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## Segmental Phonology of Chiru

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#### Abstract

The Chiru language belongs to the Northern Kuki-Chin subgroup of the TibetoBurman language families (G.A. Grierson 1903). It has only 6032 speakers (Census of India: 2001) scattered in Senapati, Tamenglong and Churachandpur districts of Manipur and Cachar district of Assam. Thus, Chiru is a highly endangered language. It is recognised as a scheduled tribe by the Government of India in 1957. The language is highly influenced by its neighbouring dominant languages. This threatens the language with the possibility of extinction. This article attempts to describe the segmental phonology of Chiru in the light of modern trends in Linguistics. The study of segmental phonological system of the language will mainly include the phonemic inventory, phonemes and its variants and distributions, phonemic sequence, syllabic pattern and phonological processes.


### 1.0. Introduction

Chiru is one of the thirty-three recognised tribal languages of Manipur. It is considered as a highly endangered language with only 6032 speakers (census of India: 2001) scattered in Senapati, Tamenglong and Churachandpur districts of Manipur and also in Cachar District of Assam. Chiru language in Manipur is highly influenced by Meiteilon and by Hmar language in Assam. Chiru has close affinities with other languages like Ranglong, Aimol, Koireng, Kharam, Kom, Chorei, Darlong, Rangkhol, Sakachep, etc. The total number of Chiru villages is 13 (thirteen). Out of these, one village (Budhon Chiru) is situated in Cachar district of Assam; 9 villages, namely, Nungsai, Bungte, Bungte Kholen, Khoirok, Sadu, Thangjing, Kangchup, Uran and Waithou in different parts of Senapati district of Manipur; 2 villages, namely, Dolang and Lamdangmei in Tamenglong district, Manipur and one village, namely, Charoi khullen in Henglep subdivision, Churachandpur district, Manipur. The documentation, description and codification of the language are highly required to preserve and revitalise the language.

## Linguistic Lineage for Chiru Language



### 2.0. Segmental phonology

Altogether there are 18 consonants, 8 vowels and 6 diphthongs in Chiru. The consonantal phonemes of Chiru are organized into: stops, nasals, fricatives, lateral and flap. Semi vowels are absent in this language. Evidence of contrast for consonants and vowels is illustrated with minimal pairs.

### 2.1. Vowels

Chiru language has eight vocalic phonemes - /i/, /e/, /ع/, /a/, /ə/, /っ/, /o/ and /u/. They are shown in the table below:

|  | Front | Central | Back |
| :--- | :--- | :--- | :--- |
| Close | I |  | u |
| Close-mid | E |  | o |
| Open-mid | $\varepsilon$ | $\partial$ | 0 |
| Open |  | a |  |

Articulatory description of these vowels is given below:
i close, front, unrounded vowel
e close-mid, front, unrounded vowel
$\varepsilon \quad$ open-mid, front, unrounded vowel
a open, front, unrounded vowel
ə mid, central, unrounded vowel
0 open-mid, back, rounded vowel
o close-mid, back, rounded vowel
u close, back, rounded vowel

### 2.2 Contrasting Pairs of Vowels

/i/ vs. /u/

| /ri?/ | 'boundary' | /ru?/ 'bone' |
| :--- | :--- | :--- | :--- |
| /mik/ 'eye' | /muk/ 'to see' |  |
| /din/ | 'to stand' | /duy/ 'length' |

/e/ vs. /o/

```
/be?/ 'beans'
/re?/ 'to arrange'
/rei/ 'axe'
```

/bop/ 'leaf'
/ro?/ 'bamboo'
/roi/ 'responsibility'
/ع/ vs. /o/
$\begin{array}{ll}\text { /ke/ } & \text { 'goat' } \\ \text { /me:t/ } & \text { 'to massage' } \\ \text { /ccm/ } & \text { 'knife' }\end{array}$
/ko/ 'spouse'
/mo:t/ 'banana'
/com/ 'to jump'
/a/ vs. /2/

| /raP/ | 'war' | /rə?/ | 'yam' |
| :--- | :--- | :--- | :--- |
| /va?/ | 'to swallow' | /və?/ | 'bird' |
| /na?/ | 'to mope' | /nə?/ | 'banana leaf' |

/e/ vs. /ع/

| /ce:m/ 'downfall' | /ce:m/ 'knife' |
| :--- | :--- | :--- |
| /be?/ 'bean' | /be?/ 'pot' |
| /asei/ 'long' | /asci/ 'raw' |

