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Urubú Phonology

Jim Kakumasu

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0. Introduction. The purpose of this paper is to describe the phonology of Urubú¹. The description includes the contrasts and variants of segmental phonemes and also posits higher level units, including syllable, phonological foot and phonological clause. A special study is made of border phenomena.

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1. Chart of the consonants.

	labial	alveolar	alveo- palatal	velar	labio- glottal
stops	/p/	/t/		/k/ /kʷ/ /ʔ/	
nasals	/m/	/n/		/ŋ/ /ŋʷ/	
fricatives		/s/	/š/		/h/
vibrant		/r/			
semivowels	/w/		/j/		

1.1. Consonantal contrasts. There are fifteen consonants in contrast one with the other; stops p, t, k, kʷ, and ʔ; nasals m, n, ŋ, and ŋʷ; fricatives s, š, and h; vibrant r; and semivowels w and y.

Examples of contrasts in some positions are noted below.

Stops p and t contrast word initially: peyu 'he blows', teyu 'type of small lizard'. Stops p, t, k, kʷ, and ʔ contrast word medially: tape 'flat', tate 'almost', mata 'name of an Indian', hake 'by its side', makak 'type of monkey', takʷar 'bamboo head arrow', akʷa 'I know', aʔe 'he/she/it', kaʔa 'forest'.

Nasals m, n, ŋ, and ŋʷ contrast word medially: mama 'papaya', nana 'pineapple', maga 'to count', magʷa 'type of frog'.

Fricatives s, š, and h contrast word initially: sururu 'to drip', šuru 'it is rough', huré 'he is happy!.

Semiconsonants w and y contrast word medially: awa 'someone', aya 'thus'.

1.2. Consonantal variants conditioned within the syllable. Stops p, t, k, kʷ, and ? are lengthened in stressed syllables; the greater the degree of stress, the greater the length. (For a description of stress see 4.1 and 4.2.) /kətu/ [ka'ttu] 'it is good', /tata/ [ta'tta] 'fire', /ka?̥a/ [ka'??a] 'forest'. Primary stress is written ['].

The phoneme /p/ has an allophone [pʷ] and an optional voiced variant [b]. [pʷ] occurs before high central vowel /ɨ/: /pɨ?̥a/ [pʷɨ'??a] 'liver', /pitam/ [pʷɨ'tam] 'tobacco'. [b] may occur in nonprimary stressed syllables: /arapuha/ [arabu'ha] 'deer', /yi pehi/ ['yi be'hi] 'axe is there', /ipe/ ['ibe] 'to him'.

The phoneme /t/ has an optional voiced variant [d]. [d] may occur in nonprimary stressed syllables: /heta ti pe/ [he'ta di be] 'there are many', /mira tāha/ [m̥i'ra d̥i'ha] 'a huge tree'.

The phoneme /k/ has an optional voiced variant [g]. [g] often fluctuates from a voiced [g] to a fricative [ɣ]. Slower speech tends toward the stop [g] and faster speech tends progressively toward the fricative [ɣ]. [g] occurs at word boundaries: /usak oho/ [u'sag oho] or [u'sag oho] 'he went to see', /pihe katu/ [pihe ga'tu] 'it smells nice'. (see also 3.3)

The phonemes /m/ and /n/ have as optional variants prenasalized stops [mb] and [nd] respectively. [mb] and [nd] fluctuate freely with [m] and [n] before oral vowels and nonnasal consonants. In normal speech, [mb] and [nd] occur less frequently and in some texts, not at all: /moy/ ['mboⁱ] or ['moⁱ] 'snake', /inami/ [ina'mbi] or [ina'mi] 'his ear', /ne/ ['nde] or ['ne] 'you, your', /henu/ [he'ndu] or [he'nu] 'he hears'.

The phoneme /r/ has an optional trilled variant [r̡] which generally occurs utterance finally: /yawar uwur/ [ya'war u'wur] 'the dog came', /yawar/ [ya'wa᷑] 'dog'.

The phonemes /ŋ/ and /ŋʷ/ have as optional variants [ŋg] and [ŋgʷ] respectively. [ŋg] and [ŋgʷ] occur more frequently in normal speech. In fast

speech [g] and [gʷ] may be heard: /haga/ [ha'gga] or [ha'gʷa] 'hour', /itagʷa/ [ita'gʷa] or [ita'gʷa] 'his buttock'.

