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## Traversing language barriers: 'Witoto' signal drums from Northwest Amazonia

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## 1    The *People of the Centre* and the 'Witoto'

Numerous cultural and linguistic areas have been recognized throughout Amazonia. They consist of related and unrelated ethnolinguistic groups which share common cultural and linguistic traits. Such areas include Upper Rio Negro, Vaupés, Guaporé-Mamoré, and Upper Xingu.[1] The Caquetá-Putumayo (C-P) region, spanning across the Caquetá and Putumayo River Basins in southern Colombia and northern Peru, is an example of a cultural area. In the recent years, the C-P groups have become to be wider known as the *People of the Centre* (Echeverri, 1997).[2] They form a 'cultural complex' that consists of eight dispersed ethnolinguistic groups that belong to three language families (Witotoan, Boran, and Arawak) plus one isolate (Andoke) (see Diagram 1).
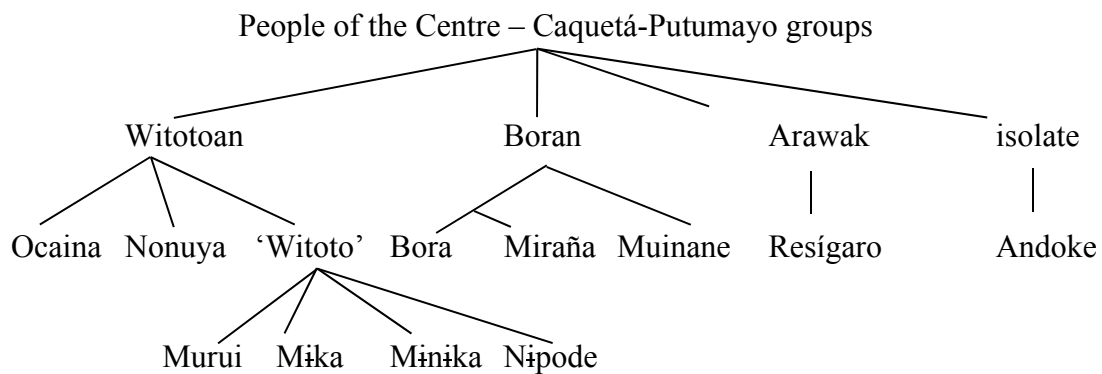
People of the Centre – Caquetá-Putumayo groups



Diagram 1. Ethnolinguistic groups that form the Caquetá-Putumayo cultural area

[2] The name *People of the Centre* (*Gente del Centro* in Spanish) refers to the shared mythical origin, the 'Hole of Awakening' (Wojtylak, forthcoming). They also refer to themselves as *Children of Tobacco, Coca, and Sweet Yuca* (Sp. *Hijos del tabaco, la coca y la yuca dulce*).

The C-P peoples consider themselves to be distinct from groups to the north (i.e. Cariban, East and Central Tucanoan, and Arawak-speaking peoples), to the west (West Tucanoan and Kichwa), and to the east and south (West Tucanoan, Peba-Yaguan, Tupí-Guaraní, and Ticuna, an linguistic isolate). Approximate locations of C-P groups are illustrated in Map 1.
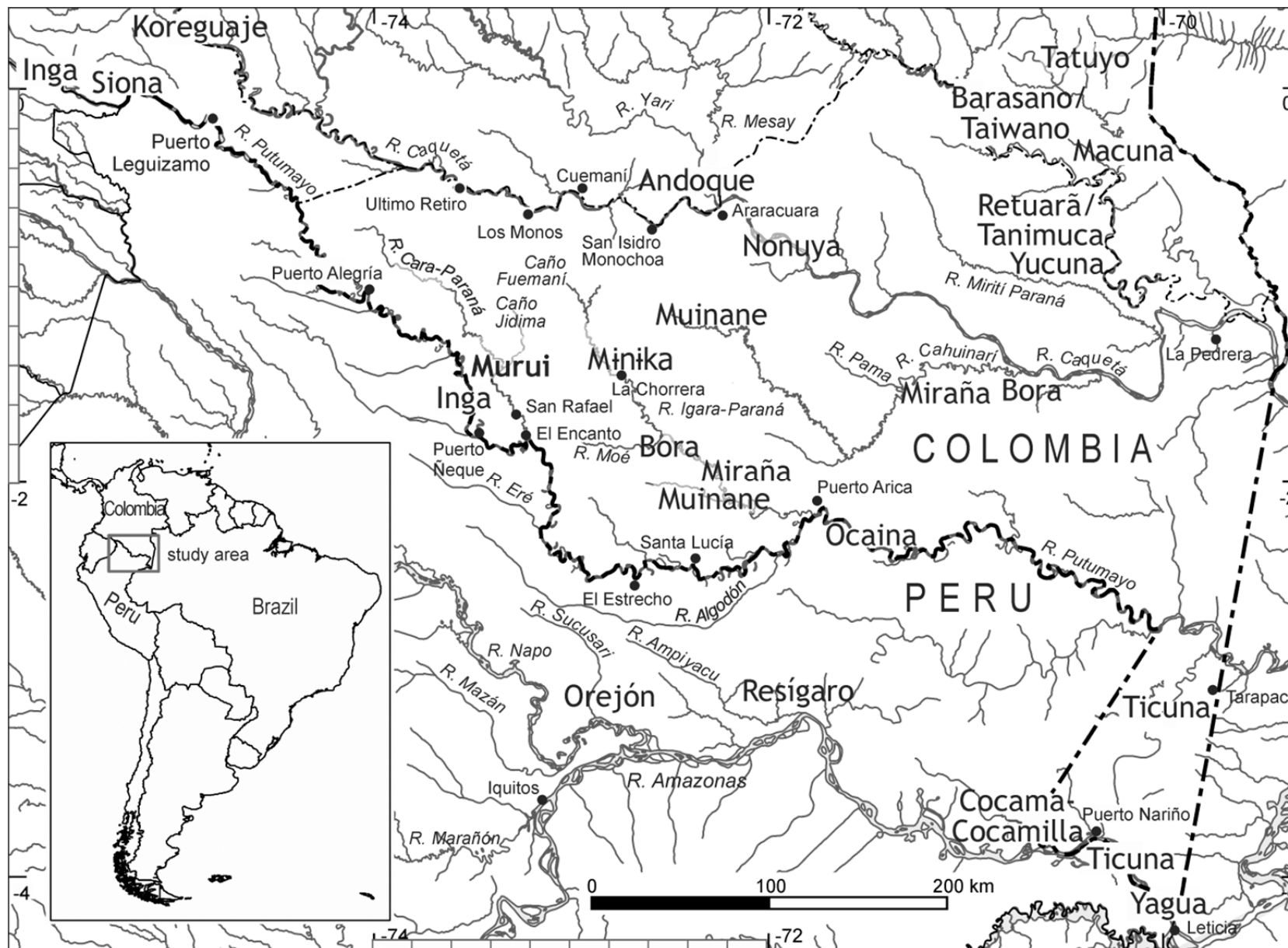
Map 1. Approximate locations of groups located in the C-P area (author's map)