/o/ vs. /o/

| /doithei/ | 'tolerable' | /doithei/ | 'magician' |
| :--- | :--- | :--- | :--- |
| /ro?/ | 'bamboo' | /rop/ | 'cliff' |

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/coi/ 'to dig' /csi/ 'to take'

### 2.3 Distribution of Vowels

All the eight vowels can occur initially, medially and finally in words.
Their distributions are discussed as follows:

| Initial | Media | Final |  |
| :---: | :---: | :---: | :---: |
| /i/ | /in/ 'house' | /mik/ 'eye' | /ni/ 'sun' |
| /e/ | /ei/ 'to chew' | /nei/ 'wealth' | /se/ 'cow' |
| $\mid \varepsilon /$ | /عk/ 'excreta' | /sek/ 'hammer' | /be/ 'pot' |
| /a/ | /ar/ 'chicken' | /ram/ 'land' | /ra/ 'war' |
| /2/ | $/ \partial \mathrm{p}^{\mathrm{h}}$ / 'time' | /sənu/ 'daughter' | /səpə/ 'son' |
| /0/ | /omcan/ 'behavior' | /vok/ 'pig' | /vo/ 'semen' |
| /o/ | /oko/ 'nine' | /con/ 'job' | /mo/ 'hair' |
| /u/ | /ui/ 'dog' | /vun/ 'skin' | /ru/ 'bone' |

### 2.4 Diphthongs

Chiru has 6 (six) diphthongs-/ai/, /ei/, /عi/, /วi/, /oi/ and /ui/. They are found occurring in all initial, medial and final positions of words excepting the diphthongs $/ \mathrm{oi} /$ and $/ \mathrm{zi} /$ which do not occur in the initial position. All the dipththongs in Chiru glide to the close front unrounded vowel /i/.
/ai/ is the diphthong starting from the open central unrounded vowel to a close front unrounded vowel. It occurs in all positions. Examples of the diphthong /ai/ occurrences are shown below:

```
/ai/ 'crab'
/bai/ 'mouth'
/caice/ 'tongs'
```

/ei/ is a diphthong which starts with close-mid front unrounded vowel to a close front unrounded vowel. It occurs in all positions of words.

Examples:

```
/ei/ 'to chew'
/reipar/ 'flower'
/nei/ 'wealth'
```

/zi/ is a diphthong which starts with open-mid front unrounded vowel to a close front unrounded vowel. It occurs only in medial and final positions of words.

Examples:

| /umssisak/ | 'gourd' |
| :--- | :--- |
| /asci/ | 'raw' |
| /zei/ | 'fry' |

/ $\mathrm{i} /$ is a diphthong which starts with open-mid rounded back vowel to a close front unrounded vowel. It occurs in all initial, medial and final positions of words.

Examples:

| /oi/ | 'to lament' |
| :--- | :--- |
| /doithei/ | 'magician' |
| /atoi/ | 'short' |

/oi/ is a diphthong which starts with close-mid rounded back vowel to a front unrounded vowel. It occurs only in medial and final positions of words.

Examples:
/loi/ 'medicine'
/loihar/ 'weed'
/mosoi/ 'pulse’
/ui/ is a diphthong which starts with the close back rounded vowel to a close front unrounded vowel. It occurs in all initial, medial and final positions of words.

Examples:
/ui/ 'dog'
/rui/ 'rope'
/tuira/ 'thirst'

### 2.5 Vowel Sequence

Chiru has vowel sequence across the morphemic/syllabic boundary. The following examples illustrate the vowel sequences found in Chiru language:
/ii/ /ri.ik/ 'sobbing'
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| /ic/ | /ai.cy/ | 'turmeric' |
| :---: | :---: | :---: |
| /ia/ | /mi.ci.a/ | 'salty' |
| /iu/ | /thi.ut/ | 'blood clotting' |
| /ei/ | /se.in/ | 'cow shed' |
| lee/ | /me.er/ 'burp' |  |
| lee/ | /se.ck/ | 'cow dung' |
| lea/ | /me.an/ | 'meat curry' |
| /ea/ | /se.be.o/ | 'at the wound' |
| /es/ | /re.om/ | 'troublesome' |
| /eu/ | /me.ui/ | 'stale meat' |
| /عi/ | /ke.in/ | 'goat shed' |
| $/ \varepsilon \varepsilon /$ | /ce.ey/ | 'yellow paper' |
| /ea/ | /le.ai/ | 'big hips' |
| /عu/ | /he.ur/ | 'low voice/ bass' |
| /ai/ | /a.ir/ | 'yellowing leaf' |
| /as/ | /a.cy/ | 'yellow' |
| /aa/ | /a.ai/ | 'widen' |
| /as/ | /a.si/ | 'flexible' |
| /au/ | /a.ui/ | 'stale' |
| $/ \partial \mathrm{/} /$ | /vo.ck/ | 'bird's excreta' |
| /əа/ | /ro.ay/ | 'similar' |
| /oi/ | /zo.in/ | 'sheep shed' |
| /os/ | /zo.ck/ | 'sheep excreta' |
| /oi/ | /ro.in/ | 'house made of bamboo' |
| /oc/ | /ncr.mo.cp/ | 'to trim beard' |
| /uc/ | /bu.cr/ | 'to cook rice' |
| /us/ | /nu.om.boi/ | 'motherless' |
| /uu/ | /bu.ui/ | 'stale food' |