The phoneme /y/ has optional variants [ñ] and [dž]. [ñ] often fluctuates with /y/ preceding nasalized vowels or nasals: /ereyā/ [ere'ñā] 'you run', /yəmi/ [ña'mi] 'he squeezes'. [dž] is lenis and fluctuates frequently with /y/ before high oral vowels /i/, /ɨ/, and /u/. Some speakers articulate [dž] more forcefully than others. [dž] occurs sometimes as [ž]: /yi/ ['dži] or ['yi] and sometimes [ži] 'axe', /yira/ [dži'ra] or [yi'ra] and sometimes [ži'ra] 'harmonies'.

The phonemes /s/ and /š/ have optional variants [ts] and [tš] respectively which fluctuates freely. The [t] in [ts] and [tš] varies among speakers from very lenis to lenis. Occasionally in emphatic speech, the [t] is fortis. Examples: /suʷu/ [suʷʷu] or [tsuʷʷu] 'he bites', /risā/ [ri'sā] or [ri'tsā] 'it is cold', /iša/ [i'ša] or [i'tša] 'it is fat', /rišā/ [ri'šā] or [ri'tšā] 'substitution'.

1.3. Consonantal variants conditioned by a contiguous syllable. A homorganic nasal occurs

preceding a voiceless stop when the stop occurs between nasalized vowels; /hetū/ [hē^Ntū] 'he smells', /iapū/ [iā^Npū] 'he is full (of food)'. For description of nasalization see 3.4.

The stop /k/ is lightly labialized when preceded by /u/. This type of labialization is lenis compared to that in the phoneme /kʷ/: /yukā/ [yukʷā] 'he kills', /tuka/ [tukʷā] 'he bumps'.

Phonemes /t/, /n/, and /ŋ/ are slightly palatalized when preceded by /i/: /itawa/ [it^Yawa] 'it is yellow', /ita/ [it^Ya] 'stone', /ihē/ [ih^Yē] 'I, my', /iham/ [ih^Yam] 'its cord', /ino/ [iñō] 'aspect marker', /hayno/ [ha^{iñō}] 'grandchildren'. When /n/ is articulated by its variant form [nd], the [nd] is not palatalized.

2. Chart of the vowels.

Oral vowels

	Front	Central	Back
High	i	ɛ	u
Low	e	a	o

Nasalized vowels

	Front	Central	Back
High	ī	ɛ̄	ū
Low	ē	ā	ō

|f| → [kʷ] | 02

2.1. Vowel contrasts. There are six oral and six nasalized vowels in contrast with one another. Oral vowels become nasalized if they occur contiguous to a nasal consonant (see 3.4). Inherently nasalized vowels (3.4) are in focus in this section. The vowels are: high front unrounded i and ī, high central unrounded ē and ī, high back rounded u and ū, low front unrounded e and ē, low central unrounded a and ā, and low back rounded o and ō.

High oral vowels contrast word finally: u?i 'manioc flour', u?ā 'arrow', u?u 'he eats'. Low oral vowels contrast word initially: eho 'go (imperative)', aho 'I go', oho 'he goes'. Front oral vowels contrast word finally: wewi 'it is light (in weight)', wewe 'he flies'. Central oral vowels contrast word finally: ahā 'it hurts', aha 'to cross'. Back oral vowels contrast word finally: yapu 'japu bird', yapo 'he makes'.

High nasalized vowels contrast word finally: yapi 'he shaves the hair off', iapū 'he is full'. High nasalized central vowel /ē/ occurs rarely and is therefore difficult to contrast. /kē?ē/ 'pepper', /ē/ 'not (negativizer)', and /kē/ 'future purpose aspect' are the only occurrences found thus far.

Low nasalized vowels contrast word finally: he^ñ 'it is sweet', ka^ñ 'it scars', puru^ñ 'umbilical cord', ha^ñ 'he sings', he^õ 'he is tired', ko^õ 'it stings, throbs'. Front nasalized vowels contrast word finally: pehí 'it is there', pehẽ 'you plural'. Back nasalized vowels contrast word finally: yawarú 'black jaguar', hũ 'big, lots', yarõ 'wild, fierce', ihõ 'he went'.

High front oral and nasalized vowels contrast word finally: yupi 'it stings', yupí 'he scrapes'.

