

Paumarí Phonemic Statement

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Anápolis - GO
2009***

*This paper is essentially the same as the previous version made available in 1964 as No. 84 of the Arquivo Lingüístico (Summer Institute of Linguistics, Brasília, DF); only the page size and numbering have been changed, and a few minor typographical errors and errors of organization corrected. The analysis has not been changed in any way.

I. Introduction.

The Paumarí Indians are located at the mouth of the Sepatini River, Lagoa Marrahã which is near Bom Futuro on the Purus River, and also on the Ituxi River. The language is ordinarily stated to belong to the Aruak family group. There are approximately 150 speakers of the language. They also are fluent bilinguals. This statement is based on the tribal visits made from March to June and August to November 1964. This data was gathered generally from the speakers living at Lagoa Marrahã and from the visiting tribal members of the Sepatini River group. In particular, the two informants used were: Divaldo who is about 20 years old, and Ezilda who is approximately 25 years old. They both have a good command of the Portuguese language.

II. Chart of phones.

Non-lengthened			Labial	Labial-dental	Alveolar	Alveo-palatal	Velar	Glottal
Stops	Unaspirated	Vl.	p		t		k ḳ	ʔ
		Vd.	b		d		g	
	Aspirated	Vl.			t ^h		k ^h	
		Vd.	ɓ		ɗ			
	Affricated	Vl.					č	
		Vd.					č̣	
Fricatives	Vl.			f	s	š	h	
	Vd.		w	v				
Nasals	Vd.		m		n			
Vibrants	Vd.				ɾ ⁱ ɾ ^u	ɹ		

Lengthened			Labial	Labial-dental	Alveolar	Alveo-palatal	Velar	Glottal
Stops	Unaspirated	Vl.	p·		t·		k· ḳ·	ʔ·
		Vd.	b·		d·		g·	
	Aspirated	Vl.			t ^h ·		k ^h ·	
		Vd.						
Affricated	Vl.					č·		
	Vd.					č̣·		
Fricatives	Vl.			f·	s·	š·	h·	
Nasals	Vd.		m·		n·			

Vocoid Chart

		Oral Unrounded			Nasalized Unrounded				
		Front	Central	Back			Front	Central	Back
High	Close	i			High	Close	ĩ		ũ
	Open	ɨ		ʊ		Open			
Mid	Close		ə		Low	Close			
	Open		ʌ			Open		ã	
Low	Close				Length				
	Open								
							i·	a·	u·

III. Interpretation procedures.

A. Segments which may be either vowel or consonant.

[w/ʊ] is interpreted as [w] when it freely fluctuates with [v] and has slight friction. It does not occur contiguous to another consonant. [ʊ] occurs elsewhere.

ex.	w	u
	'wi·fʊ	'papaɣaio'
	'wi·sʊ	'peixe'
	'tʊp·ʌwʌ	'shell'
	'kʌn·ʌwʌ	'canoa'
	'ka·wʌfʌ	'tesoura'
		'meu pé'
		'papagaio'
		'panaco'
		'fruta'
		'tambaqui'

B. Etic sequences which may be either emic units or sequences. There are no non-suspect CCV syllable patterns, therefore [tʃ] and [dʒ] are interpreted as a single consonant unit, [č] and [ǰ].

ex.	č	ǰ
	'pʌʔ·lčʌ	'pequeno'
	či'ka·ʔdʌki	'azedo'
	'čʌn·ʌki	'doce'
	'ʔʌtčʌnʌ	'miudo'
		'cubiú'
		'pedra'
		'tabaco'
		'noite'

[ʔ] is interpreted as a single consonant when occurring between two vowels and utterance initial. [ʔ] always occurs medially before implosive stops and they are interpreted as a single unit.

ex.	'sʌʔ·ʌɫ	'mão'	'ʌʔdɫkɫ	'maduro'
	sɪd·ʌʔɫ	'urucu'	'ʔa··sʊ	'tia'
	'ʔʌʔʊ	'beiju'	'ʔa··ʃʊ	'irmão mais velho'
	'hɫʔ·ʊnɫ	'alí'	'ʔʊhĩ	'beads'
	'ʌfʌ·buʔʊʌ	'terra firme'	'ʌʔʂʌkĩ	'molhado'
	'ʔɫʔʊʌ	'tambaqui'	'ʔʌʔdʊ	'pacu'

In the stressed syllable, phonemic or non-phonemic length of the vowel may occur, or the following consonant may be lengthened.