### 3.0 Consonants

Chiru language has 18 consonant phonemes- $\mathrm{p}, \mathrm{p}^{\mathrm{h}}, \mathrm{b}, \mathrm{t}, \mathrm{t}^{\mathrm{h}}, \mathrm{d}, \mathrm{k}, \mathrm{k}^{\mathrm{h}}, \mathrm{m}, \mathrm{n}, \mathrm{y}, \mathrm{v}, \mathrm{s}, \mathrm{z}, \mathrm{c}$, $h, r$ and 1 . They occur in six places of articulation- bilabial, labio-dental, alveolar, palatal, velar and glottal. The manners of articulation in Chiru consonants are- stops, nasals, fricatives, laterals and flap. Semi-vowels are absent in this language. The consonantal system of Chiru makes use of the distinction between aspirated and un-aspirated, voiced and voiceless. The consonantal system of Chiru is described with their places of articulation and manners of articulation in the table shown below:

| Manner of articulation |  | Places of articulation |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Bilabials |  | Labiodental |  | Alveolar <br> s |  | Palatals |  | Velars |  | Glottals |  |
|  |  | V1 | Vd | V1 | Vd | V1 | Vd | V1 | Vd | V1 | Vd | V1 | Vd |
| Stops | Unaspirated | p | b |  |  | t | d | c |  | k |  |  |  |
|  | aspirated | $\mathrm{p}^{\mathrm{h}}$ |  |  |  | $\mathrm{t}^{\mathrm{h}}$ |  |  |  | $\mathrm{k}^{\mathrm{h}}$ |  |  |  |

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| Nasals |  | m |  |  |  | n |  |  |  | y |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Fricatives |  |  |  | v | s | z |  |  |  |  | h |  |
| Laterals |  |  |  |  |  | l |  |  |  |  |  |  |
| Flap |  |  |  |  |  | r |  |  |  |  |  |  |
| Semi-vowels |  |  |  |  |  |  |  |  |  |  |  |  |

### 3.1 Minimal Pairs of Consonants

The minimal pairs and near-minimal pairs which illustrate the distinctiveness of consonant phonemes of Chiru are given below:
/p/ vs /b/
/pa/ 'father'
/ba/ 'arum'
/pu/ 'grand-father
/bu/ 'food'
/pe/ 'to beat'
/be/ 'pot'
/p/ vs /ph/
/pon/ 'cloth'
/p ${ }^{\text {hon }}$ / 'bubble’
/pu/ 'grand-father'
/phu/ 'roof'
/əрә/ 'man'
/əр ${ }^{\mathrm{h}}$ ә/ 'time’
/t/ vs /d/
/tvi/ 'short'
/dbi/ 'magic'
/tum/ 'share'
/dum/ 'green'
/tar/ 'old man/woman'
/dar/ 'bell'
/t/ vs / $\mathrm{t}^{\mathrm{h}} /$
/tan/ 'to run'
/than/ 'grave'
/tur/ 'venom'
/thur/ 'sour'
/tuk/ 'to cut'
/thuk/ ‘deep’

```
/k/ vs. /k k
/koi/ 'to call'
/khoi/ 'bee'
/ko/ 'nine'
/k}\mp@subsup{}{}{\textrm{h}}\mathrm{ O/ 'village'
/kэy/ 'back (body part)'
/k}\mp@subsup{\textrm{k}}{}{\textrm{h}}\mathfrak{y/ 'to weave'
/m/ vs. /n/
/mik/ 'eye'
/nik/ 'to beg'
/mot/ 'banana'
/not/ 'to kick out someone'
/mai/ 'pumpkin'
/nai/ 'baby'
/n/ vs. /n/
/nar/ 'nose'
/yar/ 'courage'
/ncm/ 'satisfied'
/y\varepsilonm/ `jaw'
/noi/ 'below'
/noi/ 'white'
/m/ vs. /n/
/me/ 'face'
/n\varepsilon/ 'sand'
/mai/ 'pumpkin'
/nai/ 'to incline'
/mak/ 'to leave'
/mak/ 'to wait'
/s/ vs./z/
/sak/ 'eatable'
/zak/ 'embarrassment'
/su/ 'vagina'
/zu/ 'wine'
/san/ 'to help'
/zan/ 'night'
/s/ vs. /h/
/se/ 'cow'
/he/ 'voice'
/sa/ 'animal'
/ha/ 'teeth'
/rusui/ 'to wipe with towel'
/ruhui/ 'whistle'
/z/ vs. /v/
/zui/ 'to follow'
```

