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A phonological description of Yamalero, the language of ethnic Yaruro in the Colombian Eastern Plains

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GRUP DE LINGÜISTES
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Leiden University

Leiden University Center for Linguistics

MA Linguistics

A phonological description of Yamalero,
the language of ethnic Yaruro
in the Colombian Eastern Plains

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First readers: Rik van Gijn & Bert Botma

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Abstract

This thesis consists of a phonological description of the Yamalero language, based on primary data. Yamalero is a Guahiban language spoken by some 300 people in the Colombian Eastern Plains. Some of these speakers are ethnic Yaruro, who had been reported to speak Yaruro (Pumé), but this thesis shows that none of them is able to use this language any more. Yamalero is a virtually undocumented language, since the only materials available before the publication of this phonological description were a 31 terms wordlist. This enabled the classification of Yamalero within the Cuiba-Sikuani language continuum. This thesis shows some features of the Yamalero phonology that are closer to Sikuani, such as the process of lenition of aspirated plosives, and others that are closer to Cuiba, such as the presence of consonantic codas. When appropriate, it also shows its resemblances to other genetically unrelated languages in the area, such as Saliba, Piapoco, Achagua or Puinave. This phonological description contributes to the study of Guahiban languages, on which very little research has been published in the last 20 years, as well as to the study of the languages between the Amazonia and the Andean foothills.

Keywords: Guahiban languages, Yamalero, phonology, language documentation, Amazonian languages, Yaruro people, functional linguistics.

Resumen

Esta tesis consiste en una descripción fonológica de la lengua yamalero, a partir de datos primarios. El yamalero es una lengua de la familia guahibo hablada por unas 300 personas en los Llanos Orientales de Colombia. Algunos de estos hablantes son de la etnia yaruro, los cuáles se creía que hablan yaruro (pumé), pero esta tesis muestra que ya no hay nadie en esta comunidad que conozca este idioma. El yamalero es una lengua prácticamente indocumentada, pues los únicos materiales disponibles antes de la publicación de esta descripción fonológica eran una lista de palabras de 31 términos. En base a esto se clasificó el yamalero dentro del continuo lingüístico cuiba-sikuani. Esta tesis muestra que algunos rasgos de la fonología Yamalero son más cercanos al Sikuani, como el proceso de lenición de las oclusivas aspiradas, mientras que otros son más cercanos a la Cuiba, como la existencia de consonantes en posición de coda silábica. Cuando es adecuado, también se muestran las similitudes del yamalero con lenguas de otras familias lingüísticas de la zona, como el sáliba, el piapoco, el achagua o el puinave. Esta descripción fonológica significa una contribución al estudio de las lenguas guahibo, sobre las cuales se han publicado muy

pocas investigaciones en los últimos 20 años, así como al estudio de las lenguas que quedan entre la Amazonía y los Andes.

Palabras clave: lenguas guahibo, yamalero, fonología, documentación lingüística, lenguas amazónicas, pueblo Yaruro, lingüística funcional.

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I would also like to say a few words about the linguistics crew at Leiden University. First about Rik van Gijn, one of my supervisors, who has trusted in this project since I first told him about it. You are probably not aware of what all your support has meant to me, especially during the uncertain pre-fieldwork stage. It would have been great if by then I had met my second supervisor, Bert Botma, as well. Your questions have often led to a new perspective on my analysis, so this thesis would be of much lower quality without your precise and enthusiastic feedback. Special thanks to Maarten Mous as well, whose experience at university and in the field led to creative solutions to make my fieldwork possible. This also applies to Samuel Beer, whose generosity and flexibility enabled me to do my field trip at the moment it finally came.

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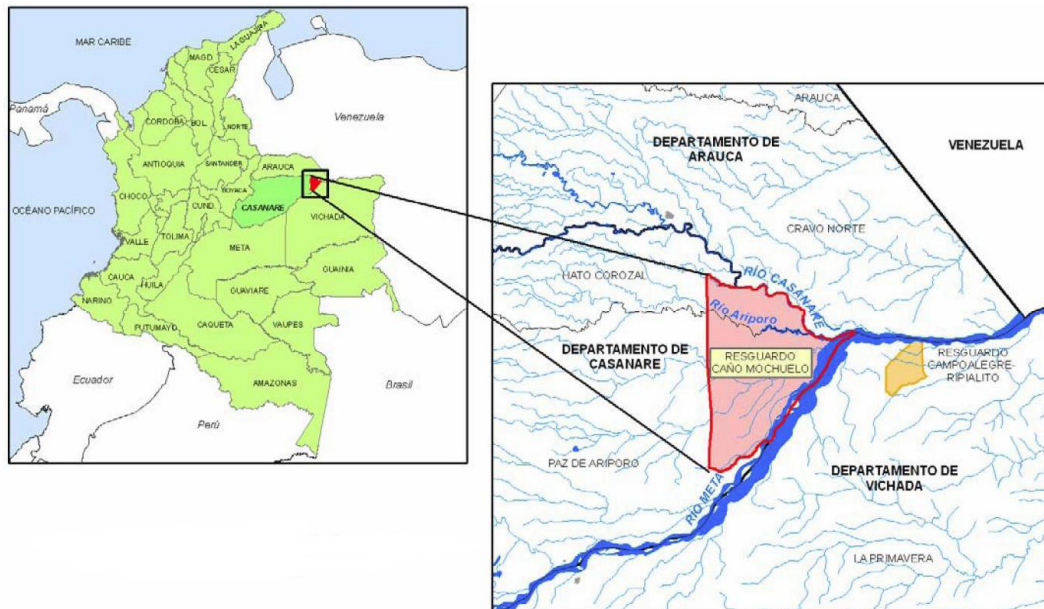
1. The Yaruro people