'CV·CV V may be phonemically long preceding any consonant and is interpreted as two separate vowel units.

'CV·CV V may have a phonetic half length when the following consonant is w, r, ʃ, and is interpreted as a single unit.

'CVC·V All consonants except w, r, ʃ, are lengthened following the stressed syllable when its preceding vowel is short. C· is interpreted as a single unit.

In rapid speech the non-phonemic length is minimal except on the primary stress of the utterance.

ex.	'CV·CV		'CV·CV		'CVC·V
'dʌ··mʌ	'anta'	'ka·wʌfɫ	'tesoura'	'dʌm·ʌɫ	'pé'
'ʃu··fɫ	'pássaro'	'ʃu·fɫ	'machado'	'sʌf·ɫnɫ	'sol'
'wi··sʊ	'peixe'	'ʃu·ʃiɫʃʊʊ	'peixe'	'wɫs·ɫ	'cigarra'
'ʔa··ʃʊ	'irmão'	'a·wʌɫ	'canela'	'mʌk ^h ·ɫʃiʌ	'homem'
'ʔa··sʊ	'tia'	'si·ʃiʊʃiʌ	'calça'	'dʊd·ʊfɫ	'pitiú'
'ku··fʌfʊ	'sardinha'	'ma·ʃɫhĩ	'pium'	'bʌb·ʌdɫ	'pirarucu'

The timing of a CVV sequence is equal to that of two syllables whether the vocoids are identical or different except when u occurs initially in a vowel cluster in an unstressed syllable and is preceded by the stops p, b, k, ɡ, ʔ. Then the CVV unit has the timing of a CV unit.

ex.	Timing two units 'CVV		Timing two units CVV		Timing one unit CVV
'ʃuimʌ	'índio'	'pa·fʌɫ	'açai'	i'tʌp·ʊʌ	'prego'
'ʃuumʌ	'piara'	'ku·fɫʊ	'peixe'	ʌmʌ'boʔ·ʊɫ	'elbow'
'mʊɫʔdɫ	'castanha'	'hʊtʌɫfɫ	'veado'	kʌ'mʌb·ʊʌ	'órfão'
'ʃʌʊʔ·ʊʃʊʊ	'cutia'	'ku·fɫʌtɫ	'sorva'	'hʊɡ·ʊɫ	'mata'
'piisɫʃiɫ	'grilo'	bʌ'ʃiʌsɫʌ	'melancia'	'ʔɫʔʊʌ	'tambaqui'
'ʔaasʊ	'tia'	'wʌnʌpʌpʌʊ	'bacurau'	'mʊʃʊʊbʊɫ	'orelha'

All possible vowel clusters occur [ʌɪ, ɪʌ, aʊ, ʊʌ, ɪʊ, ʊɪ] and are interpreted as two syllables.

ʻVV	'mʊɪʔdɪ	'castanha'	'mʌiʔdʌ	'pente'
	'mʌɪsʌ	'noivo'	'buʌhʌ	'nome de Divaldo'
	'ʊʌt ^h ĩ	'meu idioma'	'ʌɪhĩ	'nossos lábios'
VʻV	ɪ'ʌt ^h ·ɪnɪ	'teu idioma'	ʊ'a·bʌni	'minha língua'
	ʊ'ɪhĩ	'meus lábios'	nɪ'u·gʌkɪ	'não sei'
VV	'pa·fʌɪ	'açai'	i'tʌp·ʊʌ	'prego'
	'ikʊʌkʌ	'anzol'	aʊ'kʌdi'mʊwʌɪ	'nossa flor'