The C-P groups share relative cultural homogeneity, including trade specifications, intermarriage, multilingualism, and common ritual activities that relate to the consumption of pounded coca and liquid tobacco which is licked by men, and not inhaled like among groups to the north, or smoked among the groups to the west, east and south.[3] Traditionally, each group in the C-P region was specialized in production and trading of specific goods. For instance, the 'Witoto' were known to have expertise in tobacco and hammocks; the Bora in mats and woven products (Eriksen, 2011, p. 207).[4] The C-P peoples were in close relationship with other unrelated groups in the area, of which some were hostile. For instance, although the Secoya (West Tucanoan) to the west consider the 'Witoto' their traditional enemies, they seem to have borrowed from the 'Witoto' manioc squeezer together with bitter manioc (Gasché, p.c.). This is also the case with the Carijona, a group of Cariban descent (and the relative newcomers to the north of the Caquetá River) with whom the 'Witoto' shared numerous conflicts. The traditional 'Witoto' feasts called *Rɨaɨ Rua* 'songs of the non-Witoto' were celebrated to commemorate the 'Witoto' victory over invaded lands at the Yarí River by the Carijona (the arch-enemies of the 'Witoto') in the remote past. Even the term *witoto*, which is nowadays commonly used to refer to the Murui, Mɨka, Mɨnɨka, and Nɨpode groups, is in fact an exonym originating in the Carijona language. Traditionally, the C-P peoples regularly celebrated dance rituals together (Gasché, 2009; Seifart, 2015, p. 101). During shared festivals, 'repertoires of hundreds of songs that are sung in a predetermined order exist for each language. Important myths, e.g. about shared cultural heroes, exist in each of the languages'

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[3] Following Wilbert (1987, p. 40) in Echeverri (2015, pp. 108-109): 'The custom of tobacco licking is of restricted distribution in South America. It occurs in the northernmost extension of the Colombian and Venezuelan Andes [Kogi, Ica, Sanka, Timote-Cuica], in the Putumayo-Caquetá region of the Northwest Amazon [Uitoto and neighboring tribes], and in a few isolated places of the Montaña [Jivaro (?), Campa, Piro]'. Some Tariana (Arawak) groups from Vaupés used to have a ritual custom where tobacco would be licked from a partner's tongue (Aikhenvald, 2003, p. 271).

[4] The term 'Witoto' is a collective umbrella term that encompasses four different ethnic groups that speak four mutually intelligible dialects – Murui, Mɨka, Mɨnɨka, and Nɨpode. All these groups consider themselves to be separate social groups speaking different languages. Therefore, throughout this paper, I use the term 'Witoto' in parenthesis.

(Seifart, 2011, pp. 7-8).

The linguistic diffusion among unrelated language groups in the C-P area is seen in terms of language structure rather than lexicon. For instance, Resígaro (Arawak), in close contact with the Bora people, was under a heavy structural and morphological influence from Bora but borrowed relatively few lexical items (Aikhenvald, 2001; Seifart, 2011, pp. 182-190). Grammatical features that are shared among the C-P groups include the reported evidential (Wojtylak, 2018; Wojtylak, Ávila, & Sarmiento Espinosa, forthcoming).

In the early 1900's, indigenous groups that lived in the C-P region were quite numerous. The 'Witoto' dominated the area with a population of about 15,000 (Whiffen, 1915, p. 247). The entire population of the People of the Centre might have been as many as 46,000 people at that time (Fagua Ricón 2015, 137). By the end 1930's, slavery and forced migrations throughout the Rubber Boom period drastically depleted the C-P population (Casement, 1912; Hardenburg, 1912). Today, it numbers about 10,200 people. There has also been a drastic shift to Spanish; at present, only about half of the C-P groups still speak their native languages. The current estimates are given in Table 1 below.[5]

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[5] Table 1 presents author's estimations, based on available sources and firsthand field experience. See also Fagua Rincón (2015, p. 137) for comparative data who gives 11,604 as an estimate of the C-P population and 4,634 as the number of speakers.

Table 1. Current population and speakers estimates of *the People of the Centre*

| LANGUAGE FAMILY | LANGUAGE (LANGUAGE VARIETY) | | ETHNIC POPULATION | SPEAKERS | LOCATION |
|---|---|---|---|---|---|
| Witotoan | 'Witoto' | (Murui) | 2,800 | 2,000 | Colombia, Peru |
| | | (Mɨka) | 200 | 100 | Colombia |
| | | (Mɨnɨka) | 2,400 | 1,500 | Colombia |
| | | (Nɨpode) | 650 | 250 | Colombia, Peru |
| | Nonuya | | 90 | 2 | Colombia |
| | Ocaina | | 300 | 50 | Colombia, Peru |
| Boran | Bora | (Bora) | 2,560 | 700 | Colombia, Peru, Brazil |
| | | (Miraña) | 400 | 400 | Colombia |
| | Muinane | | 260 | 90 | Colombia |
| Arawak | Resígaro | | 37 | 2 | Peru |
| Language isolate | Andoque | | 520 | 370 | Colombia |
| **Totals** | | | **~10,200** | **~5,464** | |