1.1 Location: the Caño Mochuelo reserve

The Yaruro (also called Pumé) count virtually 10.000 people (Instituto Nacional de Estadística 2015: 31) and live in the Apure Plains in Western Venezuela, close to the Colombian border. They speak Yaruro, a language isolate that has been poorly described (Mosonyi 1966; Obregón and Díaz 1989; Mosonyi, Mosonyi and García 2000; Krisólogo 2002; Castillo, Díaz and Obregón 2003; Guerreiro de Pirela 2016). Yaruro is losing language domains towards Spanish, so it has been considered an endangered language by UNESCO (Moseley 2010) and ELCat (Campbell et al. 2017).

Nevertheless, there is a small Yaruro community which does not live in Venezuela. They live in the Colombian Eastern Plains in the Casanare state, close to the Venezuelan border as well. This community does not speak Yaruro anymore, but Yamalero, and this language is the one that is described in this thesis. More specifically, this Yaruro community is currently settled in Únuma (also called el Calvario),¹ a small village in the multiethnic Caño Mochuelo reserve, located in the easternmost part of the Casanare state (see figure 1).

Figure 1. Map of the Caño Mochuelo reserve within the Casanare state and Colombia.²



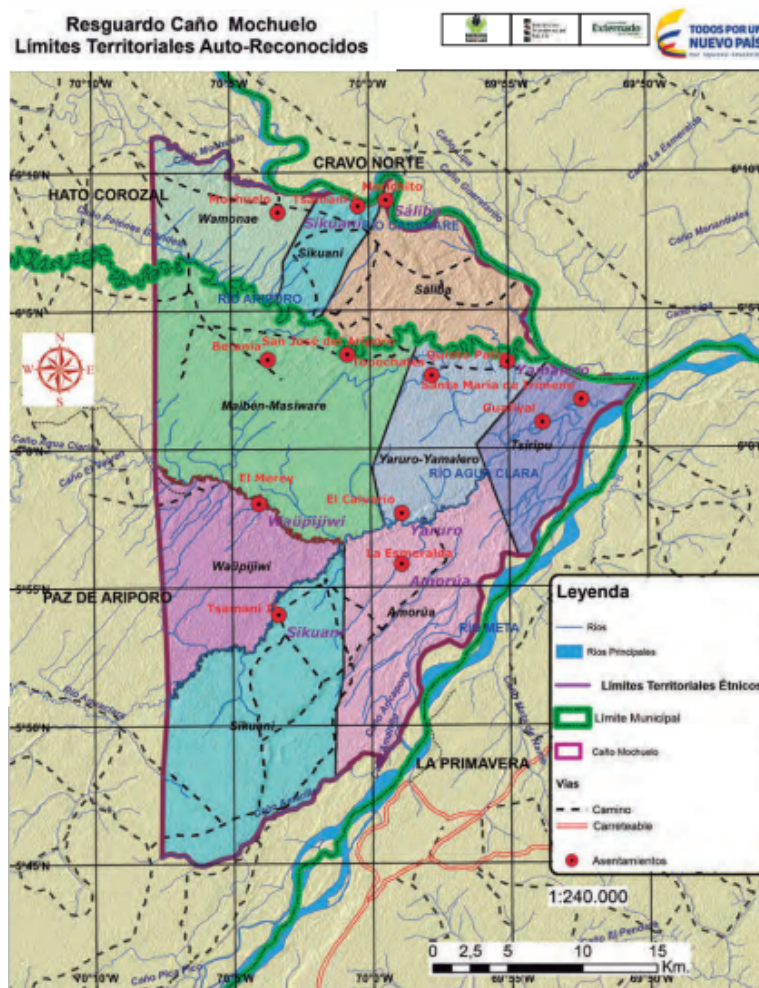
Source: Olivari & Buitrago (2012: 9)

¹ Coordinates for this village follow: latitude 5.971159, longitude: -69.955871.

² This map has been reproduced thanks to its Attribution-NonCommercial-ShareAlike Creative Commons license.