IV. Chart of the phonemes.

Consonants		Labial	Labial-dental	Alveolar	Alveo-palatal	Velar	Glottal
Stops	VI.	p		t		k	ʔ
Unaspirated	Vd.	b		d		g	
Aspirated	VI.			t ^h		k ^h	
Implosive	Vd.	ɓ		d̥			
Affricated	VI. Vd.				c j		
Fricatives		w	f	s	ʃ		h
Nasals		m		n			
Vibrants				r	ʁ		

Vowels	Front unrounded	Central unrounded	Back relaxed
Oral	i	a	o

Stress	'
	'

V. Evidence for phonemic decisions. (See enclosed lists, pp. 9-14)

VI. Formational statement of phonemes.

Lengthened consonants occur only following the stressed syllable; (see no. III. B.)

Aspirated stops and h cause breathiness of the preceding and following vowel. Pre-aspiration precedes a voiceless velar stop following a stressed syllable containing an implosive stop and central vowel.

- 1. Stops** /p, t, k, ʔ, b, d, ɡ, t^h, k^h, ɓ, ɗ, c, j/
- /p/ [p] Voiceless bilabial unaspirated stop.
- /b/ [b] Voiced bilabial stop.
- /t/ [t] Voiceless alveolar unaspirated stop.
- /d/ [d] Voiced alveolar stop.
- /k/ [k̟] Voiceless velar backed unaspirated stop. [k̟] occurs in a syllable with high back vowel or adjacent to a syllable containing an implosive stop.
- [k̠] Voiceless velar unaspirated stop. [k̠] occurs elsewhere.
- /ɡ/ [ɡ] Voiced velar stop.
- /ʔ/ [ʔ] Voiceless glottal stop.
- /t^h/ [t^h] Voiceless alveolar aspirated stop.
- /k^h/ [k^h] Voiceless velar aspirated stop.
- /ɓ/ [ɓ] Voiced bilabial implosive stop.
- /ɗ/ [ɗ] Voiced alveolar implosive stop.
- /c/ [č] Voiceless alveo-palatal affricated stop.
- /j/ [j̟] Voiced alveo-palatal affricated stop.
- 2. Fricatives** /w, f, s, š, h/
- /w/ [w] Voiced labial flat fricative.
- [v] Voiced labial dental flat fricative. [w] and [v] occur in free fluctuation.
- /f/ [f] Voiceless labial dental flat fricative.
- /s/ [s] Voiceless alveolar grooved fricative.
- /š/ [š] Voiceless alveo-palatal grooved fricative.
- /h/ [h] Voiceless glottal fricative.
- 3. Nasals** /m, n/
- /m/ [m] Voiced labial nasal.
- /n/ [n] Voiced alveolar nasal.
- 4. Vibrants** /r, ɾ/
- /r/ [ɾ̞^u] Voiced alveolar dark flap vibrant. [ɾ̞^u] occurs contiguous to the high back vowel.
- [ɾ̞ⁱ] Voiced alveolar clear flap vibrant. Occurs elsewhere.
- /ɾ̞/ [ɾ̞] Voiced alveo-palatal retroflexed grooved reverse flap vibrant.

B. Vowels

Lengthened vowels occur only in the stressed syllable. (see no. III. B.)

Utterance final vocoids tend to be nasalised and those contiguous to nasal contoids.

/i/	[i·]	Voiced high close front lengthened unrounded vocoid.
	[ĩ]	Voiced high dose front nasalized unrounded vocoid.
	[i]	Voiced high close front unrounded vocoid.
	[ɪ]	Voiced high open front unrounded vocoid. [i] and [ɪ] freely fluctuate but [ɪ] is preferred.
/a/	[a·]	Voiced low open central lengthened unrounded vocoid.
	[ã]	Voiced low open central nasalised unrounded vocoid.
	[ə]	Voiced mid close central unrounded vocoid. [ə] occurs between two [ɦ].
	[ʌ]	Voiced mid open central unrounded vocoid. [ə] and [ʌ] fluctuate utterance final, but [ʌ] is preferred.
/o/	[u·]	Voiced high close back lengthened relaxed vocoid.
	[ũ]	Voiced high close back nasalized relaxed vocoid.
	[ʊ]	Voiced high open back relaxed vocoid. The [ʊ] may be slightly raised or lowered.