## 2 The *manguaré* signal drums of the C-P groups

The C-P groups share the *manguaré* instrument, a pair of hollowed-out wooden drums traditionally used for long distance communication and as accompaniment in dance rituals (Wojtylak, 2017a). Although, traditionally, the drums played an important role in social life of the C-P groups, little is known about principles of their drum communication. This includes the basis of drum beats (whether there was an iconic relationship to the sound structure of the spoken language or not), and types of massages were encoded by the *manguaré* drums (ranging from 'fixed' repertoire of formal signals to informal messages).[6] The existing studies on the C-P drum communication include only those on the Bora *manguaré* (Meyer et al., 2012; Roe, 2014; Thiesen, 1969, 2006). In Bora, a Boran language which distinguishes two tones, the relation between the drummed signal and the speech utterance is based on an iconic relation between

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[6] There are different types of drummed forms in languages around the world. While in some, there is a relationship between the sound structure of the spoken language and drummed beats (these are so-called 'drummed languages'), in others, the relation is purely symbolic ('drummed codes') (see Meyer, Dentel, and Seifart (2012) and references therein). The majority of drummed languages are associated with those languages that are tonal.

drummed beats and the spoken language. Sequences of the Bora *manguaré* beats represent two prosodic features of the spoken language: tone (high and low) and duration of intervals (intervals with two consonants are longer than those which contain one or no consonants) (Meyer et al., 2012). Traditionally, Bora drum communication was based on an elaborate pre-defined set of message types, but, to a degree, also allowed for encoding relatively informal messages. As Thiesen and Weber (2012, p. 24) put it: '(…) because many words have identical tone and syllable patterns it is necessary to have standardized phrases'. Other C-P languages, such as Ocaina (Witotoan), might have had similar systems. It is unknown to what extent the languages had similar drum communication systems to that of Bora. According to Whiffen (1915, 216), "(…) Boro and Okaina [sic.], can carry on conversations upon almost any subject within their ken (by means of the *manguaré*). Other tribes are only able to distinguish between a warning of danger and an invitation to a dance". For Andoque, a language isolate with two tones, Jon Landaburu (p.c.) indicates that the existing set of messages was limited in the language. Based on firsthand data from the Mɨka variety of 'Witoto' (hereafter generally referred to as 'Witoto'), this paper will discuss the principles of 'Witoto' drum communication.


## 3    Notes on 'Witoto' phonology

This section describes 'Witoto' phonology based on the Mɨka and Murui varieties (Wojtylak, 2017b). The vowel inventory is based on a six vowel system that consists of, among other sounds, the high central vowel *ɨ*. There is a relatively small inventory of seventeen contrastive consonantal phonemes, some of which have restricted phonotactics. Unlike other C-P languages, the 'Witoto' language has no tone distinction.[7] 'Witoto' consonants and vowels are shown in Tables 2-3 below.

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[7] Mɨka is a very close variety of Murui (the Mɨka people consider themselves to be Murui), usually distinguished by some occasionally corresponding vowel and diphthong alternations (e.g. *e > a*, e.g. for 2pl *omoɨ* and *amoɨ*), as well as

Table 2. 'Witoto' (Mɨka and Murui) consonants (Wojtylak, 2017b)

| | LABIO-LABIAL | LABIO-DENTAL | APICO-DENTAL | APICO-ALVEOLAR | LAMINO-PALATAL | DORSO-VELAR | GLOTTAL |
|---|---|---|---|---|---|---|---|
| VOICELESS STOP | (p) [p] | | t [t] | | | k [k] | |
| VOICED STOP | b [b] | | d [d] | | | g [g] | |
| VOICELESS FRICATIVE | | f [ɸ] | z [θ] | *s [s] | | | j [h] |
| VOICED FRICATIVE | | v [β] | | | | | |
| VOICELESS AFFRICATE | | | | | ch [tʃ] | | |
| VOICED AFFRICATE | | | | | y [dʒ] | | |
| NASAL | m [m] | | n [n] | | ñ [ɲ] | | |
| FLAP | | | | r [ɾ] | | | |

Marginally used phonemes are shown in parentheses, Spanish ones are indicated with an asterisk

Table 3. 'Witoto' (Murui and Mɨka) vowels (Wojtylak, 2017b)

| | FRONT | | CENTRAL | | BACK | |
|---|---|---|---|---|---|---|
| | SHORT | LONG | SHORT | LONG | SHORT | LONG |
| HIGH | i [i] | ii [i:] | ɨ [ɯ] | ɨɨ [ɯ:] | u [u] | uu [u:] |
| OPEN-MID | e [ɛ] | ee [ɛ:] | | | o [ɔ] | oo [ɔ:] |
| LOW | | | a [a] | aa [a:] | | |

There is a phonemic distinction between short and long vowels in word-initial positions. Diphthongs are predominantly of the falling type. They start with a vowel quality of higher prominence and end in a vowel with less prominence. The first element of the diphthong may consist of any short or long vowel. The second element (short vowel) can only consist of either the front high vowel *i* or the central high vowel *ɨ*.

In 'Witoto', stress is not contrastive. The language distinguishes between primary and secondary stress. In a phonological word, the primary stress is word-initial. Monosyllabic, disyllabic, and trisyllabic words do not have the secondary stress rule. In polysyllabic words, the secondary stress goes usually onto the syllable that contains the linkers, such as *-dɨ* or *-tɨ*. The

some lexical differences (e.g. for 'what' *bue* and *mɨka*). In terms of their phonological inventories, the varieties are identical. Mɨnɨka is somewhat different in terms of accent placement and has a few differences in its consonantal inventory. Nɨpode is vastly different from other 'Witoto' varieties (Parra & Petersen de Piñeros, 1992; Wojtylak, 2017b, pp. 44-46). Recently, it has been argued for Mɨnɨka that the language seems to show some incipient tonality distinctions (Ávila, 2016). Certainly, this is not the case for Mɨka and Murui. Up to date, little is known on details of the phonological system of Nɨpode.

basic syllable pattering is of the (C)V type where C can be in principle any consonant and V any vowel (long or short) or diphthong. If the vowel is long, the glottal stop [ʔ] can occur in the coda position. There are three basic types of intonation contours: falling (for declarative sentences), rising-falling (for questions and commands), and rising (for calls from the distance and announcements during festivities).