The Caño Mochuelo reserve is one of the most ethnically diverse reserves in Colombia. It hosts 10 different ethnolinguistic groups spread in 14 different villages. Most of these groups are Guahibo-speaking groups (Yamalero, Yaruro, Sikuani, Wamone, Maiben, Amorua, Tsiripu and Waipiri), but there is also a Saliba-speaking group and a Piapoco (Arawak-speaking) group. The reserve area is divided among these 10 groups in the terms that can be seen in figure 2. The three groups located in the northern part (above the Ariporo river) belong to the municipality of Hato Corozal, while those located to the south of the Ariporo river belong to the municipality of Paz de Ariporo, as is the case for Únuma, Yaruro's village. Únuma (in the map, el Calvario) is located to the south of the central blue area, shared between the Yaruro and Yamalero groups.

Figure 2. Map of the ethnolinguistic groups in the Caño Mochuelo reserve.³



Source: ENSANI (2014a: 37), with data from SIGOT-IGAC (2011) and WFS Geoservices from IGAC

³ I thank the Instituto Colombiano de Bienestar Familiar and the Universidad Externado de Colombia for authorizing the reproduction of this map.

In fact, the map in figure 2 is a bit old (2014), since there are a couple of changes that it does not reflect. The first deals with the Yaruro community, which now has part of the territory that they used to share with the Yamalero exclusively for them. The second one deals with the Piapoco community, which also used to share their territory with the Saliba community, but they now have a territory of their own in las Mañanitas (Marco Julio García, personal communication).

1.2 Ethnolinguistic history of the Colombian Yaruro

The Colombian Yaruro are an ethnic group that descends from the mixture between Venezuelan Yaruro and ethnic Yamalero. More concretely, from two Yaruro men that married two Yamalero women and were integrated into their group, five generations ago. They learnt the Yamalero language and this is also the language that they taught to their children, so Yaruro was no longer spoken (Marco Julio García, personal communication). In the 2000, descendants from these two Yaruro families decided to split from the mixed Yamalero-Yaruro group they were part of and established an ethnic Yaruro community, Únuma. These Yaruro use the term “Yaruro” to refer to their own language, although they are aware that it is not the same language that the Yaruro groups in Venezuela speak. However, they use this term because it represents their identity. Although they know that the linguistic system that they use is virtually the same as the one that the Yamalero people use, it would make no sense to them to refer to their language as “Yamalero”.

There are no references in the scarce literature on the Yamalero people pointing at the moment in which the Yaruro (two male cousins and the sister of one of them) joined the Yamalero group (Romero 1993: 122-123; Sánchez 2007: 57-59; Usma et al. 2011: 208; Naranjo et al. 2013; Zamudio et al. 2014a; Zamudio et al. 2014b). It is also unclear what movements did this group do before arriving at the Caño Mochuelo reserve in 1982. However, after conducting interviews with community members and contrasting the information I got with the relevant literature, I have tried to reconstruct what these movements may have looked like. Therefore, the story that follows is probably unexact, but I think that it may help to understand the recent past of the Colombian Yaruro and the Yamalero people. These two groups had historically lived separately, then lived together for some 50 years, and nowadays live separately again.

My hypothesis is that the Yamalero coincided with the three Yaruro at some point during the 1950s in the Upper Capanaparo river, on the Venezuelan side of the border. This is one of the areas that the Yaruro people have historically populated (Castro 1993: 185-186; Mosonyi, Mosonyi & García 2000: 545), and they were attested there in 1934 (Petrucco

1939). As for the Yamalero, they were traditionally a group of hunter-gatherers that occupied large territories along the Meta river, from the Meta and Vichada states in Colombia to the border city Puerto Carreño and the northern Capanaparo area in Venezuela (Usma et al. 2011: 208; Zamudio et al. 2014a: 63); therefore, determining their location at a given historical time is a bit more difficult .

However, there are a few signs that would locate the Yamalero around the Capanaparo river in the fifties. The first is it has been reported that “from the 1948 war [the group] was divided and some went to Arauca and others to Venezuela” (Zamudio et al. 2014b: 59).⁴ The second is that one of the two Yamalero women (Victoria Lara) that married a Yaruro man (José Nieves), who is now very old but I had the opportunity to interview, declared that she got married and had at least her first daughter while her group was based in the Capanaparo area. The younger daughter of the other mixed marriage (Braulio García and María Elena Lara), who I could also interview, declared that she was very young when they left the Capanaparo and that she barely remembers.⁵ The third sign is that in 1962 the Yamalero are reported to be in the Colombian side of the border again, in Puerto Carreño, working in a country estate called “Las Mañanitas” (Sánchez 2007: 58; Zamudio et al. 2014b: 60). Therefore, if these two groups were in contact for some time, it seems natural to assume that this led to a few interethnic marriages.

Nevertheless, the situation might have been a bit more complex. In one of my interviews I was told that these three Yaruro were survivors from a massacre that took place against their group, probably perpetrated by creole ranchers (Marco Julio García, personal communication). Since this is a sensitive issue, I only discussed it with my main host after some weeks in the field, and I did not feel that my relationship to other relevant community members enabled this kind of conversation yet. This means that I could not contrast this information in the field, but there are similar massacres documented around the same area in the same time period, such as the 1967 Rubiera massacre (Gómez 1998: 351-352), so I think that it is possible that the three Yaruro that joined the Yamalero group did so because their group had been exterminated.