C. Stress

/ˈ/	[ˈ]	Stress normally occurs on the ante-penult syllable or on the initial syllable of two syllable words. Stress occurring elsewhere is marked with '.
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VII. Distribution of phonemes. Syllable patterns.

CV	ex.	<u>pi</u> 'ririka	'frito'	' <u>ba</u> badi	'pirarucu'
		' <u>pa</u> rai	'açá'	' <u>ci</u> naki	'doce'
		' <u>do</u> roro	'fruta'	' <u>ka</u> waîi	'tesoura'
V	ex.	' <u>i</u> sai	'criança'	<u>a</u> 'rapaki	'amargo'
		'jo <u>fa</u> i	'esteira'	ka <u>i</u> 'pohiki	'tem muito'
		<u>i</u> 'tapo <u>a</u>	'prego'	'si· <u>ro</u> i	'roçado'

The occurrence of phonemes /p, t, g, c, š, t^h, r/ is limited.

The phonemes /g, t^h, j, ʙ, š, r/ are restricted in the unstressed initial syllable on the word level.

Stress does not occur on the final syllable on the word level.

Part of the word may be reduplicated consisting of CVCV or a CVV.

Primary stress can fluctuate on either the first or second syllable of the 'CVCVCV. Secondary stress then falls on the original 'CVCVCV thus making:

ex. 'wʌg·ʌki 'claro, luz'
 'CVC·V "CVCVCV or CV'CV· "CVCVCV
 wʌg·ʌ "wʌgʌni wʌ'ga· "wʌgʌni 'cedo'

In CVVCV the stress falls on the second syllable of the reduplicating syllable.

ex. CV'V·CVVCV
 fʊ'a·fʊʌni 'embrulhado'
 bu'a·buʌni 'fervendo'

When stress falls on the second syllable of either of the above reduplications, there is phonetic half lengthening of the vowel, and the following consonant never lengthens. When the whole word is reduplicated and consists of a CVCV, the syllable may occur as one of the following three patterns:

ex. CV'CVC·VCV 'CVC·V "CVCV
 ku'suk·usu 'cutiara' 'ʔʌm·u "ʔʌmu 'prima'
 CV'CV·CVCV
 mʌ'fʌ·mʌfʌ 'marimari'
 mu'tu·mutu 'canapú'

Contrastive stress occurs in a few words.

ex. 'dʌi·fʌfʌ 'sieve' dʌ'fʌi·fʌ 'inseto'
 'wʌʔdʌmʌ 'pato' wʌ'ʔdʌm·ã 'pés dêles'

Stress may fluctuate on some words.

'ɪp·ʊhɪkɪ ɪ'pʊh·ɪkɪ 'tem muito'
 'nʌd·ʌʒʌkɪ nʌ'da·ʒʌkɪ 'vermelho'

DISTRIBUTIONAL CHART OF PHONEMES

Voiceless Stops

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
				igat ^h iki 'segurar'		
t ^h	t ^h at ^h a 'passaro'			bat ^h aki 'podre'	bit ^h a 'carapanã'	
	t ^h ofo 'panaco'			?it ^h oni 'azuado'		
				mak ^h ira 'homem'		
k ^h	k ^h anaki 'pesado'	k ^h afofaki 'está chovendo'	fak ^h ajahi 'plantar'	jak ^h awi 'desenteria'		mak ^h a 'cobra'
			fok ^h ajahi 'costurar'	mok ^h odo 'peixe'		
	piisiifi 'grilo'	pisána 'gato'	kapiripa 'peixe'	papira 'papel'		katatopi 'cedro'
p	pa?ici 'pequeno'	pacahari 'banana'	kapapiri 'peixe'	topawa 'shell'		kapiripa 'peixe'
	poto 'pássaro'	pokonofi 'bico do pato'		waporo 'navio'		
	tiwa 'urucu'	tikafohi 'palha'	jamatikofi 'bicho do casco'	kotiti 'peixe'		ko?iati 'sorva'
t	tapi 'cipó'	tarasara 'terçado'	itapoa 'prego'	hotaiifi 'veado'		kapita 'peixe'
	topawa 'shell'		matobiri 'peixe'	ajotofo 'mata'		motómoto 'canapu'
	kidi?i 'pássaro'			tikiifi 'pássaro'		fo?i 'lombriga'
k	kapita 'peixe'	kapiripa 'peixe'	makapofo 'cupuaçu'	makaifi 'roupa'		kanaka 'cacau'
	kofo 'pássaro'	koráwa 'corda'	okojoa 'mergulhão'	dikosi 'macaco cheiro'		masiko 'lua'