## 4    'Witoto' signal drums

In addition to being the musical accompaniment during dance rituals, the 'Witoto' *manguaré* was used for announcements within the community and between communities. The sound range of a well carved *manguaré* could reach up to 30 kilometres. Communal roundhouses would relay messages across the entire tribe. The *manguaré* was used to summon kinsmen or clans, to report danger, progress in preparation for a dance ritual, to announce hunt, war, arrival of an important person, death, and such.

According to the 'Witoto' mythology, the souls of people, living and dead, are enclosed within a *manguaré* (Petersen de Piñeros, 1994a, 1994b; Preuss, 1921, 1923). In their cosmology, the Father Creator is the one who 'possesses' the *manguaré* instrument. His *manguaré* beats 'are' the thunders which created the first rain.[8] The *manguaré* is also associated with words (through songs and dance rituals). Elders narrate that the pair of the *manguaré* drums 'are' in fact two chiefs who were turned into wooden logs as a punishment from the Father Creator, *Juziñamui*.[9] The 'Witoto', as well as all the C-P groups, regard the small drum to be male, and the big drum to be female. Among the Bora, the large drum represents a pregnant woman (Roe, 2014, p. 21).

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[8] See Petersen de Piñeros (1994a, p. 49; 1994b, p. 701).

[9] In the mythology of the Andoque, the wooden drums were given to the people in exchange of the flute stolen from them by "the Stars of Heaven", as the symbol of a new form of living (Echeverri, 1997, p. 108). Note that the C-P groups do not have the Yurupari flutes, unlike groups to the north of the Caquetá river.

The *manguaré* (called *juaɨ* or *juaraɨ* in 'Witoto', see also Table 5 in §6) is composed of a pair of hollowed-out hardwood logs each between 150-180cm long and 45-60cm in diameter, each with a narrow slit connecting two holes. The logs are suspended at an oblique angle, and differ in size. The 'male log', called *ɨɨ-raɨ* (man-CLF:LOG) is thinner; the 'female log', *rɨño-raɨ* (woman-CLF:LOG), is thicker. The 'Witoto' *manguaré* drums are shown in Figure 1 below.[10]
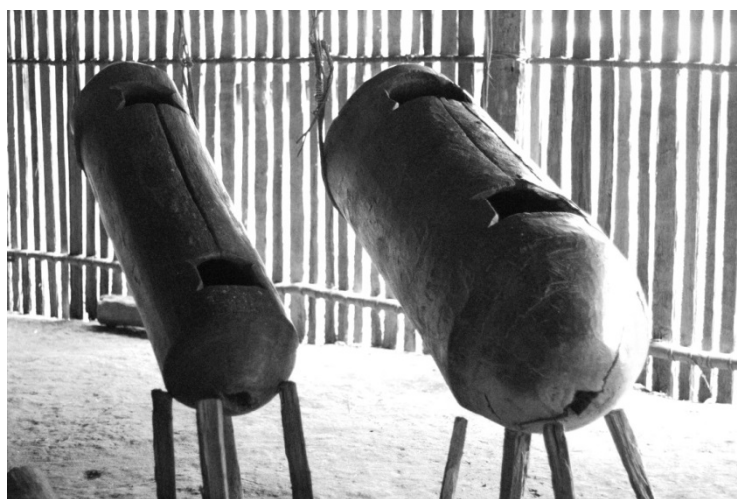


Figure 1. A pair of 'Witoto' wooden signal drums

The 'male' drum, always located on the left side, has a higher pitch. The 'female' drum, found on the right side, has a lower pitch. Each of the drums is capable of producing two additional pitches but only two main pitches are contrastive, and, traditionally, were used for communication.[11] The drums are beaten with a club covered with rubber, generally called *juaɨkɨyu* (see Figure 2). The club used for beating the male drum, *ɨɨikɨyu*, is smaller and thinner than the club used for beating the female drum, called *rɨñokɨyu* ('female club'). A picture of a drum club is shown below. When

[10] All pictures in this paper were taken by the author in the village of San José, a mixed Mɨka and Murui community, located Upper Cara-Paraná, Colombia (March 2016).

[11] This is also the case among other C-P groups. See remarks of Thiesen (1969), Thiesen and Weber (2012, p. 23), and Meyer et al. (2012) who points out that the Bora wooden drums could produce four pitches, but that only two pitches were used for communication. This is similar to Muinane (Boran). Walton and Walton (1975, pp. 7-8) noticed that although the Muinane *manguaré* had four pitches, only two were contrastive when encoding messages.

drumming, a man is always positioned between the drum logs, and begins each message by beating the female drum.
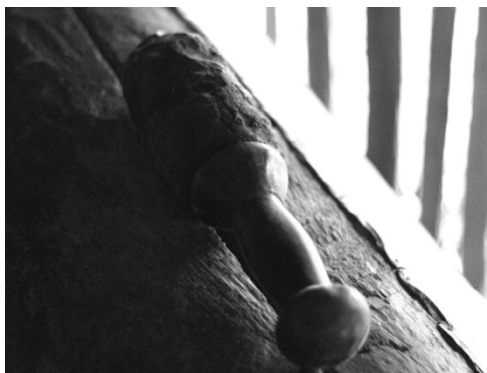


Figure 2. Drum club covered with rubber

The drum logs are kept inside the *ananeko*, the communal roundhouse.[12] They are hung with vines from rafters at a certain angle (about 90/180cm) and supported by posts or placed on the ground. Different position of the drums can produce different sound range.[13]

To construct a wooden drum, the interior is burnt out through two holes and the connecting slit. This event is accompanied by a series of special dance rituals called *zɨyɨko* (ritual that takes place before assembling pieces of the *manguaré*) and *ruakɨ* (ritual of inauguration of a newly made *manguaré*) (Wojtylak, 2017a).