/vui/ 'a kind of rodent'
lzok/ 'to rear'
/vok/ 'pig'
/zo/ 'sheep'
/vo/ 'semen'
/c/ vs. /z/
/cem/ 'knife'
/zem/ 'to beat'
/cir/ 'mud'
/zir/ 'to transform'
/mucu/ 'sugarcane'
/muzu/ 'rat'
/c/ vs. /s/
/cam/ 'authority'
/sam/ 'hair'
/cem/ 'knife'
/s\varepsilonm/ 'to distribute'
/cek/ 'brick'
/sek/ 'hammer'
/r/ vs. /l/
/ru/ 'bone'
/lu/ 'head'
/ram/ 'land'
/lam/ 'road'
/roi/ 'responsibility'
/loi/ 'medicine'

```

\subsection*{3.2 Description and Distribution of Consonants}

\subsection*{3.2.1 Stops}

Chiru has nine phonemic oral stops which occupy the four places of articulationbilabial \(/ \mathrm{p}, \mathrm{p}^{\mathrm{h}}, \mathrm{b} /\), alveolar \(/ \mathrm{t}, \mathrm{t}^{\mathrm{h}}, \mathrm{d} /\), palatal \(/ \mathrm{c} /\) and velar \(/ \mathrm{k}, \mathrm{k}^{\mathrm{h}} /\). The aspirated voiceless stops \(/ \mathrm{p}^{\mathrm{h}}, \mathrm{t}^{\mathrm{h}}, \mathrm{k}^{\mathrm{h}} /\) and un-aspirated voiced stops \(/ \mathrm{b}, \mathrm{d} /\) occur only in the initial and medial positions of words and never occur in the word final position. When the un-aspirated voiceless stops \(/ \mathrm{p}, \mathrm{t}\), \(\mathrm{k} /\) occur in the word-final position, they are phonetically unreleased as \(/ \mathrm{p} \mid, \mathrm{t}, \mathrm{k} /\). There are contrasts between voice and voiceless, apirated and un-aspirated stops.

\subsection*{3.2.2 Bilabial Stops}

The phoneme \(/ \mathrm{p} /\) is a voiceless un-aspirated bilabial stop. It occurs in all positions in Chiru words or syllable.

Initial
/pon/ 'cloth'
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```

/pei/ 'mud' /tuiput/ 'fountain' /sesep// 'advice'

```

The phoneme \(/ \mathrm{p}^{\mathrm{h}} /\) is a voiceless aspirated bilabial stop. It occurs only in the word initial and medial positions and is never attested to word final position.
\begin{tabular}{|c|c|c|}
\hline Initial & & Medial \\
\hline /p \({ }^{\text {h }}\) or/ & 'blessing' & /rop \({ }^{\text {h }}\) ¢ \(/\) / 'to announce' \\
\hline /p \({ }^{\text {h }}\) un/ & 'to erect' & /rəp \({ }^{\text {ha/ }}\) 'denial' \\
\hline
\end{tabular}

The phoneme /b/ is a voiced un-aspirated bilabial stop. It occurs only in the word initial and medial positions and is not attested in the final position of words.
\begin{tabular}{llll} 
Initial & & Medial & \\
/bai/ & 'mouth' & /cubai/ & 'greeting' \\
/bey/ & 'cheek' & /robon/ & 'wrestle'
\end{tabular}