Voiceless Stops

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
ʔ	ʔicani 'miudo'			paʔici 'pequeno'		kamaʔi 'piolho'
	ʔasi 'puppy'	ʔaʔakawa 'galinha'		naboʔani 'embaixo'		haʔã 'sim'
	ʔohi 'beads'	ʔoʔoija 'eu entro'	iʔomani 'você está deitado'	soʔofo 'paneiro'		maʔõ 'peixe'
c	cinaki 'doce'	cikaadaki 'azedo'				paʔici 'pequeno'
			pacahari 'banana'	ʔicani 'miudo'		
			kocoriki 'strong smell'	macoroki 'bad smell'		

Voiced Stops

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
b	bi ^h a 'carapanã'	binofiki 'ele quer'	nabídi 'pescoço'	kabisi 'kindling'		kabi 'coati'
	babani 'língua de pirarucu'	baʔijafo 'incense'	ibanaʔi 'caju'	babani 'língua de pirarucu'		wabonoba 'tucunaré'
	bowiʔi 'estrela'	bodinija 'dentro'	wabonoba 'tucunaré'	jaboni 'também'		jinabo 'caba'
d	dikosi 'macaco cheiro'		bodinija 'dentro'	didisi 'patauí'		nabídi 'pescoço'
	dadahi 'segurar pau'		kodanahi 'assado'	kodahi 'arco'		boda 'mandioca'
	dodoʔi 'pitiú'		kamaodofohaki 'cego'	dodoʔi 'pitiú'		bodo 'peixe'
g	gihaki 'ralar'					jogi 'nome de mulher'
	gat ^h aki 'segurar'		gánogánoki 'cisco'	wagaki 'luz'		siriga 'borracha'
	goʔa 'casa'			hogoi 'capim'		wago 'peixe'

Voiced Stops

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
	jinabo 'caba'			kojira 'colher'		
j	jafoi 'espinho'		kajapari 'peixe'	kajara 'cubiú'		naraja 'laranja'
	jomahi 'cachorro'		řajomahi 'medir'	sajoki 'amolado'		wanajo 'capitari'
	ḃisana 'estragado'					
ḃ	ḃaḃana 'calango'			sabaḃa 'mutuca'		wabaḃa 'barata'
	ḃoḃa 'velho'					ḃaḃo 'banana'
	ḃiřiři 'sieve'	ḃiřiři 'inseto'		jaḃini 'novo'		kaḃaḃi 'cabeça'
d'	ḃaama 'anta'		oḃáma 'meu pé'	kaḃaḃi 'cabeça'		sabaḃa 'mutuca'
	ḃoki 'lombriga'		kaḃomahaki 'cozinhar'	wiḃoři 'macaco barrigudo'		mok ^h oḃo 'peixe'

Fricatives

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
				safini 'sol'		migafi 'fruta'
f		fařařaki 'coçar'		nafani 'ovo'		banafa 'ovo'
			nihafóřihiki 'quanto é'	řafoki 'inchado'		
	wiḃoři 'macaco barrigudo'	wiřadaki 'magro'	kawironi 'balançar'	kawina 'guariba'		mařawi 'abano'
w	waporo 'navio'	wabonoba 'tucunaré'	sawahařo 'tracajá'	kawasi 'envira'		topawa 'shell'
	wóřoniki 'cair'					

