatal $/ \mathrm{n} /$. Orthographically, dental $/ \mathrm{n} /$ and alveolar $/ \mathrm{n} /$ are written with the same letter $m$. We illustrate some place of articulation contrasts for nasals with geminates, because they provide the most minimal set. (For singleton vs. geminate contrasts, see 'Geminates' section below.)

There is a seventh contrastive place of articulation for geminate nasals, which we transcribe as $/ \mathrm{y}^{\mathrm{j}}: /$. Its functional load is very low; it mostly appears in a finite set of semantically-

 is controversial, having been described as 'lamino-palatal' (Asher \& Kumari 1997) or 'palatal', in contrast with $/ \mathrm{n} /$, which has been described as 'palato-alveolar' (Mohanan 1986). Orthographically, $/ \mathrm{y}^{\mathrm{j}}: /$ is written with ஞß3, the letter corresponding to $/ \mathrm{y}: /$, but compare Фสъеノ /may:al/ (phonetically [may:alə]) 'wiltedness, tiredness' and øணைை /mati:aji:a/ 'squash, pumpkin'. The nasal formants of $/ \mathrm{y}: /$ vs. $/ \mathrm{y}^{\mathrm{j}}: /$ are at similar frequencies, but vowels adjacent to $/ \mathrm{n}^{\mathrm{j}} /$ are notably palatalized (see Figure 3a). The sound likewise contrasts with $/ \mathrm{n} \mathrm{i} /$ : compare
 differ, and vowels adjacent to the latter show convergence of the second and third formants (the 'velar pinch') around 3000 Hz , characteristic of velar consonants (see Figure 3b). We do not consider $/ \mathrm{n}^{\mathrm{j}}: /$ a velar-palatal nasal cluster $[\mathrm{nn}]$, because for the first author (a native speaker of this variety of Malayalam), its production does not involve anterior movement of the tongue body over the course of the nasal. Instead, the tongue body is against both the velum and hard palate, unlike $/ \mathrm{n}: /$, which is solely palatal, and $/ \mathrm{n}: /$, which is solely velar. Further, as seen in Figure 3, $/ \mathrm{y}^{\mathrm{j}}: /$ is produced with steady nasal formants, suggesting that it is also not a nasal $+/ j /$ cluster. It is possible that this sound forms part of a 'clear' (i.e. palatalized) set of nasal sounds, which would also include $/ \mathrm{n} /$, similar to the 'clear' set of liquids found in the language (see discussion below).

Aside from the seven nasals, there are five liquids in Malayalam (Punnoose, Khattab \& Al-Tamini 2013, Scobbie, Punnoose \& Khattab 2013): /r r 1 l.t. Punnoose et al. (2013) distinguish the liquids by place, manner, as well as quality:/f 1 l are 'clear,' having a palatalized quality with a raised second formant in adjacent vowels, whereas $/ \mathrm{r} \ell$ are 'dark' and lack palatalization. For example, Asher \& Kumari (1997: 418) report that the tap /r/ has a 'distinct palatal resonance'; similarly, Jiang (2010) labels the sound as $/ \mathrm{r}^{\mathrm{j}} /$. Though auditorily weak for our speaker, the palatalized quality in /r/ can be seen in Figure 4, which shows spectrograms of $\varnothing \omega_{0} / \mathrm{maram} /$ 'tree' versus $\triangle \circ / \mathrm{mara} /$ 'covering'. The second formant in /a/ rises above 2000 Hz adjacent to / $\mathrm{r} /$, but not adjacent to $/ \mathrm{r} /$.

Aside from its palatalized quality, there is some debate as to the manner of articulation of / $/$ /. Ladefoged \& Maddieson (1996: 222, after Ladefoged, Cochran \& Disner 1997) say that some speakers produce $/ \mathrm{r} /$ as a trill that is slightly more advanced than /r/. However, our
(a)


Figure 3 Nasal formants. (a) Comparison of $/ \mathrm{y}: /$ vs. $/ \mathrm{y}^{\mathbf{j}} \mathbf{:}$. Both $/ \mathrm{y}: /$ vs. $/ \mathrm{y}^{\mathbf{j}}: /$ are characterized by steady nasal formants at similar frequencies, but note the higher F2 values for the $/ \mathrm{a} /$ adjacent to $/ \mathrm{n}^{\mathbf{j}} \mathbf{:} /$, suggesting palatalization. (b) Comparison of $/ \mathrm{n}: /$ vs. $/ \mathrm{y}^{\mathrm{j}}: /$. The nasal formants differ, and $/ \mathrm{a} /$ adjacent to $/ \mathrm{y}^{\mathrm{j}}: /$ shows a velar pinch between the second and third formants at around 3000 Hz .