Low front oral and nasalized vowels contrast as follows: pe 'trail', pẽ 'aunt'. Low central oral and nasalized vowels contrast word finally: i^ã 'his hair', i^õ 'his spirit'. High back oral and nasalized vowels contrast word finally: yapu 'japu bird', iapu 'he is full'. Low back oral and nasalized vowels contrast word finally: ipo 'his hand', ipõ 'it is straight and narrow'.

2.2. Vowel variants. Phonemes /e/ [æ] and /o/ [ɔ] have as optional noncontrastive variants [ɛ] and [ɔ] respectively. [æ] and [ɔ] occur more frequently: /pe/ [pæ] 'trail', /pako/ [pako] 'banana'.

2.3. Transitional sounds. A transitional sound approximating the semivowel [y] occurs between a high

front or central vowel and a low central vowel:
/iakā/ [i^Jakā] 'his head', */piahu/ [pi^Jahu]* 'it is new'.

A transitional sound approximating the semivowel [w] occurs between back vowels and front or central vowels; */yašuer/ [yašu^wer]* 'it is old', */koI/ [ko^wI]* 'tomorrow', */puam/ [pu^wam]* 'he stands'.
jáxer

These transitional sounds are not analyzed as consonants but are regarded as allophones of /i/ and /u/ respectively.

3. Syllables. A syllable consists of an obligatory nucleus filled by a vowel and an optional onset and/or coda filled by a consonant.

3.1. The syllable types are as follows: (periods are used to indicate syllable breaks) V n.Ms 'it hurts', VC pu.am 'he stands', CV ta.ta 'fire', CVC ku.tuk 'she washes, pierces'. CV syllable type occurs most frequently, followed by CVC, V, and VC.

All consonants occur as the onset of syllables and only /p/, /k/, /m/, /n/, /r/, and /y/ occur as the coda. Of these latter, /k/ and /r/ occur most frequently, /m/, /n/, and /y/ less frequently,

and /p/ is rare.

All vowels occur as the nucleus of a CV syllable type. Inherently nasalized vowels have not been found to occur in VC and CVC syllable types though lightly nasalized vowels occur contiguous to nasals (see 5.4).

3.2. CVi sequences are interpreted in two ways depending on whether stress occurs on the first or second vowel. When stress occurs on the second vowel, this is interpreted as two syllables, CV plus V. Examples: /wasai/ [wasa'i] 'açai fruit', /karai/ [kara'i] 'white man'. When stress occurs on the first vowel, the sequence is interpreted as a single CVC syllable, i.e. the final [i] is a consonant.

Examples: /tuy/ ['tuⁱ] 'he is there', /puhⁱ/ [pu'héⁱ] 'it is heavy'. There are no nonsuspect vowel clusters in the language and the [i] glide fills a C slot in such words as /tayahu/ [taⁱ'a'hu] 'large wild pig', /mayapa/ [maⁱ'a'pa] 'foster mother'². On the basis of this interpretation, consonant clusters occur over syllable boundaries. /payte/ [paⁱ'te] 'it is far away', /hayk^Wer/ [haⁱ.'k^Wer] 'after'.

3.3. Border phenomena. There are no consonant

clusters within syllables in Urubú. The term "border phenomenon" is used to describe what occurs when a consonant filling the coda of VC or CVC type syllable is followed by a consonant filling the onset of a CV or CVC type syllable across word boundaries. Border phenomena have been observed most often in normal or fast speech rather than in slow speech. In very slow speech, the feature of pause occurs and the border phenomena do not occur since each phoneme is articulated.

3.31. Reduction of phonemes. When the coda and the onset both contain the same consonant, only one is articulated. When /k/ occurs, it freely fluctuates from a voiced velar fricative [g] to a voiced velar stop [g].

Slow: kutuk katu

she-washes well

Normal: kutu gatu

Consonants /m/ and /n/ filling the coda of VC or CVC drop before a consonant filling the onset of a CV type syllable, and the vowel preceding the coda remains lightly nasalized (see 3.4). The onset consonant in the CV type syllable retains its shape except for /k/, which varies as described above.

Slow: aman pe

rain in

Normal: amā pe

Slow: mokən raho

Normal: moko raho

he-swallowed he-took-away

Consonants /k/ and /r/ filling the coda of VC or CVC type syllable drop before a consonant filling the onset of a CV type syllable.