Nowadays, the 'Witoto' *manguaré* wooden drums continue to be used solely as accompaniment in traditional dance rituals, and not for long distance communication. In fact, this practice has been long gone, possibly since 1920's and 1930's (Chávez, Leach, Shanks, & Young, 1976, p. 66). The SIL missionary Shirley Burtch noted in 1976 that the 'Witoto' ceased to use the *mangauré* 'as long as 40-50 years ago' (Chávez et al., 1976). In remote communities, such as San

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[12] 'Witoto' communal houses are of a circular shape, and are called *ana-ne-ko* (below-LOCATIONAL:NONSPECIFIC-CLASSIFIER:COVER) that is roughly translated as 'a place from below (i.e. from the sky) that is covered, like a house' (Wojtylak, 2017b). Communal houses in Amazonia is commonly referred to as *malocas*.

José or Tercera India (Upper Cara-Paraná, Colombia) one can occasionally hear *manguaré* beats. Such beats, regardless of the intensity and rhythm, are merely interpreted as 'come, there is news'. What once was an elaborate repertoire of 'Witoto' drummed messages is gone. Only a few elders scattered in remote villages remember a few 'common' signals that were used long time ago. The description of drummed messages presented in this paper is thanks to elder *uzuma Narsiso Yasi*, a speaker of Mɨka (*Mɨka doode* clanolect) of the *Yavuiyanɨ* clan from the village of San José (Upper Cara-Paraná, Colombia). He is the only elder who still remembers the manguaré beats, as he was taught as a child by his father, who was an expert *manguaré* drummer. The drummed messages included in this paper, remembered with great effort by *uzuma Narsiso,* consist of 8 'common' messages relating to public announcements and preparation for a dance ritual.

## 5   'Witoto' drummed messages

The little data available indicates tendencies rather than offers definitive conclusions. It appears that 'Witoto' used a system of drummed codes, where drummed messages corresponded to established calling formulas. There was some iconic relation to the sound structure of the spoken language, but, that relation seems to have been less prominent than the one in Bora. This section focuses on what can we said about what remains of 'Witoto' drum communication.

### 5.1   Locality of sounds

Traditionally, the system of drummed names was very elaborate. *Uzuma Narsiso,* as well as other 'Witoto' elders recall that drummed messages included very specific information, such as names for clans and personal names of important chiefs. Such 'Witoto' calling formulas must have been pre-defined by a local community, and agreed upon by other communities. *Uzuma Narsiso* also

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[13] I was told that sometimes the drums can be placed directly on the ground. In such cases its sound range is less far-reaching than when the drum is hung.

mentions that there were drummed signals that were specific to certain communities, and not distinguishable by outside communities. This concerned unique events, such as marriage alliances, and such.

## 5.2 Vocabulary of rhythms

Each 'Witoto' message (referred hereafter as 'phrase') has certain rhythmic patterns (beats and pauses) which allow to understand their readings. Compare the sequences of beats *tù-bɨ* in (1) and *bɨta* in (2). The meanings of the two messages, seemingly identical in their rhythms, are distinguished by the duration of pauses. In (1), the first pause is long (marked as P-P); in (2) the first pause is short (marked as P). Commonly, long pauses tend to have a duration of the preceding word. This is illustrated in (1), where the long pause is of the same duration as *tubɨ*.[14]

(1)  *tùbɨ* to relay the message '(unprocessed) yuca is being crushed )in the basin)'

```
[tù-  bɨ  P-P  tù-  bɨ  tù-  bɨ  P  tù-  bɨ  P  tù-  bɨ  P  tù-  bɨ  P]
  ¯   ----      ¯        ¯   --     ¯   --     ¯   --     ¯   --
 R    L        R    L   R    L      R    L     R    L      R    L
```

(2)  *bɨta* to relay the message '(processed) yuca is being put down (into the manioc squeezer)'
     (cf. the verb *bɨta(de)* 'lie on the ground')

```
[bɨ-  tà  P  bɨ-  tà  bɨ-  tà  P-P]  [bɨ-  tà  P  bɨ-  tà  bɨ-  tà  P]
  ¯   --     ¯        ¯   ----          ¯   --      ¯        ¯       --
 R    L     R    L   R    L            R    L      R    L   R    L
```

Each phrase is usually 'repeated' twice, as (2), but the number of repetitions is the drummer's decision. For instance, in (1) the phrase is repeated only once.

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[14] Examples of drummed messages in this paper have four lines. The first line indicates the meaning of the message (wherever possible, including the gloss). The second line gives specific words that are hummed by the drummer when drumming messages. Morpheme/syllable boundaries are indicated with an en dash; the word accents ` (for 'low') and ´ ('high') over the vowels indicate the tone. Additionally, square brackets show the beginning and the end of the hummed message. The third line shows the pitch of the drum (low _ and high ¯) and pauses (short -- and long ----). The final line indicates the hand used (right R and left L).

The rhythm of 'Witoto' drum beats corresponds to mimicking speech patterns. Syllables that consist of short vowels receive one beat. This is illustrated in examples (1, 2). Syllables that consist of long vowels often receive two beats. In (3), the syllable *daa-* contains a long vowel, and receives thus two beats. This, however, is only a tendency. In the same example, the disyllabic *guizɨ* receives just one beat; in (4) the third occurrence of the syllable *-pi* (of *chopi*) receives two beats.