Figure 4 Comparisons of formants transitions for /a/ adjacent to /r/vs. /r/. Note the higher second formant target for /r/, suggesting a palatalized quality like $\left[\mathrm{r}^{\mathrm{j}}\right]$.
speaker consistently produces $/ \mathrm{f} / \mathrm{as}$ a tap. In contrast, $/ \mathrm{r} /$ is often very short and accompanied by frication, phonetically [r] or [r].

The place and manner of the retroflex central approximant $/ \downarrow /$ has been subject to much debate. Kumari (1972: 27-28) calls it a 'voiced retroflex palatal fricativised lateral', whereas Asher \& Kumari (1997: 419) call it a 'voiced sublamino-palatal approximant'. Because it has been reported to have frication (Kumari 1972), the sound is traditionally symbolized as /z! (Asher \& Kumari 1997, Punnoose et al. 2013), but in our data this sound is always an approximant. Indeed, in an ultrasound study, Scobbie et al. (2013) found that $/ \mathrm{t} /$ is a retroflex approximant with an advanced tongue root and raised tongue body, as well as a lateral release. Punnoose et al. (2013) transcribe the sound narrowly as advanced and palatalized [ $\left.\mathrm{r}^{\mathrm{j}}\right]$. This phonetic transcription accords well with the recordings in our illustration: /e/ has a palatalized quality (a raising of the second formant) similar to that found for the $/ \mathrm{f} /$ (see Figure 4).

In addition to the liquids，there are two additional central approximants：$/ \mathrm{v} / \mathrm{and} / \mathrm{j} /$ ．The labiodental approximant $/ \mathrm{v} /$ may be realized as［v］，［v］，［w］，or［ $\beta$ ］（Asher \＆Kumari 1997）．

| ／m：／ | ／kam：i／ | $\infty$ ¢ $\infty$ | ＇shortage＇ |
| :---: | :---: | :---: | :---: |
| ／n：／ | ／pañi／ | －mb | ＇pig＇ |
| ／n：／ | ／kan：i／ | काm？ | ＇virgin＇ |
| ／n：／ | ／kaףi／ | めண్మ | ＇link of a chain＇ |
| ／n：／ | ／kanii／ | கல¢m | ＇rice soup＇ |
| ／n：／ | ／tan：i／ | ๓ைฺ | ＇held fast＇ |
| $/ \mathrm{m}^{\mathrm{j}}$ ：／ | ／matran ${ }^{\text {j }}$ ：a／ | வாைை | ＇squash，pumpkin＇ |
| ／r／ | ／maram／ | －10 | ＇tree＇ |
| ／r／ | ／mara／ | ه0 | ＇covering＇ |
| ／ l ／ | ／ma．a／ | ه५ | ＇rain＇ |
| ／1／ | ／ta：lam／ | cைero | ＇arrangement of items used to welcome people＇ |
| ／1／ | ／ta：${ }_{\text {am／}}$ | （1） | ＇rhythm，beat＇ |
| ／v／ | ／pavan／ | வவ冂゙ | ＇8 grams of gold＇ |
| ／j／ | ／daja／ | B® | ＇care，adoration＇ |

## Geminate consonants

According to Asher \＆Kumari（1997：432－435），there is a length contrast for all consonants except／fshrre．However，voiced geminate plosives and approximants are rare．Not all singleton－geminate pairs appear to exist in the Namboodiri dialect described here；thus，we include only some of the pairs reported to exist in Malayalam．As with phonemic singleton voiced aspirated plosives，the geminate counterparts are devoiced in our speaker＇s recordings．