\subsection*{3.2.3 Alveolar Stops}

The phoneme /t/ is a voiceless, un-aspirated, alveolar stop. It occurs in all initial, medial and final positions of words. In final position of words, it is realized phonetically as unreleased voiceless un-aspirated alveolar stop \([t]\).
\begin{tabular}{lll} 
Initial & Medial & Final \\
/tui/ 'water' & /moto/ 'python' & /mot \(/ /\) 'banana' \\
/taksə/ 'body' & /mants/ 'brinjal' & \(/ \mathrm{k}^{\mathrm{utu}} / /\) 'hand'
\end{tabular}

The phoneme \(/ \mathrm{t}^{\mathrm{h}} /\) is a voiceless aspirated alveolar stop. It occurs only in the initial and medial positions of words and never occur in word finally.
```

Initial Medial
/thai/ 'oil' /mətha/ 'wings'
/thiykuy/ 'tree' /rothok/ 'brain'

```

The phoneme /d/ is a voiced, un-aspirated alveolar stop. It occurs only in the initial and medial positions of words and is never attested in the word final position.
\begin{tabular}{lll} 
Initial & Medial \\
/dan/ 'law', & /radai/ 'to play' \\
/dir/ 'lake' & /midik/ 'correction'
\end{tabular}

\subsection*{3.2.4 Palatal Stop}

The phoneme /c/ is a voiceless un-aspirated palatal stop. It occurs only in the initial and medial positions of words and is never attested to the word final position.
\begin{tabular}{lll} 
Initial & Medial \\
/cikce/ 'stingy, & /micim/ 'hard' \\
/con/ & 'word' & /roca/ 'earthworm'
\end{tabular}

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\subsection*{3.2.5 Velar Stops}

The phoneme \(/ \mathrm{k} /\) is a voiceless un-aspirated velar stop. It occurs in all initial, medial and final word positions. Word-finally, it is realized phonetically as an unreleased voiceless un-aspirated velar stop [k|].

Initial
/kum/ 'year'
/ke/ 'goat' /riki/ 'parrot'

Medial
/rəkakai/ ‘ladder’

Final
/sek|/ 'hammer'
/rothok|/ 'brain'

The phoneme \(/ \mathrm{k}^{\mathrm{h}} /\) is a voiceless aspirated velar stop. It occurs only in the initial and medial positions of words and is never attested to the word final position.

\author{
Initial \\ \(/ \mathrm{k}^{\text {hen }} \mathrm{\varepsilon} /\) 'plate' \\ \(/ k^{\text {hailin/ 'ant' }}\)
}

Medial
/rak'ana/ 'hesitation'
/rink \({ }^{\text {ho/ }} \quad\) 'life'

\subsection*{3.2.6 Nasals}

There are three nasal phonemes in Chiru. They occupy three places of articulationbilabial \(/ \mathrm{m} /\), alveolar \(/ \mathrm{n} /\) and velar \(/ \mathrm{y} /\). These nasal phonemes occur in all the positions of words in the language.

The phoneme \(/ \mathrm{m} /\) is a voiced bilabial nasal. It occurs in all initial, medial and final positions of words.
\begin{tabular}{lllll} 
Initial & Medial & Final \\
/mik/ 'eye' & /ramay/ 'dream' & /sam/ 'hair' \\
/mot/ 'banana' & /rimin/ & 'name' & /cem/ 'knife'
\end{tabular}

The phoneme \(/ \mathrm{n} /\) is a voiced alveolar nasal. It occurs in all initial, medial and final positions of words.
\begin{tabular}{lllll} 
Initial & Medial & & Final \\
/nar/ 'nose' & 'ranak/ & 'power' & /dan/ & 'law' \\
/numpok/ 'love' & /munu/ & 'sin' & /vun/ & 'skin'
\end{tabular}

The phoneme \(/ \mathrm{y} /\) is a voiced velar nasal. It occurs in all initial, medial and final positions of words.
\begin{tabular}{llll} 
Initial & Medial & Final \\
/y \(\varepsilon /\) & 'sand' & /rinkho/ & 'life'
\end{tabular}

\subsection*{3.2.7 Fricatives}

There are four fricatives phonemes in Chiru- \(/ \mathrm{v}, \mathrm{s}, \mathrm{z}, \mathrm{h} /\). They occur only in the initial and medial positions of words.