(3)  *daaguizɨ data* to relay the message '(processed) yuca is being turned around (in the manioc squeezer) with a club' (cf. *daa-* 'one, the same' followed by a classifier, *data(de)* 'make turn')

```
[dàà-    gúi-zɨ   dà   tà   P-P]    [dàà-    gúi-zɨ    dà    tà   P-P]
                            ----                                  ----
 R̄ R̄     L        R̄   L̄            R̄ R̄     L         R̄    L̄
```

(4)  *chopi* to relay the message 'drops are falling (from the manioc squeezer)'
     (*chopi* is a word that phonetically imitates the sound of drops falling on the ground)

```
[chò-  pí  P   chò-  pí  chò-  pí    P-P]   [chò-  pí  P   chò-  pí  chò-  pí    P-P]
           --                       ----                  --                     ----
 R̄     L      R̄     L   R̄     L R          R̄     L      R̄     L   R̄     L R
```

Succession of beats can also have iconic basis. That is, messages indicating high level of urgency are characterized by sequences of fast beats. This is illustrated in example (5):

(5)  *bii!* 'come!'
     (cf. the imperative form of the verb *bi(te)* 'come' is *bii*)

```
[bíí  P   bíí   bíí   bíí   P-P]   [bíí  P   bíí   bíí   bíí   P-P]
     --                    ----         --                    ----
 R L      R L   R L   R̄ L            R L      R L   R L   R̄ L
```

It is apparent that some of the drummed phrases end with two simultaneous beats, which might be indicative of a 'full stop' of sorts, as shown in examples (4-5).

'Witoto' drummed phrases can be combined in different ways, but the constituent order within each phrase remain rigid. *Fɨgo fuɨtɨkaɨ, bii bii bii bii* 'we finished well, come' is a

combination of (6) *fɨgo fuitɨkaɨ* 'we finished well' and *bii bii bii bii* 'come' from (5) above. Within

messages combined in such a manner, each individual phrase can only be repeated twice.

(6)  *fɨgo fuitɨkaɨ* 'we finished well'
     (*fɨgo* 'good (Mɨnɨka)', *fui-tɨ-kaɨ* (finish-LINKER-1pl) 'we finished')

[fɨ-gò  fúi-  tí-  kàɨ  P-P]  [fɨ-gò  fúi-  tí-  kàɨ  P-P]

R̄      L    L    R̄   ----   R̄      L    L    R̄   ----

(7)  *fɨgo fuitɨkaɨ, bii!* 'we finished well, come!'
     (cf. examples (5-6) above)

[fɨ-gò  fúi-  tí-  kàɨ  [fɨ-gò  P-P (2X)]  [bíí  P  bíí  bíí  bíí  P-P (2X)]

R̄      L̄    R    L    R̄   ----            R L      R L  R L  R L  ----

Drummed messages illustrated in examples (1-7) are in fact announcements of progression in

preparation for a dance ritual. Their sequence is given in Table 4. Note however that the sequence

in which different drums beats occur can also play an important role in understanding their

meanings. The phrase *bɨta* in (2) means '(processed) yuca) is being put into the manioc squeezer'.

However, *bɨta* can be repeated. When it is drummed right after *chopi* 'drops are falling (from the

manioc squeezer)' (see example (4) above), it receives a different reading. It indicates that

*tamale*[15] are being prepared, which is one of the final steps in preparation for a dance ritual.

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[15] A *tamal* (from Spanish) is a traditional dish made of masa of yuca, cooked and wrapped in leaves.

Table 4. Sequence of messages relating to preparation of a dance ritual

| EXAMPLE | MESSAGE |
|---|---|
| (1) | *tubɨ* '(unprocessed) yuca is being crushed (in the basin)' (reading: the preparation to a dance ritual begins) |
| (2) | *bɨta* '(processed) yuca is being put down (into the manioc squeezer)' |
| (3) | *daaguizɨ data* '(processed) yuca is being turned around (in the manioc squeezer) with a club' |
| (4) | *chopi* 'drops are falling (from the manioc squeezer)' |
| (! 2) | *bɨta 'tamal* is being put down (onto the ground)' |
| (6) | *fɨgo fuitɨkaɨ* 'we finished well' (reading: the preparation to dance ritual has ended) |
| (7) | *fɨgo fuitɨkaɨ, bii!* 'we finished well, come!' (reading: the preparation to dance ritual has ended, it is time to come)' |

## 5.3   Drumming and the humming practice

The 'Witoto' drummer often explicitly hums the message he is encoding. All messages have a clear specific intonation, distinguishing high and low pitches. With regard to vowel quality in drummed messages, we observe the following:

A. RELATION BETWEEN VOICE PITCH AND DRUM PITCH – vowel quality (whether vowel is low or high) in hummed messages is not relevant for the drum pitch. Hummed messages can begin with either low or high pitch, but drumming always begins on the bigger (female) drum which has the low pitch.

B. RELATION BETWEEN VOICE PITCH AND PITCH OF THE HUMMED MESSAGE – there is a relation between vowel quality and humming: for front high and central vowels /i/ and /ɨ/ high pitch is used; back high, low-mid, and low vowels /u, o, a/ show low pitch.[16] For instance, the first syllable of *bɨ-* in example (2) is high; in *daa-* in (3) it is low. Another example includes *jobadɨzɨ* (see (8) in Table 4) meaning 'eggs of the *joba* fish' which is an invitation for hunting. In (8), the

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[16] The front low-mid vowel /e/ does not occur in the collected data.

high central vowel has high pitch; the back low-mid and the low vowels /o, a/ show low pitch.

Table 4 illustrates low and high pitches used in across hummed messages.

Table 2. Distinguishing pitches in hummed messages

| EXAMPLES | PITCHES IN HUMMED MESSAGES |
|---|---|
| (1) | tu$^L$-**bɨ**$^H$ |
| (2) | **bɨ**$^H$-ta$^L$ |
| (3) | daa$^L$-**gui**$^H$-**zɨ**$^H$ da$^L$-ta$^L$ |
| (4) | cho$^L$-**pi**$^H$ |
| (5) | **bii**$^H$ |
| (6) | fɨ$^L$-go$^L$ fui$^H$-**tɨ**$^H$-kaɨ$^L$ |
| (8) | jo$^L$-ba$^L$ **dɨ**$^H$-**zɨ**$^H$ |

Given that 'Witoto' does not distinguish tone, and that there is no correlation between the voice pitch and drum pitch, the role of the humming remains a question. It might have been the case that the 'Witoto' borrowed the humming 'technique' from other C-P groups (note that all C-P languages distinguish two tones, low and high). The C-P peoples have been in close contact for a lengthy period of time, and, traditionally, and shared many customs with each other, including common dance rituals during which the *manguaré* instrument was used.[17] The pitch difference in 'Witoto' humming might be a mimic of this.