The geminate／t：／is usually slightly aspirated and palatalized（Asher \＆Kumari 1997，Jiang 2010）．Voiced unaspirated geminate plosives occur mostly in loanwords．Between vowels， dental $/ n /$ and palatal $/ \mathrm{n} /$ are always geminated．

| ／p／／upaka：ram／ | உஉகカつロ。 | ＇favor＇ | ／p：／／tup：a／ | Ø떠 | ＇spit＇ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $/ \mathrm{p}^{\mathrm{h} /} / \mathrm{kap}^{\text {ham }}$／ | கூロ。 | ＇phlegm＇ | ／ph：／／ap ${ }^{\text {h }}: \mathrm{an} /$ | สைก⿺𠃊 | ＇father＇s younger brother＇ |
| ／b／／abu／ | ๔ைฺ¢ | ＇Abu（a name）＇ | ／b：／／klab：／ | がరけ｜ | ＇club＇ |
| ／t／／kotri／ | ๑ெைウา | ＇craving＇ | ／ti：／／kotris／ | ๑ெวா¢ை | ＇pecked，a hoe－like tool＇ |
| $/ \mathrm{d}^{\mathrm{h}} / / \mathrm{ba}: \mathrm{d}^{\mathrm{f}} \mathrm{a} /$ | ๗วய | ＇disease＇ | ／diniz／cradita／ | （ூ）ß | ＇attention＇ |
|  |  |  | ／t：／／pati／ | －กी | ＇was able to＇ |
| ／t／／kuti／ | ¢35 | ＇drink＇ | ／t：／／kuti／ | \％） | ＇kid＇ |
| ／d／／na：di／ | ตวญา | ＇vein＇ | ／d：／／midi／ | Фிஷ్జు | ＇skirt＇ |
| ／di／／muid ${ }^{\text {f }}$ an／ | จูต\％ | ＇simpleton＇ | ／dit／／viditic | விய¢ | ＇fool＇ |
| ／t¢ $/$／patca／ | ل－ | ＇cooking＇ | ／tct／／patç：a／ | ل10 | ＇green＇ |
|  | ๑๐ைอロ | ＇Sailaja（a name）＇ | ／dz：／／ladża／ | อ甲® | ＇shyness＇ |
| ／k／／akale／ | லアカめு | ＇far away＇ | ／k：／／ak：ara／ | （81006） | ＇farther shoreline＇ |
| ／g／／va：ga／ | வうの | ＇a tree＇ | ／g：／／bag：／ | வ¢ூ | ＇bug＇ |
| ／m／／uma／ | உ® | ＇Uma（a name）＇ | ／m：／／um：a／ | อமை | ＇kiss＇ |
| ／n／／niram／ | 冈ीก。 | ＇color＇ | ／n：／／pañi／ | 』（m） | ＇pig＇ |
| ／n／／mini／ | Фிறி | ＇Mini（a name）＇ | ／n：／／minii／ | Фीmी | ＇glimmered， flashed＇ |
| ／n／／kani／ | めฺி | ＇first sight of the new year＇ | ／n：／／kani／ | めฑை | ＇link of a chain＇ |
| ／n／／nant／ | ஸைs゙ | ＇crab＇ | ／n：／／mana／ | Фぃm | ＇yellow＇ |
| ／y／／ma：ya／ | ロコ¢ | ＇mango＇ | ／n：／／may：a／ | Фலை | ＇is wilting＇ |
| ／s／／ma：nasam／ | ロைறஸ。 | ＇about the mind＇ | ／s：／／manas：／ | －வmm゙ | ＇mind＇ |


| /6/ /paca/ | -160 | 'paste' | //¢:/ /olac:a/ | 38050 | 'Olassa (place name)' |
| :---: | :---: | :---: | :---: | :---: | :---: |
| /j/ /va:ja/ | ఎృ | 'mouth' | /j:/ /vaj:a/ | வ¢y | 'tired' |
| /1/ /vala/ | வ | 'net' | /l:/ /val:a/ | வe1 | 'some, whichever' |
| /l/ /tala/ | セை | 'child's foot-bangle, | /l:/ /tala/ | (13) | 'old crone' |

## Vowels



There are six vowels in Malayalam: /a i e ou/, and [ə], shown in the vowel quadrilateral based on data from the speaker as well as the first author (Namboodiripad 2014). Of these, /a i e $o \mathrm{u} /$ also contrast in length (see below). On the other hand, [ $\partial$ ], though phonetically distinct from the other five vowels, is not phonemic; it only occurs word-medially or word-finally: word-medially, instances of $[ə]$ derive from $/ \mathrm{a} / \mathrm{or} / \mathrm{u} /$ reduction, and word-finally, $[ə]$ is viewed as a post-lexical 'enunciative' vowel after some consonants (Valentine 1976, Mohanan 1986, Asher \& Kumari 1997, Namboodiripad, Garellek, \& Baković 2015; see Keane 2004 for similar discussion of schwas in Tamil).