The resulting group, of which the Yaruro were an ethnic minority, probably left the Capanaparo and occupied different areas before being employed by a rancher called “señor Medina” in las Mañanitas in 1962 (Hualdo García personal communication; Sánchez 2007:

⁴ This passage is taken from a report dealing with the Yaruro people. However, considering where other studies locate the Yaruro people at that time (Petrullo 1939, Mosonyi 1966), it is very likely that the group that the report is talking about is the Yamalero.

⁵ It would be relatively easy to calculate the period that they spent in the Capanaparo using birth dates, but unfortunately the age of community members born before they arrived at the Caño Mochuelo reserve (1982) is unknown.

58; Zamudio et al. 2014b: 60). During the years that they spent there, some community members also used to go fishing or hunting for a few days and this caused two tragic incidents. One took place when some male community members went fishing to the Casanare river. José Nieves, Victoria's Yaruro husband, fell ill and although they returned to las Mañanitas, he died some days later. The second one took place when some men went hunting and they coincided with another indigenous group, the Siripu. They were trying to hunt the same capybara, which produced a violent conflict. Joaquín Lara, a Yamalero man that married the Yaruro woman in the group (Rosita García), was shot with an arrow and also died. Shortly after that, his wife Rosita abandoned the group with her daughter and moved to an urban setting (Puerto Carreño). Therefore, in a few years, out of the three Yaruros that had joined the Yamalero group, only one remained (Victoria Lara and Carina García, personal communication).

After spending some years in las Mañanitas, the group left again to the savannah, moving westwards along the Meta river to la Venturosa and then to the Samuco and Lipa rivers. Some years later they went back to las Mañanitas and they were employed by the same rancher, Medina. Some families decided to leave to urban settings (Puerto Carreño and Puerto Ayacucho), and those who remained in 1982 they ended up in the Caño Mochuelo reserve (Hualdo García, personal communication). The main reason to look for protection in a reserve was that the violence against indigenous people had not ceased (Ortiz 2005; Bjork-James 2015).

When they arrived at the reserve, the group consisted of some 40 people. They initially settled in Santa María de Irimene, but they quickly founded the Quinto Patio settlement, still in 1982. Due to internal conflicts, the ethnic Yaruro moved to Palo Grande in 1988, where they stayed until 1999. Then they started a settlement of their own, first in a country state whose property belonged to a creole family and the year after, in the 2000, they established in Únuma (Zamudio et al. 2014b: 60). Initially the group was only made up of 16 people, but then other Yaruro who were still living with the Yamalero joined them. Their natality rate has increased dramatically in the last few years, so they now count with 136 community members (DANE 2018).

Thus, the current 136 Yaruro community members are part of two extended families: the descendants of Braulio García and María Elena Lara, on the one hand, and of José Nieves and Victoria Lara, on the other hand. Braulio and José Nieves were Yaruro speakers who did not transmit the language to their children; however, Braulio taught it to her wife and they kept using this language until he died, in 1989. From then on, María Elena remained as the only Yaruro speaker in the community, so she could not use this language with anybody. She

died at an advanced age in 2021, and therefore the Yaruro language vanished in Colombia. However, the sources that inform about the language of this community either keep linking it to the Yaruro language in Venezuela (Ministerio de Cultura 2010: 4; Zamudio et al. 2014b: 59) or do not comment on its genetic affiliation, which implicitly also links it to Yaruro (Naranjo et al. 2013: 134).

The Yamalero community had further internal conflicts and splitted again, so they are now divided in two communities: Quinto Patio and Topochales. Altogether they count 142 people (DANE 2018). It is unclear whether there are further ethnic Yamalero communities. In the linguistics literature they have been located on the Venezuelan side of the border: in the Capanaparo river (Ortiz & Queixalós 1981), in the Cinaruco and Juripe rivers (Kondo 1982: 45), and in the Cinaruco river (Queixalós 1993: 195). However, it is likely that these locations do not correspond to the time of the publications, but some years before, when the Yamalero were still moving around these territories. On the other hand, it has also been pointed out that recently another group would have splitted from the main Yamalero group, which “left the reserve towards a place called Santa Bárbara in the Vichada state” (Zamudio et al. 2014b: 60). In fact, Santa Bárbara is located at one of the reserve accesses, so considering that the last Colombian national census (DANE 2018) only listed Yamalero people in the Caño Mochuelo reserve, it is possible that for some reason they decided to return there.

1.3 Living conditions and current challenges

The Yaruro community has most of their basic needs covered, but they are still facing some important challenges. The community has a well of potable water that they can use to drink, cook and wash on a daily basis. They use the river water to wash themselves and to wash their clothes. Their diet is still highly dependent on hunting and fishing, but now they combine it with some crops (mainly yuca) and with basic products they buy in Cravo Norte such as rice, pasta, legumes, oil, or coffee. This is the closest non-indigenous village and it is located 3 hours away by motorbike. The community also has chickens that provide them eggs and meat. However, fruits and vegetables are almost nonexistent in their diets, which has led to some vitamin deficiencies. Every few days they light a fire to burn their waste. They also need to go outside of the village to meet their physiological needs.