## 6    Wooden drums in South America

In different parts of South America, hollowed-out wooden drums used for communication appear among the following groups († indicates that some form of wooden drums are mentioned in the literature for those groups but are not in use today):[18]

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[17] Although there are no precise dates for the migration of the 'People of the Centre' into the C-P area, contact has been ongoing for centuries (Echeverri, 1997; Eriksen, 2011).

[18] For further references see the following sources. On the Panoan languages: Capanahua, Matses (Tessmann, 1930), Marubo (Hill & Chaumeil, 2011, p. 39); Chicham (Jivaroan) (Bowern, Epps, Hill, & Hunley, undated; Frungillo, 2003; Tessmann, 1930); Boran: Muinane (Walton & Walton, 1975), Arawak: Tariana (Koch-Grünberg, 1911; Reclus, 1894, p. 169), Yucuna (Koch-Grünberg, 1911; Schauer, Schauer, Yucuna, & Yucuna, 2005, p. 240), Waujá (Piedade

- Arawak: †Tariana, †Yucuna, Resígaro, Wauja
- Boran: Bora, Miraña, †Muinane
- Chapacuran: Wari'
- Chicham (Jivaroan): Shiwiar, Achuar, Shuar, Huambisa, Aguaruna
- Panoan: Capanahua, Matsés, Marubo
- Peba-Yagua: Yagua
- Tacana: †Cavineña
- Tucano: Desano, Wanano, Tucano, Tanimuca
- Witotoan: 'Witoto' (Murui, Mɨka, Mɨnɨka, Nɨpode), Ocaina, Nonuya
- language isolates: Andoque, Cofán

The areas of the occurrence of the wooden drums are illustrated in Map 2. Drums from those areas are not the same, and differ in their shape, size, and the number of slits on the drums. While the signal drums of the C-P groups consist of two wooden logs, with two holes and one slit each (see §2), the Tucanoan, Chicham and Panoan drums consist of one wooden log.

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de Camargo, 2011, p. 244) and Emy Ireland (p.c.); Tacana: Tacana (Guillaume p.c. and Camp and Liccardi (1989); Tucanoan: Tucano (Ramirez, 1997, p. 299) and (Piedade de Camargo, 1997, p. 50), Desano (Brüzzi Alves da Silva, 1977, p. 228; Koch-Grünberg, 1921, p. 172; Reichel-Dolmatoff, 1987), Tanimuka (Jonathan Hill and Elsa Gomez Imbert, p.c.), Wanano (Waltz, Jones, & Waltz, 2007, p. 255) and Stenzel (2013, p. 61) for *toʔatu*; Cofán (Bowern et al., undated); Chapacuran: Wari' (Bowern et al., undated); Peba-Yagua: Yagua (Bowern et al., undated). References for C-P languages: Murui, Mɨnɨka (Chávez et al., 1976, p. 70) as well as Wojtylak (2017b and references therein), Nɨpode (Griffiths, Coleman, & Morales, 2001, p. 71), Mɨka (Petersen de Piñeros, 1994b, p. 71); Nonuya (Echeverri, 2014, p. 40); Ocaina (Leach, 1969, pp. 38, 70); Muinane (Walton & Walton, 1975, p. 80); Bora (Thiesen & Weber, 2012, p. 30); Resígaro (Allin, 1976, p. 422); Andoque (Jon Landaburu p.c.).

Map 2. Locations of occurrence of wooden drums in South America
(the C-P area is marked in red, author's map)

A. TUCANOAN DRUM – the wooden drum among the East Tucanoan peoples of the Vaupés River

Basin has long been forgotten. The drum, called 'trocano', was a large wooden log (2-3m long

and 1,5m in diameter) with three holes connected by a slit.[19] It was used to communicate 'basic'

messages (Stradelli, 1929, pp. 680-681). The existence of wooden drums in the Vaupés linguistic

area appears to have had a great impact on the communities that lived therein. The Tariana, an

Arawak speaking group, who similarly to the East Tucanoan peoples took part in the marriage

network of the Vaupés area (Aikhenvald, 2012, p. 82), share the same type of wooden drum (see

further this section). That wooden drums have diffused within in the Vaupés linguistic area is

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[19] The term 'trocano' is possibly a loan word from Nheêngatú, a lingua franca of Upper Rio Negro. In Língua Geral
Amazônica of the Upper Rio Negro (Tupí) its form is either 'trocano' (Koch-Grünberg, 1921) or 'torocana' (Stradelli,
1929, pp. 680-681). See also (Cunha, 1998, p. 296). A picture of the Tucano drum can be dound in Koch-Grünberg
(1921).

shown by the Yuhupdeh practises. The Yuhupdeh (Nadahup/Makú), who themselves had no drum

logs but were in close contact with the East Tucanoan peoples, have a word for the Tucano drum –

*dög-tön* 'hollow trunk of *vapixuna* (type of tree)' (Cácio Silva, p.c.).[20] The Yuhupdeh are

marginal members of the Vaupés since they do not participate in the multilingual marriage

network within the area (unlike the Arawak and the East Tucanoan-speaking peoples who do).

B. JIVAROAN (CHICHAM) DRUM – the Chicham people have a drum called *tunduli* that was used as

a 'telegraph' as well as a musical accompaniment during big ceremonies.[21] Stroking large drum,

was heard from house to house, and the message was passed on from hill to hill (Simson, 1880, p.

387). The Chicham drum has four openings connected by a slit.[22]

C. PANOAN DRUM – the Panoan signal drum, called *tintili* and *aku* (or *ako*), has two holes and a

slit.[23] A picture of a Panoan drum is given in Tessmann (1930, p. 146).