The phoneme \(/ \mathrm{v} /\) is a voiced labio-dental fricative. It occurs only in the initial and medial positions of words and is never attested to the final position of word.
\begin{tabular}{llll} 
Initial & & Medial & \\
/vun/ & 'skin' & /ruvut/ & 'ash' \\
/və/ & 'bird' & /rəvan/ & 'sky'
\end{tabular}

The phoneme \(/ \mathrm{s} /\) is a voiceless alveolar fricative. It occurs only in the word initial and medial positions.
```

Initial
/sim/ 'needle'
/solo/ 'wage'

```
```

Medial
/risim/ 'story'
/sokso/ 'snail'

```

The phoneme \(/ \mathrm{z} /\) is a voiced alveolar fricative. It occurs only in the word initial and medial positions.
\begin{tabular}{lll} 
Initial & \multicolumn{2}{c}{ Medial } \\
/zu/ & 'liquor' & \multicolumn{2}{c}{\(/ \mathrm{muzu} /\) 'rat' } \\
/zei/ 'air' & /məzan/ 'yesterday'
\end{tabular}

The phoneme \(/ \mathrm{h} /\) is a voiceless glottal fricative. It occurs only in the initial and medial positions of words.
\begin{tabular}{ll} 
Initial & Medial \\
/hə/ 'teeth' & /ruhui/ 'whistle' \\
/hoinə/ 'enjoyment' & /mohon/ 'cheat'
\end{tabular}

\subsection*{3.2.8 Lateral}

The phoneme \(/ l /\) is a voiced alveolar lateral. It occurs only in the initial and medial positions of words.
\begin{tabular}{llll} 
Initial & & Medial & \\
/lu/ & 'head' & /muluy/ & 'heart' \\
/lam/ & 'dance' & /relei/ & 'earth'
\end{tabular}

\subsection*{3.2.9 Flap}

The phoneme \(/ \mathrm{r}\) / is a voiced alveolar flap. It occurs in all initial, medial and final positions of words.
\begin{tabular}{lllll} 
Initial & Medial & Final & \\
/ra/ & 'war' & /səra/ 'poor' & /meivar/ & 'light' \\
/rek/ & 'throat' & /merem/ 'weapon' & /reipar/ & 'flower'
\end{tabular}

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\subsection*{3.3 Geminates}

Gemination is the sequence of identical consonant phonemes adjacent to one another within a phonological word. In Chiru, the consonant phonemes \(/ \mathrm{p} /\), \(/ \mathrm{t} /, \mathrm{k} / \mathrm{k}, \mathrm{m} / \mathrm{m} / \mathrm{n} / \mathrm{m} / \mathrm{and} / \mathrm{r} /\) are attested as geminates in the lexical items.

\section*{/-pp-/}
/seseppa/ 'advisor'
/rəsappui/ 'assistant'
/-tt-/
/puttui/ 'fountain water'
/k \({ }^{\text {hatte/ } \quad \text { 'only one' }}\)
/-kk-/
/nukkir/ 'redoing’
/vokke/ 'pig's leg'
/-mm-/
/rammun/ 'place'
/ramman/ 'land tax'
/-nn-/
/khinnei/ 'selected'
/ravanni/ 'Friday’
/-nŋ-/
/ningai/ 'happy'
/luypoi/ 'whitestone'
/-rr-/
/arrutui/ 'egg'
/cirrik/ 'germ'

\subsection*{3.4 Consonant Sequence}

In this analysis, the consonant sequence refers to the combination of more than one consonant occurring across the syllabic boundary. The following examples show the consonant sequences in Chiru.

\subsection*{3.4.1 Stop+Stop}
\begin{tabular}{|c|c|c|}
\hline /-pp-/ & /rap.pui/ & 'place for drying above fire-place in kitchen' \\
\hline /-pk-/ & /nap.ker/ & 'boger' \\
\hline /-tp-/ & /ret.pom/ & 'balloon' \\
\hline /-tc-/ & /khut.csi/ & 'gift' \\
\hline /-kc-/ & /cik.ce/'stingy’ & \\
\hline /-kk \({ }^{\text {h-// }}\) & /zak.k \({ }^{\text {h/ }}\) & 'armpit odour' \\
\hline
\end{tabular}

\subsection*{3.4.2 Stop+Nasal}
\begin{tabular}{lll} 
/-tm-/ & \(/ \mathrm{k}^{\text {hut.mi.tin/ }} \quad\) & 'nail' \\
/-tn-/ & /set.nə/ \(‘\) sin'
\end{tabular}