Short $/ a /$ is often realized as raised [ $\Lambda$ ] or [ $\partial$ ] in unstressed syllables, while it may also be elided in fast speech (Asher \& Kumari 1997: 440). Both /a/ and /a:/ may also vary in tongue advancement, ranging from [æ] to [a]. Short /o/ does not occur word-finally (Asher \& Kumari 1997, Punnoose 2011). Asher \& Kumari (1997: 420-421) also list/æ/, but this sound occurs only in a few English loanwords and may alternate with /a:/, e.g. றృฒ"/ba:yk/, phonetically [bæygə] or (more commonly in the Namboodiri dialect) [ba:ggə] 'bank.' Illustrative examples of the vowels follow:

Word-initial

| /a/ /ata/ | cms | 'a steamed dessert' |
| :---: | :---: | :---: |
| /i/ /ita/ | றS | 'put' |
| /e/ /eta/ | ๑) | 'dude' |
| /o/ /oti/ | ๔รी | 'crotch' |
| /u/ /utane/ | உ๐5m | 'right away' |
| Word-medial |  |  |
| /a/ /vati/ | வรி | 'stick' |
| /i/ /viti/ | வીડી | 'let go' |
| /e/ /veti/ | ญைை | 'a fart, a shot' |
| /o/ /poti/ | வைวร์ | 'powder' |
| /u/ /muti/ | ¢รใ | 'hair' |

## Word-final



Long vs．short vowels

| ／a／／kalam／ | ¢e1 | pot | ／a：／ | ／ka：lam／ | कうఅ• | ＇time，season＇ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ／e／／eri／ | ๑๐ी | ＇throw＇ | ／e：／ | ／e：ri／ | 囚०1 | ＇higher degre |
| ／i／／vit／ | ヘीร | ＇let go＇ | ／i：／ | ／vi：t／ | ภis | ＇house＇ |
| ／o／／koti／ | ๑ெวைி | ＇flag＇ | ／o：／ | ／ko：ti／ | கேวธी | ＇brand new＇ |
| u／／uma／ | ๑๐ | ＇Uma（a name）＇ | ／u：／ | ／u：ma／ | ๑ワロ | mute perso |

Diphthongs


There are four diphthongs in Malayalam：／ai ei oi $\mathrm{au} /$ ．The diphthongs／ai au／are marked
 $/ \mathrm{o} /(\varnothing)$ followed by $/ \mathrm{j} /\left(\omega^{5}\right)$ ．The diphthongs／ai au／are usually realized with a raised nucleus as［ $\Lambda \mathrm{i} \Lambda u$ ］，respectively．

| ／ai | ati／ | ๑ெெயுडி | ＇applause＇ |
| :---: | :---: | :---: | :---: |
|  | ／koit：／ |  | harvest＇ |
| ei | ／peitu／ | வை¢ு（ | hower do |
| au／ | ／gauri／ | ヘワ®ி | Gauri（a nam |

## Stress

Mohanan（1986）states that stress in Malayalam is predictable and not contrastive：it falls on the first syllable of the word，unless the first syllable has a short vowel and the second syllable has a long vowel，in which case stress falls on the second syllable（Mohanan 1986， Broselow，Chen \＆Huffman 1997）．For example，noem。／sam：atam／＇agreement＇has stress on the first syllable，whereas $\mathbf{\sim \infty} \boldsymbol{0}$ ）mo／sam：a：nam／＇gift＇has stress on the second syllable because the first vowel is short and the second is long．However，Terzenbach（2011）found that Malayalam listeners perceive all word－initial vowels to be stressed，regardless of the following vowel＇s length．Moreover，even if word－medial long vowels are phonetically more prominent than initial short ones，they do not cause a perceptual shift in stress from the first syllable（Terzenbach 2011）．To conclude，more work is needed to determine if lexical stress really exists in Malayalam，and，if so，what governs its position．

## Transcription of recorded passage

## Broad phonemic transcription

e：t：ovam ad ${ }^{\text {ik }} \mathrm{ikam}$ cakți｜a：rka：neñ：va：dik：ja：jiruñ：u șu：rjanum vatakenka：tum tam：il｜｜a：samajatt：｜b ${ }^{\text {fiu：mijil oru }}$ sanja：si｜｜me：l potap：ţut：i natak：a：jiruñ：u｜｜su：rjan paran：u ｜｜e：vatakenka：te｜｜nam：ak：ip：o tan：e kand pidik：jam｜arak：a e：touam ku：tutiil caktii en：｜｜a：natakana a：lute me：tr：Ţcut：ija