The economy of the Yaruro community is still in a precapitalist stage. Money is starting to be used for commercial relations, but exchanging goods and favors is still a common practice. Very few community members earn a salary (school teachers and workers from the Colombian Family Welfare Institute), while others work as day laborers in settler’s farms.

Some also do small jobs for community members with higher incomes, but most of them are not employed on a regular basis. Hunting and fishing is the main activity for them.

The main current challenges for the Yaruro people are the lack of territory and lack of health care. After many years of land exploitation, natural resources in the reserve are becoming scarce, so community members now need to go further and further to obtain a fair amount of meat. Fish is more abundant during the dry season (December-March), but harder to obtain in the rain season (April-November). During these months, 70% of the reserve territory is flooded, which makes mobility very difficult. Communities have been struggling to expand the limits of the reserve, but no success has been achieved yet.

Access to health care is also difficult for the Yaruro community. Once per month, a medical squad visits them for 2 or 3 days to do routine inspections, most of them to pregnant women. If they find serious cases, patients are taken to Cravo Norte or to Yopal. However, in most cases this turns into a problem, because when they recover they do not have the money to get back to their communities. Moreover, they are usually taken to hospital unaccompanied, a serious issue for elders who do not speak Spanish (who do not receive translation service either). Besides this, there is a traditional doctor in the community, but this practice has been interrupted for some periods and therefore his knowledge is not enough to deal with all community's health issues.

2. The Yamalero language within the Guahiban language family

2.1 The Guahiban language family

2.1.1 Family origins

The independence of the Guahiban language family was recognized as early as Gillij (1782: 205). More than one century later, Briton also kept them as a separate stock (Briton 1891: 270-271), followed by Chamberlain (1913: 240). Between these years, the first grammar on a Guahiban language (Sikuani) was published; however, it did not discuss its genetic affiliation (Fernández & Bartolomé 1895). Guahiban languages are also treated as unrelated to any other language family in the classifications published around the mid 20th Century (Rivet 1948; Mason 1950: 257).

However, in the macrogroupings of American languages that took place during the second half of the 20th Century, the Guahiban language family was often related to Arawakan languages. In fact, the first source I could find pointing out this relationship goes back to the early 20th Century, which groups Sikuani, Achagua (a surrounding Arawak language) and Guamo (a presumably isolate, extinct language from the Venezuelan Plains) with the Maipure language family (Fabo 1911: 106). This relationship was followed by Swadesh (1958: 134) and Loukotka (1968: 148-149), who placed Guahiban languages within their “Macroaruac” and “Arawak” clusters, respectively. Greenberg took a slightly different approach and included them in his Equatorial stock, one of his big three Amerindian stocks: “Although Loukotka (1968) includes Guahibo in Arawakan proper, I consider it one of the groups closest to Arawakan within Equatorial, but not Arawakan as such” (Greenberg 1987: 83-84).

Nevertheless, these classifications were made with very little data available. In the late 1960s, this started to change, since different scholars and SIL missionaries started to produce descriptive works on Guahiban languages. In the late 70s scholars from the Centro Colombiano de Estudios en Lenguas Aborígenes (CCELA) in the Universidad de los Andes in Bogotá joined descriptive efforts and since then most of the work has been done with languages spoken in the Colombian part of the Guahiban domain. These authors also analyzed Guahiban languages from a historical linguistics perspective and they all reached the conclusion that the previously proposed relationship between Guahiban and Arawakan

languages might be the result of language contact, but not of shared genetic history (Morey 1969: 16; Lobo-Guerrero 1979, cited in Queixalós 1993: 193; Kondo 1982; Queixalós 1993: 194).

Since then, most classifications have treated Guahiban languages as an independent genetic unit, starting by Payne (1991), who argues that “the resemblances of [Guahiban] languages to Arawakan languages are now commonly considered to be due to borrowing” (Payne 1991: 363). Only Kaufman has systematically classified Guahiban languages within Loukotka’s Macro-Arawakan stock (Kaufman 1990, 1994, 2007), in spite of the fact that he was aware that this “hypothesis deserves to be tested or looked into”, since he had “so far seen no evidence to convince me of the connection” (Kaufmann 1994: 57). For this reason, and quoting this passage, Campbell decided to classify Guahiban languages as an independent linguistic stock “since there is no real evidence that [Guahiban and Arawakan] are related” (Campbell 1997: 178). This is also the status that is given to these languages in recent reference works (Aikhenvald & Dixon 1999: 370; Adelaar & Muysken 2004: 162; Campbell 2012: 90).