D. DRUMS OF OTHER GROUPS – for other groups in Amazonia (Map 2), there are brief mentions of

wooden drum, used either as musical instrument, drummed language or drummed code. For

instance, the wooden drums of the Cofán (linguistic isolate) and Yagua (Peba-Yagua) were

supposed to carry sound for long distances (Bowern et al., undated). Koch-Grünberg (1911)

mentions that the Yucuna, an Arawak neighbour of the C-P groups to the north-east, used to have

a form of a drummed language (so called 'Trommelsprache'). The drums of the Yucuna appear to

be very much the same in shape, size, and the number of slits on the drums, as those of the C-P

groups (Jonathan Hill, p.c.). Traditionally, the Arawak-speaking Tariana used to have the same

type of wooden drums as the Tucanoan peoples, but this practice has been long gone (Aikhenvald,

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[20] Of the Tiquié River (Alto Rio Nego) (Cácio Silva, p.c.). It is not known how the Yuhupdeh of the Apapóris related to the drums of the Tucano groups.

[21] Called also *tunduy* in Ecuador and *tuntui, tundoy, tunduy, dundurio* in Peru (Frungillo, 2003, p. 365).

[22] See also Chávez et al. (1976, p. 8). A picture of a Chicham drum is given in Tessmann (1930, p. 339).

p.c.). Other groups, such as the Arawak-speaking people of Xingu – the Wauja (known as Waurá), have wooden drums, that consists of two hollowed-out wooden logs (Emilienne Ireland, p.c.). The shape and size of the logs are very similar to those of the C-P peoples, but the size of the slits appear to be slightly bigger in form.

In certain areas, some languages share a common name for wooden drums. In the C-P cultural area, the form of *cumu* is found in Resígaro (Arawak), Bora, and Muruinane (Boran), and (possibly) in Andoque (isolate), but not throughout the Witotoan langauge family. However, the same form is also found in the neighbouring Yucuna (Arawak) as well as Cavineña, a Tacanan language located far from the C-P area. At present, the form *kumu* is considered by Amazonists as one of the Amazonian *wanderwörter* (Haynie, Bowern, Epps, Hill, & McConvell, 2014, p. 14). Table 5 shows words for wooden drums in South American languages.[24]

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[23] For further references, see Hill and Chaumeil (2011, p. 39); Tessmann (1930, pp. 147, 374).

[24] The asterisk used in the Table 5 indicates that the presented data, taken from the Languages of hunter-gatherers and their neighbors (Bowern et al., undated), requires further consultation. References for the names of the wooden drums in C-P languages can be found in Chávez et al. (1976, p. 70), Griffiths et al. (2001, p. 71), Petersen de Piñeros (1994b, p. 71), Echeverri (2014, p. 40), Leach (1969, pp. 38, 70), Walton and Walton (1975, p. 80), Allin (1976, p. 422), and Jon Landaburu (p.c.). For languages beyond the C-P area, see references in Footnote 18.

Table 5. Words for wooden drums in South America

| Region | Language family | Language [Language variety] | wooden drum |
|---|---|---|---|
| Caquetá-Putumayo (People of the Centre) | Witotoan | Witoto [Murui] | júaɨ, júaraɨ |
| | | Witoto [Mɨka] | júaɨ, júareɨ |
| | | Witoto [Mɨnɨka] | juaɨ, juaraɨ |
| | | Witoto [Nɨpode] | júaɨ, júaráɨ |
| | | Nonuya | uyi'ɨ́ |
| | | Ocaina | arón |
| | Boran | Bora | **cuúmu(-va)** |
| | | Bora [Miraña] | **cuúmu(-va)** |
| | | Muinane | **kɨ́ɨmɨba** |
| | Arawak | Resígaro | **koómó, kómookú** |
| | isolate | Andoque | ku'dɨ |
| Upper Rio Negro/Vaupés | Arawak | Tariana | dulipiru |
| | | Baniwa | pee'nako |
| | | Yucuna | **kumu** |
| | East Tucanoan | Tucano | to'atɨ |
| | | Wanano/Kotiria | tohati to?atu (reconstr.) |
| | | Desano | not mentioned |
| | Others | Yuhup (Nadahup/Makú) for Tucano drum | dög-tön |
| | | Hup (Nadahup/Makú) for Tucano drum | dög-tön* |
| | | Nheêngatú (Tupí) for wooden drum | trocano torocana |
| Putumayo - Amazon | Peba-Yagua | Yagua | xãmu ritʃĩnu* |
| Guaporé-Mamoré | Tacanan | Cavineña | **kumukumu** |
| | Chapacuran | Wari' | tain tom* |
| south-eastern side of the Andes | Panoan | Matsés | tíntili acu* ten tencate* |
| | | Capanahua | not mentioned |
| | | Marubo | ako |
| north-eastern side of the Andes | Chicham (Jivaroan) | Aguaruna | tintui |
| | | Ashuar | túntui* |
| | | Huambisa | tuntui* |
| | isolate | Cofán | khoʃa* |
| Upper Xingu | Wauja | Arawak | pu.lu'pu.lu |

## 7    Summary

Traditionally, the 'Witoto' people shared a practise of drum communication. The *manguaré* instrument, a pair of hollowed-out wooden drums, was used for long distance communication, as well as during traditional dance rituals. As drum communication among the 'Witoto' has not been practised for a century, today, only a few elders remember a few 'common' signals. They appear to be 'drummed codes' with only some iconic relation to the sound structure of the spoken language. The humming 'technique' among the 'Witoto' when encoding messages might have been borrowed from other Caquetá-Putumayo groups. Traditionally, those groups lived next to each other, and displayed relative cultural homogeneity, such as trade of goods, common ritual activities, intermarriage, multilingualism, and the practice of long distance drum communication.

The practise of drum communication appears to be easily diffusible in contact situations. Hollowed-out wooden drums used for long distance communication are found in various parts of South America (in those areas that are geographically adjacent, and those that are not). Frequently, the form of wooden drums appear to be specific to certain areas, such as the Caquetá-Putumayo River Basins. Some languages, often within the same area, share a common name for wooden drums, such as the form *cumu* found in four C-P languages. Often, those regions are well-established cultural and linguistic areas, such as the Vaupés.

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