Slow: mani'ok yane yapirok Normal: mani'o yane yapirok
manioc we we-peeled

Slow: ka'apor miriso

Normal: ka'apo miriso

wood-dweller woman (Urubú woman)

/p/ as a coda occurs rarely and is unchanged. This may be because it carries a semantic load signifying location which may be roughly translated 'at that spot'; /uhem ihap/ 'coming out place' (literally: it-comes-out nominalizer + p 'where it comes out').

/y/ as a coda is unchanged (see 3.2).

3.32. Open transition. In addition to the above, there is a contrasting phenomenon which occurs at word boundaries. Sometimes in normal speech both the consonant in the coda and the onset are articulated, and an open transition occurs. If /k/ occurs in the onset and/or coda, it generally varies to a [g] as described above. The open transitions are as follows: [s] following /i/ and /e/ -vC^eC-: /uker katu/

[uker⁶gatu] 'he sleeps well'; [e] following /ʌ/, /a/, or /o/ -vC^eə- ; /muhák raho/ [muhák^eraho] 'he causes it to arrive'; [u] following /u/ -vC^uə- ; /mákur panu/ [mákur^upanu] 'the ferret said', /kutuk katu/ [kutuk^ugatu] or [kutug^ugatu] 'she washes well'.

A transitional [ə] occurs between a nasalized vowel filling the nucleus of a CV type syllable and an oral vowel filling the nucleus of a V type syllable: /pirā iwe/ [pirā^əiwe] 'reddish', /porā iwe/ [porā^əiwe] 'sort of pretty'.³

3.4. Nasalization. There are two degrees of nasalization on vowels: inherent nasalization and light nasalization. Light nasalization is conditioned by nasal environments and it may be progressive or regressive.

3.41. Inherent nasalization refers to nasalized vowels which occur in oral environments: /ipō/ [i'pō] 'it is straight and narrow', /iʔə/ [i''ə] 'his spirit'.

3.42. Progressive nasalization occurs when oral vowels are preceded by nasals /m/ and /n/. These nasals progressively nasalize the vowel following them. /uruma/ [uru'mā] 'duck', /kuruni/ [kuru'mī]

'young boy'. It is possible to hear a phonetic difference between inherent nasalization and progressive nasalization when they occur syllable finally. For example, when a recorded tape is played backwards, the progressive nasalization is heard beginning orally and changing to a nasalized vowel before coming to the nasal. An inherently nasalized vowel begins nasalized.

Nasals /n/ and /nʷ/ do not nasalize progressively since the more frequent forms of these phonemes occur as [ŋ] and [ŋʷ] respectively (see 1.2).

When prenasalized stops [mb] and [nd] occur, progressive nasalization is stopped. /mono/ [mō'nō] but [mō'ndo] 'he sends', /yane/ [yā'nē] but [yā'nde] 'we, our'.

3.43. Regressive nasalization occurs when a nasal /m/, /n/, /v/, /vʷ/, or inherently nasalized vowel nasalizes the vowel preceding it. Examples: /aman/ [ā'mān] 'rain', /iŋa/ [i'ŋa] 'large wild string bean', /haga/ [hā'ga] 'hour', /yami/ [yā'mī] or [ñā'mī] 'he squeezes', /yupā/ [yū'pā] or [ñū'pā] 'he chips (wood)', /hatā/ [hā'tā] 'it is hard'.

Regressive nasalization may extend further than contiguous syllable but usage is variable and it

has not been discussed in this paper.

4. Higher level features. The stress, phonological foot, and the phonological clause will be discussed in this section.

4.1. Stress in relation to grammatical units.

Three degrees of stress are recognized: heavy stress ["], primary stress '", and secondary stress [*]. Heavy stress is significant within the phonological clause and often coincides with emphasis (see 4.32). Primary stress always occurs on the final syllable of words: /tata/ [ta'ta] 'fire'. Secondary stress most commonly occurs on every second syllable counting back from the primary stress in nonsuffixed words: /waruwa/ [wāru'wa] 'glass', /arapuha/ [arāpu'ha] 'deer'.

Suffixes perturb the stress pattern. The primary stress moves from the last syllable of the word to the suffix and secondary stress occurs where the primary stress was: /nupā/ [nu'pā] 'he hits', /nupāta/ [nupā'ta] 'he will hit', /nupām/ [nupā'm] 'he does not hit', /nupā̄ta/ [nupā̄'ta] 'he will not hit'.