# potap: | a:rka: ma:t:a:mpat:a | aja:lain e:t:om caktima:n || ka:t: tanik:j pat:anat:are cakti:lu:ti || ka:t:inte cakti ku:tijap:o | sanjaisi potap: onsuyku:ti muruki tctutii || koratc kanin:ap:o || ka:tin u:ti usti matutriu || pinse sursjante u:.jajiruñu || ve:l kond tcu:t sahik:jan vaj:atre a:jap:o | sanja:si potrap: maitii || ayane | surjan avanonte cakti trelijetçu || 

## Orthographic version










## English translation

The Sun and the North Wind were betting on who was the strongest. At the same time, down on earth, a monk wrapped in a shawl was walking. The Sun said: "Hey North Wind! We can find out who is the strongest right now! Whichever one of us can remove the shawl wrapped around that man is the strongest!" The North Wind blew as hard as he could. As the wind's strength grew, the monk wrapped the shawl around himself even tighter. After a while, the wind grew tired of blowing. Then, it was the sun's turn. When the monk couldn't take the heat of the sun any longer, he took off his shawl. That is how the sun proved his strength.

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## References

Asher, R. E. \& T. C. Kumari. 1997. Malayalam. London: Routledge.
Broselow, Ellen, Su-I Chen \& Marie Huffman. 1997. Syllable weight: Convergence of phonology and phonetics. Phonology 14, 47-82.
Jiang, Haowen. 2010. Malayalam: A grammatical sketch and a text. Ms., Rice University.
Keane, Elinor. 2004. Tamil. Journal of the International Phonetic Association 34, 111-116.
Kumari, Syamala B. 1972. A Malayalam phonetic reader. Mysore: Central Institute of Indian Languages. Ladefoged, Peter, Anne Cochran \& Sandra Disner. 1977. Laterals and trills. Journal of the International Phonetic Association 7, 46-54.
Ladefoged, Peter \& Ian Maddieson. 1996. The sounds of the world's languages. Oxford \& Malden, MA: Blackwell.

Lewis, M. Paul, Gary F. Simons \& Charles D. Fennig (eds.). 2013. Ethnologue: Languages of the world, 17th edn. Dallas, TX: SIL International. Online version: http://www.ethnologue.com (retrieved 25 November 2013).
Mohanan, K. P. 1986. The theory of Lexical Phonology. Dordrecht: Reidel.
Mohanan, K. P. \& Tara Mohanan. 1984. Lexical phonology of the consonant system in Malayalam. Linguistic Inquiry 15, 572-602.
Namboodiripad, Savithry. 2014. Context-dependent vowel dispersion in Malayalam. Ms., University of California, San Diego.
Namboodiripad, Savithry, Marc Garellek \& Eric Baković. 2015. Moraic geminates in Malayalam: Evidence from loanwords. Presented at 12th Old World Conference in Phonology, Barcelona, Spain.
Namboodiripad, Usha. 1989. The speech of Namboodiris: A sociolinguistic study. Ph.D. dissertation, University of Kerala.
Punnoose, Reenu. 2010. An auditory and acoustic study of liquids in Malayalam. Ph.D. dissertation, Newcastle University.
Punoose, Reenu, Ghada Khattab \& Jalal Al-Tamimi. 2013. The contested fifth liquid in Malayalam: A window into the lateral-rhotic relationship in Dravidian languages. Phonetica 70, 274-297.
Scobbie, James M., Reenu Punnoose \& Ghada Khattab. 2013. Articulating five liquids: A single speaker ultrasound study of Malayalam. In Lorenzo Spreafico \& Alessandro Vietti (eds.), Rhotics: New data and perspectives, 99-124. Bozen-Bolzano: Bozen-Bolzano University Press.
Terzenbach, Lauren M. 2011. Malayalam prominence and vowel duration: Listener acceptability. MA thesis, The University of Texas at Austin.
Valentine, Elias. 1976. A generative phonology of Malayalam. Ph.D. dissertation, University of Leeds.
Velayudhan, S. 1971. Vowel duration in Malayalam: An acoustic phonetic study. Trivandrum: The Dravidian Linguistic Association of India.