\subsection*{3.4.3 Stop+Fricative}
\begin{tabular}{|c|c|c|}
\hline /-ps-/ & /rapsor/'water & dripping off the roof' \\
\hline /-tv-/ & /put.va/ & 'a kind of bird' \\
\hline /-ts-/ & /nat.sat/ & 'sickness' \\
\hline /-tz-/ & /khut.zi.cn/ & 'palmistry' \\
\hline /-ks/ & /sok.so/ & 'snail' \\
\hline /-tz-/ & /tak.zo/'tickle' & \\
\hline
\end{tabular}

\subsection*{3.4.5 Nasal+Stop}
\begin{tabular}{|c|c|c|}
\hline /-mp-/ & /num.pok/ & 'love' \\
\hline /-mp \({ }^{\text {/ }}\) & /num.pe/ & 'broom' \\
\hline /-mc-/ & /sam.cok/ & 'bitter brinjal' \\
\hline /-mk-/ & /sam.ker/ & 'hair clip' \\
\hline /-nt-/ & /man.tə/ & 'brinjal' \\
\hline /-nk-/ & /in.ko/ & 'spouse' \\
\hline /-nk-/ & /ziy.kar/ & 'morning' \\
\hline /-nk \({ }^{\text {h }}\) / & /riy.k \({ }^{\text {ho/ }}\) & 'life' \\
\hline
\end{tabular}

\subsection*{3.4.6 Nasal+Nasal}
\begin{tabular}{lll} 
/-ny-/ & /nin.yai/ & 'happy' \\
/-nm-/ & /ran.mai/ & 'bronze' \\
/-mn-/ & /cam.nei/ & 'authorised' \\
/-nn-/ & /in.nei/ & 'marriage'
\end{tabular}

\subsection*{4.0 Syllabic Structure}

Like other kuki-chin groups of Tibeto-Burman languages, Chiru is also an agglutinative language. A lengthy word consisting of numerous syllables can be formed by adding a number of affixes to the root. But the main syllabic systems found in Chiru are monosyllabic, bisyllabic and trisyllabic. The following syllabic patterns illustrated with examples show the syllabic structures in Chiru. The dot (.) marks the syllabic boundary.

\subsection*{4.1 Monosyllables}

V
/a/ 'salty'
/e/ 'bowel motion'
/o/ 'yes'
\begin{tabular}{ll} 
VV \(\mathrm{ai} /\) & 'crab' \\
/ei/ & 'to chew' \\
/ \(\mathrm{i} /\) & 'to lament'
\end{tabular}

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\begin{tabular}{|c|c|c|}
\hline & /ui/ & 'dog' \\
\hline \multirow[t]{2}{*}{VC} & /in/ & 'house' \\
\hline & /En/ & 'to look' \\
\hline \multirow[t]{2}{*}{/an/} & 'curry' & \\
\hline & /um/ & 'bitter gourd' \\
\hline \multirow[t]{3}{*}{CV} & /ri/ & 'boundary' \\
\hline & /se/ & 'cow' \\
\hline & /ke/ & 'goat' \\
\hline \multirow[t]{2}{*}{/ra/} & 'war' & \\
\hline & /hə/ & 'teeth' \\
\hline \multirow[t]{4}{*}{CVV} & /rei/ & 'axe' \\
\hline & /nai/ & 'child' \\
\hline & /tui/ & 'water' \\
\hline & /loi/ & 'medicine' \\
\hline \multirow[t]{4}{*}{CVC} & /rik/ & 'lice' \\
\hline & /cem/ & 'knife' \\
\hline & /ban/ & 'arms' \\
\hline & /vun/ & 'skin' \\
\hline
\end{tabular}