Clitics take secondary stress and do not perturb the stress pattern of the word; /akuši/ [aku'si] 'agouti', /akuxi rehe/ [aku'sirehe] 'for agouti'.

4.2. Phonological foot. A foot consists of one or more syllables and has features of stress, pitch change, and duration. Generally the final syllable of a foot receives primary stress along with a pitch change. The pitch may go up or down. Occasionally, other syllables may follow the primary stress within the foot. Primary stressed syllable of a foot tends to be longer than the preceding syllables. Each foot tends to have the same duration whether it contains two syllables or five. In order to maintain this equal duration syllables are articulated very quickly, sometimes to the point that they are barely audible. The upward limit of the number of syllables in a foot has not yet been determined. A foot generally begins on a lower pitch than the last syllable of the preceding foot. Feet commonly coincide with grammatical words. Example:
ka'a pui monokuhu // 'forest thin-things they-chopped-lots'. Foot primary stress is written ['], secondary stress [']. Spaces indicate foot divisions. In this example, the phonological clause is comprised of three

2.12. Coordinate phrase consists of repeated head tagmemes. The head tagmeme may be modified as described above.

$$+ H:n \dots \pm (+ H:n + \text{coord:coord})^n$$

The formula indicates that in order to have a coordinate phrase, two head tagmeme must occur. When the second head occurs, then a coordinator must occur as well. The superscript n makes this an open-ended construction. The dots indicate that other items may occur between the head.

Examples:

kapitā₁ ruku₂ ... juse₃ namo₄
 n n n ad
 H H coord

'capitão₁ ruku₂ ... José₃ also₄' (capitão ruku and José)

nasuj₁ ri ki ihē₂ namo₃ ihō₄
 n part pr ad v
 H H coord P

'Nasuj₁ went₄ I₂ also₃' (nasuj and I went)

2.2. Axis-relator phrases. Two types of axis-relator (ax-r) phrase are recognized. These are designated ax-r1 and ax-r2.

2.21. Ax-R1 consists of an obligatory axis filled by noun phrases (2.1), adverbs, or nominals (4.13) followed by an obligatory relator filled by clitics and particles.

$$\text{Ax-R1} = + \text{Ax:n ph/ ad/ nominal} + \text{rel:cli /part}$$

Examples:

ka'a₁-rupi₂ 'through₂ the woods₁'
 n cli
 ax - rel

coincides with grammatical word stress⁴. Heavy stress and significant pitch rise occur on the word that is emphasized. Examples: // ¹karai ²ri ³ki ⁴k'eh;e·// 'it was the white men LON-N-N-G ago', // ¹he'ō· ²tam̄y ³a'e ⁴ke ⁵ma // 'the old man is VERY TIRED'.

4.33. Three basic intonational patterns are recognized for statements and two for questions. Statement intonation patterns are: step down, level, and step up contours.

Step down pattern starts high and goes to low. Falling pitch generally occurs with the last syllable of clauses of this pattern.

// ¹ko ²yehák ³yayú // 'thus we arrived'

Level pattern starts mid and goes to low. There may be variations of pitch but these are considered nonsignificant. Level, rising, or falling pitch may occur with the last syllable of clauses of this pattern.

// ¹xe ²ri ³ki ⁴miniya ⁵lñe ⁶rehe ⁷unk // 'miniya came to me there'

Occasionally, the level pattern may begin on a high pitch and remain high throughout the clause. The last syllable of the clause may rise or fall slightly.

One text contained 17 contiguous clauses with this high level pattern. This seems to indicate close sequences of action.

Step up pattern starts low and goes to high. Rising or falling pitch may occur with the last syllable of clauses of this pattern.

// ame²e yane yarur iq^va // 'that's what we brought to eat'

One question intonation pattern has level pattern with high pitch rise in the last foot. This pattern may include a question morpheme, e.g. /m̩/ // m̩ iho mama // 'where did he go?'

A second question intonation pattern has high pitch throughout the clause. Heavy stress may occur in the last foot.

// upa monok // 'did you finish cutting?'

Some questions may occur with the step down pattern as for statement.

// m̩ yeteuk ramuy // 'where is grandfather tick?'

4.34. Several features characterize the final foot of a clause.

It occurs with one of the three pitch features described in 4.31, i.e. level, rising, or falling.