Fricatives

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
	sipaři	sipatihi	kasisihi	basina	dikosi	
	'batata doce'	'banana'	'cigarro'	'banha'	'macaco barrigudo'	
s	sapiwa	sajořiiki	samosamohi	asafi	maisa	
	'chapéu'	'cego'	'scabs'	'pele'	'noivo'	
	sořořo	sořiřioki	kosokoso	nosoma	kosokoso	
	'paneiro'	'leaky'	'cutiara'	'bacuri'	'cutiara'	
	siina				řasi	
	'nome de Maria Alvina'				'puppy'	
ř				řisana		
	sooni			'estragado'		
	'irmão mais novo'					
	hikoři	hidanija	pahihari	bihini	kodahři	
	'espelho'	'ontem'	'lima'	'pena'	'arco'	
h	hajiři	hahaniki	wahajaři	gihaki	pahã	
	'tabaco'	'rindo'	'pássaro'	'ralar'	'água'	
	honoři		mahořioki	jájahoři	kařahõ	
	'socó boi'		'almofada'	'cigana'	'grande'	

Nasals

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
	mirisi			řamiki	wanami	
	'caititu'			'dois'	'remo'	
m	makaři	mabidiři	amakařiiki	jomahi	nosoma	
	'roupa'	'cobra'	'perto'	'cachorro'	'bacuri'	
	mok ^h ini	motómoto	káwamóniki	kamotři	gamo	
	'apagado'	'canapu'	'doente'	'pote'	'mulher'	
		nioogaki		hidanija	babani	
		'não sei'		'ontem'	'língua de piraracu'	
n	naraja	nabídi	kanařawa	kanaka	basina	
	'laranja'	'pescoço'	'pássaro'	'cacau'	'banha'	
	nosoma		onofiki	bononi	bano	
	'bacuri'		'eu quero'	'junto'	'piranha'	

Liquids

	Initial Syllable		Medial Syllable		Final Syllable	
	'CV	CV	'CV	CV	'CV	CV
r			piririka 'frito'	piririka 'frito'	kapapiri 'peixe'	
			koráwa 'corda'	naraja 'laranja'	kajara 'cubiú'	
			moroboni 'chifre'	dororo 'fruta'	dorodoro 'bola'	
r̂	řafaki 'inchado'	řak ^h ajahi 'plantar'	bařijaro 'incense'	mařihi 'pium'	kawaři 'tesoura'	
	řooni 'name de Zé Rato'	řok ^h ojahi 'costurar'	ařakawa 'galinha'	đařaři 'socó rosa'	jařa 'gente de fora'	
			sořořoki 'leaking'	dořořo 'sapo'	dořořo 'sapo'	

Vowels

	Initial Syllable		Medial Syllable		Final Syllable	
	'V	V	'V	V	'V	V
i	ihĩ 'labios'	ibanaři 'caju'	oíno 'meu dente'	káijoi 'barriga'	jařoi 'osso'	
a	ama 'sangue'	abiniki 'morto'	iájoiki 'voce vai voltar'	íkoaka 'anzol'	arajoa 'zé prego	
o	ohoho 'tosse'	omawaři 'gafanhoto'	iok ^h aki 'você vai'	jáořoro 'cutia'	wao 'cuia'	
i		CVV/VV	CVV/VV	CVV/VV	CVV/VV	CVV/VV
			biawik ^h aki 'ele vai levar'	ahiana 'cantamos'		kódiámia 'minha mãe'
a	řai 'comida'	waikajařo 'boto tucuxi'	abáisana 'peixe'	hotaiři 'veado'	kořio 'peixe'	
	wao 'cuia'				wánapápaio 'bacurau'	

Vowels

	Initial Syllable		Medial Syllable		Final Syllable
	doi		majóiîfiîfi	nókoi?áfo-	sifoi
				rani	
o	'fruta'		'pato'	'acordar'	'roçado'
	koa	oadisaki			jafoa
	'ratinho'	'estou			'porcupine'
		tossindo'			