2.1.2 Family membership

A large number of language names have been proposed to be part of the Guahiban family. However, many of these names often correspond to the same language, as it is common in language families in the Americas and elsewhere (Campbell 2012: 60-62). For this reason, only language names used by authors that have worked in the field since the 1960s (or by authors that use these primary sources) will be considered here (see Kondo [1982: 52-55] for a comprehensive list of names no longer used). This reduces the number of members of the Guahiban language family to four or five: Sikuani,⁶ Cuiba,⁷ Hitnü,⁸ Guayabero and (according to some authors) Playero.⁹

The discussion on the membership of the fifth language, Playero, is not on whether this language should be a member of the Guahiban family, but on whether it should be counted as an independent language or as a dialect of Sikuani. The arguments to consider Playero a separate language are mostly given in Kondo (1982: 46), while those to consider it a dialect of Sikuani are mostly given in Queixalós (1993: 196-197).

⁶ Also called Guahibo (exonym) and in some areas Hiwi (endonym meaning ‘people’).

⁷ Also called Hiwi (endonym).

⁸ Also called Macaguán and Agualinda Guahibo (exonyms)

⁹ Also called Pepojivi (endonym meaning ‘true people’ [de Kondo 1982: 46]) and Playero Guahibo (exonym).

Kondo claims that there are “lexical, grammatical and accentual” differences between Sikuani and Playero. These were observed during a visit that her husband Victor Kondo, who is fluent in Waü Sikuani, and a native speaker of this language made to the Playero group. They ensured that “they could understand isolated words and short sentences, but not the meaning of long sentences nor normal conversations among Playero speakers” (Kondo 1982: 46). She quotes an unpublished report that Victor Kondo (1973a) wrote after that trip, which is likely to contain precious data, but unfortunately it is not publicly accessible. The inclusion of Playero as a separated language within the Guahiban family has been supported by Lobo-Guerrero (1979, cited in Queixalós 1993: 193), Huber & Reed (1992), Crevels (2007: 160; 2012: 196, 221) and most language databases (Glottolog [Hammarström et al. 2022], Ethnologue [Eberhard, Simons & Flemming 2022], ELCat [Campbell et al. 2017] and WALS [Dryer & Haspelmath 2013]). Playero has also been given an ISO 639-3 code: *gob*.

On the other hand, Queixalós claims that Playero is a linguistic variety “halfway between Sikuani and Cuiba [...], although closer to Sikuani”, and therefore he “provisionally” included it within the Sikuani language (Queixalós 1993: 196). He reached these conclusions after the examination of Playero’s materials from Ortiz (1977, cited in Queixalós 1993: 196) and Criswell (personal communication, cited in Queixalós 1993: 196). Unfortunately, these analyses have not been published. Despite having insistently looked for it, I have also been unable to find any copy of Ortiz (1977) nor any library that includes this publication in its catalog. The inclusion of Playero within Sikuani and therefore the limitation of the Guahiban language family to four members has been followed by Adelaar & Muysken (2004: 162). Campbell (2012: 90) also lists four members, but he follows Kaufman (2007: 65), so he includes Sikuani, Cuiba, Guayabero and the today extinct and very poorly attested Churuya language (Kondo 1982: 52). Finally, Aikhenvald & Dixon (1999: 369-377) do not explicitly mention which languages are included in their typological overview of the Guahiban family.

A third option for the status of Playero had been proposed by Ortiz and Queixalós (1981) early on. In their comparison of ornithological lexicon between Sikuani, Cuiba, Hitnü and Playero, they grouped the latter within Cuiba, “both for their language and mythology”. However, since Queixalós (1993) is a more in-depth study on the subject, in which he groups Playero within Sikuani, it is reasonable to assume that at least this author no longer supports this idea.

Moreover, the very limited materials on Playero make it hard to further develop any of these hypotheses. The two linguistic works that are likely to contain more data on the language are not publicly available: a report by Kondo (1973a) and a collection of tales by Ortiz (1977).

Only a few wordlists are publicly available. The most extensive one was collected by Kondo (1973b), and includes 375 terms based on the Swadesh-Rohe wordlist. These materials were later included in the lexical comparison between Colombian languages published by Huber & Reed (1992). A few words and three sentences were also published in Kondo (1982: 61-62, 65), in comparison to other Guahiban varieties. Besides Kondo (1973), there is only one more primary source (Ortiz 1977). Part of these materials were later published in the comparison of ornithological lexicon among some Guahiban varieties (Ortiz and Queixalós 1981). The wordlist consists of 126 terms, of which 36 have data for Playero.

2.1.3 Internal classification

There are three modern subclassifications of the Guahiban family, which do not present major differences among them (Lobo Guerrero 1979 [see figure 3], Kondo 1982 [see figure 4] and Queixalós 1993 [see figure 5]). The three of them coincide on pointing at Guayabero as the most divergent language within the family. Their main differences deal with the status of Playero (see 2.1.2 Family membership above) and with the dialects grouped within Cuiba and Sikvani.