Laryngealization [y] occurs frequently with

gradual loss of voicing. Its significance preceding long pause has not been ascertained. Before short pause it seems to be a device for gaining time to think what to say next, much like English "uhm". In this use, it often occurs with /na?e/ 'what, something, someone'. Some speakers use laryngealization more than others. One speaker gave almost a whole text laryngealized. Examples: *ma?²e / 'something...', // pe te?²e yane apo yai ya?²e ?N //* 'we are there now'.

Several types of release [>] have been observed. Releases vary with different speakers and it is difficult to assign meaning to their occurrence. The releases are: voiceless nasal [N] (see paragraph above), double glottal [? - ?], voiceless vowel [V], schwa [e], and breathiness [B]. Friction [.] may sometimes accompany voiceless vowels.

5. Notes on text. The text is written phonemically except for the last syllable before pause to illustrate the various releases. Notations used in this text are discussed in 4. Parentheses in the English translation are used in two ways. Those without numbers are words added for smooth

reading. Those with numbers are Urubú words which are superfluous for English translation. Articles (a, the) do not occur in Urubú but are not put in parentheses.

1. xo₁ ri ki₂ ihē₃ aho₄ | ≠ ma^e₅ name₆ kaitā₇ name₈ ↓ //
2. ko₁ pe₂ rupi₃ yaho₄ ↓ // 3. ko^e₁ ↑ ≠ ko₂ rupi₃
- yassiri₄ | ≠ ko₅ rupi₆ yayere₇, yayu₈ ↓ // 4. ma^e₁
- yasi₂ ra^ar₃ ri ki₄ amahem₅ we₆ amo₇ ↓ ≠ yasi₈ ra^ar₉ ↓ //
5. ma₁ kaitā₂ ↑ / yasi₃ ra^ar₄ umahem₅ ↓ // 6. petei^e₁ ↓ //
7. ko₁ rupi₂ yayu^a₃ ↓ // 8. ko₁ kaitā₂ ma^e₃ ↓ /
- waaai₁ muyin^a₅ ↓ // 9. ko₁ yane₂ yahik₃ yayur₄ ↓ //
10. ko₁ yahik₂ yayur₃ ↓ // 11. ame^e₁ te^e₂ yane₃
- yaruu₄ ↓ //

Translation.

1. It was₂ over there₁ (that) I₃ went₄, with₆ someone₅ with₆ kaitā₇. 2. We went₄ along₃ this₁ trail₂. 3. Here₁..along₃ here₂ a turtle₄..we (made
a) turn₇ (coming₈) along₆ here₅. 4. Uhm₁ it was₄ another₇ little₃ turtle₂ (that) I₅ barely₆ found₅,
a little₉ turtle₈. 5. Wha₁.. (as for) kaitā₂, he
found₅ a little₄ turtle₃. 6. One₁. 7. We came₃
along₂ here₁. 8. Here₁ kaitā₂ uhm₃, he picked₅
açai₄. 9. Thus₁ we₂ arrived₃ (coming₄). 10. Thus₁
we arrived₂ (coming₃). 11. That's₁ the only₂ thing₁
we₃ brought₄.

Footnotes

¹Urubú is spoken by about 500 Indians in the state of Maranhão, Brazil, and is classified as Tupi-Guaraní by F. John Duval Rice (*A Pacificação e identificação das Afinidades Linguísticas da Tribo Urubú dos Estados de Pará e Maranhão*, 1928-1929). Data have been collected during field trips to the village of Capitão Xitarixá on a tributary of the Gurupi river during the years 1962-1965 and four months of 1967. Thanks are due to the Museu Nacional of Rio de Janeiro under whose auspices field work was done and to the Serviço de Proteção aos Índios for granting permission for field trips, and to the Indian agent, João Evangelista de Carvalho, for his assistance. The author gratefully acknowledges help on the earlier phonemic analysis by Robert Meader and subsequently from other colleagues at the 1968 S.I.L. Technical Papers Workshop in Belém, Brazil.

²One word has been found which has as its glide a high central vowel /ɨ/. [munu^ɨ] or [mundu^ɨ] 'he goes shouting'.

³Where transition [n] occurs in Urubú, other related

languages, e.g. Guajajara and Assurini, have an invariant [i] as part of the morpheme, e.g. *piraq* and *poxo*.

*In Uribó songs, the strong beat (akin to the downbeat in a musical measure) also coincides with grammatical word stress.