\subsection*{4.2 Bisyllables}
\begin{tabular}{|c|c|c|}
\hline \multirow[t]{4}{*}{V.V} & /a.c/ & 'act of bowel motion' \\
\hline & /u.u/ & 'his/her brother/sister-in-law' \\
\hline & /a.a/ & 'saltiness' \\
\hline & /a.o/ & 'being calm' \\
\hline \multirow[t]{4}{*}{V.VV} & /a.ui/ & 'stale' \\
\hline & /e.ei/ & 'chewing' \\
\hline & /a.ai/ & 'widen' \\
\hline & /a.si/ & 'flexible' \\
\hline \multirow[t]{3}{*}{V.VC} & /a.cy/ & 'yellow' \\
\hline & /i.in/ & 'his/her house' \\
\hline & /a.ir/ & 'yellowing' \\
\hline \multirow[t]{3}{*}{V.CV} & /a.ra/ & 'fruit' \\
\hline & /u.ru/ & 'seed' \\
\hline & /a.pa/ & 'time' \\
\hline \multirow[t]{3}{*}{VV.VC} & /ai.cy/ & 'turmeric' \\
\hline & /ai.ck/ & 'crab excreta' \\
\hline & /ui.ck/ & 'dog's excreta' \\
\hline \multirow[t]{2}{*}{VV.CVC} & /ui.cok/ & \\
\hline & /ai.tay/ & urmeric' \\
\hline VC.VC & /En.om/ & tive' \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline & \multicolumn{2}{|l|}{/ar.sk/ 'hen's excreta'} \\
\hline CV.CV & \begin{tabular}{l}
/mo.ro/ /rithi/ \\
/vo.su/
\end{tabular} & \begin{tabular}{l}
'snake' \\
'wind' \\
'wild dove'
\end{tabular} \\
\hline CV.CVV & /mo.soi/ /me.lei/ /ma.lai/ & 'pulse' 'tongue' 'navel' \\
\hline CV.CVC & \begin{tabular}{l}
/ro.thok/ \\
/mu.luy/ \\
/ro.may/
\end{tabular} & 'brain' 'heart' 'dream' \\
\hline CVV.CV & \begin{tabular}{l}
/thei.rə/ \\
/tui.ra/ \\
/moi.nu/
\end{tabular} & 'fruit' 'thirst' 'bride' \\
\hline CVC.CV & \begin{tabular}{l}
/sok.so/ \\
/cik.ce/ \\
/mik.mo/
\end{tabular} & \begin{tabular}{l}
'snail' \\
'stingy' \\
'eyebrow'
\end{tabular} \\
\hline CVC.CVV & /vok.pui/ /sak.thei/ /lun.joi/ & 'female pig' 'eatable' 'whitestone' \\
\hline CVC.CVC & /nin.nak/ /not.sun/ /pok.rik/ & \begin{tabular}{l}
'eagerness' \\
'hurry' \\
'burden'
\end{tabular} \\
\hline
\end{tabular}

\subsection*{4.3 Trisyllables}
\begin{tabular}{|c|c|c|}
\hline V.CV.CV & \[
\begin{aligned}
& \text { /ə.mə.sə/ } \\
& \text { /ə.rə.pə/ }
\end{aligned}
\] & \begin{tabular}{l}
'thick' \\
'thin'
\end{tabular} \\
\hline CV.CV.CV & \begin{tabular}{l}
/sə.ro.za/ \\
/ra.kha.nə/
\end{tabular} & \begin{tabular}{l}
'stag' \\
'hesitation'
\end{tabular} \\
\hline CVV.CV.CV & \[
\begin{aligned}
& \text { /rai.tho.no/ } \\
& \text { /tui.ro.bo/ }
\end{aligned}
\] & 'leprosy' 'bath' \\
\hline CVV.CVV.CV & \begin{tabular}{l}
/vai.coi.ro/ \\
/doi.thei.pa/
\end{tabular} & \begin{tabular}{l}
'tax' \\
'magician'
\end{tabular} \\
\hline CVV.CVV.CVV & \begin{tabular}{l}
/rei.thei.boi/ \\
/nai.nei.boi/
\end{tabular} & 'unexplainable' 'childless' \\
\hline CVC.CV.CVV & \begin{tabular}{l}
/mek.re.sei/ \\
/sik.me.sei/
\end{tabular} & \begin{tabular}{l}
‘chilli’ \\
'mistake'
\end{tabular} \\
\hline CVC.CV.CVC & /mun.ri.kip/ /con.re.they/ & 'everywhere' 'gospel' \\
\hline
\end{tabular}

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\subsection*{5.0 Conclusion}

On the basis of the analysis, the following conclusions can be drawn:
(1) Chiru has altogether 18 consonants and 8 vowel phonemes. Semi-vowels are absent in this language.
(2) Chiru has 6 (six) diphthongs- / ai/, /ei/, /عi/, /วi/, /oi/ and /ui/. They are found occurring in all initial, medial and final positions of words excepting the diphthongs \(/ \mathrm{oi} /\) and \(/ \mathrm{ki} /\) which do not occur in the initial position. All the dipththongs in Chiru glide to the close front unrounded vowel /i/.
(3) Vowel and consonant sequences and geminations are abundantly found in Chiru.
(4) Chiru is also an agglutinative language. A lengthy word consisting of numerous syllables can be formed by adding a number of affixes to the root. But the main syllabic systems found in Chiru are monosyllabic, bisyllabic and trisyllabic.

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