Lobo Guerrero (1979) and Kondo (1982) often coincide in the linguistic varieties that they include within both Cuiba and Sikvani. Contrastively, Queixalós (1993) refers in broad terms to the same linguistic varieties, but he proposes the idea that these varieties are actually part of a linguistic continuum, the Cuiba-Sikvani continuum. Queixalós states that there is high intelligibility between many dialects, but that “if we take into consideration the two ends of the continuum, the idea of two different languages is justified” (Queixalós 1993: 210, translation my own).

There is also a partial subclassification of the Guahiban family, involving Sikvani, Cuiba Hintü and Playero (Ortiz & Queixalós 1981). This classification was based on a comparison of ornithological lexicon and its results don't show big differences with respect to the previous classifications. Hitnü turned out to be the most divergent language among the four, followed by Sikvani, then Cuiba and finally Playero.

Both Kondo's and Queixalós' classifications have been followed by handbooks on South American languages and language databases. Fabre (1998: 540) reproduces strictly Queixalós' proposal. Campbell (2012) seems to start by following Kondo in her grouping of dialects within Cuiba and Sikvani (although with little differences), but then he also includes Fabre's layout of Queixalós' classification. Finally, Glottolog's (Hammarström et al. 2022)

Figure 3. Lobo-Guerrero's (1979) subclassification of the Guahiban language family.¹⁰

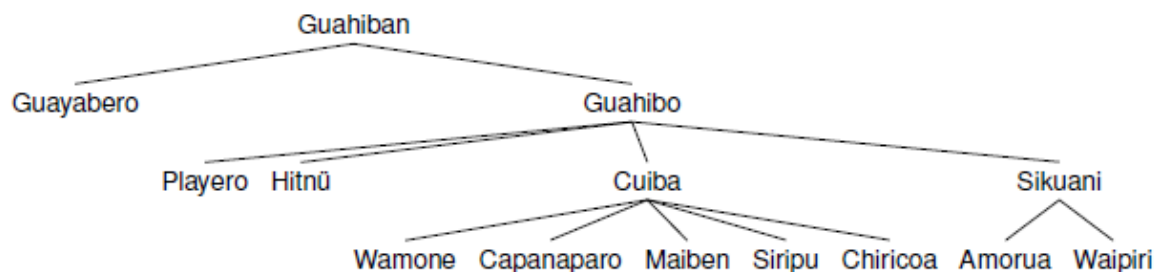


Figure 4. Kondo's (1982) subclassification of the Guahiban language family.

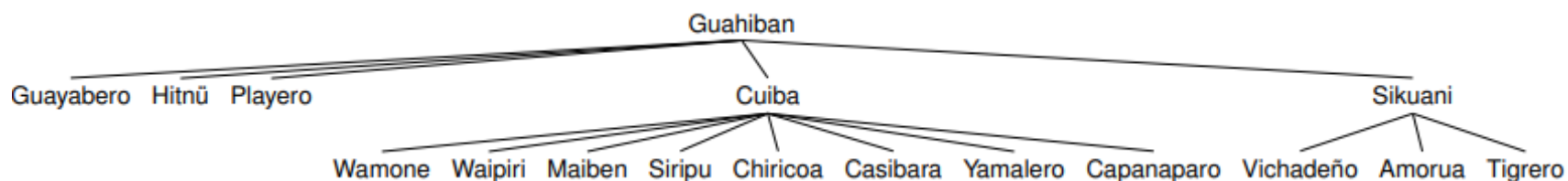
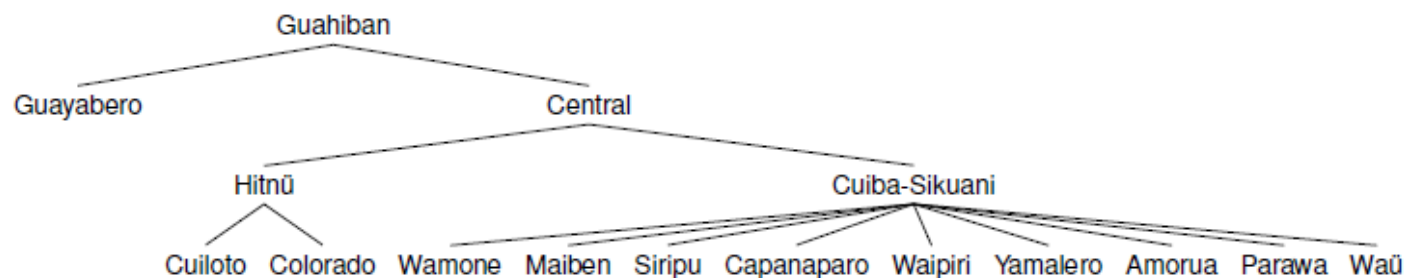


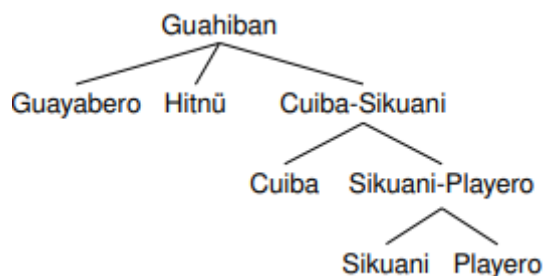
Figure 5. Queixalós' (1993) subclassification of the Guahiban language family.



¹⁰ In this and the following two subclassifications, when language names have an unmistakable and more widespread name today, the latter has been used.

dialectal varieties clearly follow Kondo's proposal, but at language level it includes more branches (see figure 6).

Figure 6. Glottolog's subclassification of the Guahiban family.



2.1.4 Previous studies

The Guahiban language family is an understudied family. At family level, there have been two attempts to make a Proto-Guahiban reconstruction (Christian & Matteson 1972; Keels 1986e), but very little data was still available for any of the languages by then. There have also been some classification efforts, already discussed above (Lobo-Guerrero 1979, Kondo 1982, Queixalós 1993). A family overview can also be added to them (Morey 1969). In addition, Queixalós is currently preparing a chapter on Guahiban languages for the handbook on Amazonian Languages (Epps & Michael in preparation).

At language level, Sikuani is the most well described language. There is a comprehensive grammar by Queixalós, divided in a morphology and a syntax volume (1998, 2000b), in addition to a bilingual dictionary (1989) and two phonological descriptions by the same author (1980, 1985a). He also published a number of papers on specific issues of Sikuani's grammar (1981, 1983b, 1985b, 2012 and 2016). Riena Kondo also published a two-volume pedagogical grammar (Kondo 1985a) and a bilingual dictionary together with Victor Kondo (Kondo & Kondo 2014), in addition to a number of papers mainly related to suprasegmental phonology (1976, 1980, 1985c and 2001). Moreover, there are also two short grammars (Kondo 1975 and Krisólogo 1983), the former written within a tagmemics framework, and two other phonological descriptions (Mosonyi 1964 and Kondo & Kondo 1967). Finally, other papers have been published in series on Colombian and Venezuelan indigenous languages (Kondo 1977; Queixalós 1983a; Kondo 1984, 1985b; Ardila 2000; Queixalós 2000a; Mosonyi, Guevara and Guevara 2000)

Regarding the Cuiba language, there is a pedagogical grammar (Kerr 1995) and a bilingual dictionary (Kerr & Berg 2018), in addition to three grammar sketches (Berg & Kerr 1973; Mosonyi 1975; Merchán 1989). Two language overviews were included in series on

Colombian and Venezuelan languages (Merchán 2000; Machal 2000), and studies on Cuiban phonology and discourse in early series on Colombian languages (Kerr and Berg 1973; Kerr and Berg 1976; Kerr 1977).

As for Guayabero, there is also a pedagogic grammar (Waller & Kondo 2012) and a recently published bilingual dictionary (Kondo, Waller & Waller 2022). In addition, there are two phonological descriptions (Waller & Waller 1976; Keels 1984) and a language overview (Tobar 2000). There are also a few studies on specific parts of the grammar: on negation (Waller 1974a), on clause types (Waller 1974b), on the noun phrase (Tobar 1989) and on stress (Kondo 1996), in addition to dedicated studies by Keels (1986a, 1986b, 1986c, 1986d, 1987).

Finally, Hitnü is the least studied language. It only has three grammar sketches (Lobo-Guerrero 1979; Lobo-Guerrero & Herrera 1984; Buenaventura 1993), and a language overview (Lobo-Guerrero & Herrera 2000).

As it can be observed, systematic studies on Guahiban languages started in the decade of the 60s. Until the 2000, grammatical and lexical studies were published in different quantities and qualities for all languages, which led Sikuni to be the most well described and Hitnü the least well described. In contrast, in the last 20 years the number of published studies has significantly decreased, since only Guayabero has considerably improved its description status.

2.1.5 Typological profile

The Guahiban language family shows agglutinative morphology with a preference for suffixing and head-marking tendencies. Alignment is nominative-accusative and word order follows head-final tendencies, such as SV and APV orders, use of postpositions and head-final noun phrases. Words tend to be long, both because of polysynthetic morphology and of frequent complex constituents. Word classes are divided into two main groups: heads (nouns, verbs and postpositions) and non-heads (adjectives, adverbs, pronouns and particles). Non-heads always need to attach to a head, forming complex constituents. Nominal predicates do not require copula elements. Nominal incorporation is a recurrent device.

Most languages have three series of stops: voiceless, voiced and aspirated. The aspirated series has evolved to fricative segments in Guayabero. This is currently an ongoing change in most Guahiban varieties (except for Maiben Cuiba). Most languages have two liquids, but the flap is often also an allophone of the voiced alveolar plosive, which is leading to a

reduction of /d/ (in Hitnü this segment has already been lost). All languages have three high vowels (in most cases the third one being an unrounded high back vowel), while Cuiba also has an opposition between mid-open and mid-close vowels.

Nominal morphology is rich and counts with prefixes (possessives and demonstratives) and suffixes (classifiers and gender, number and case markers). There are two possessive paradigms, showing an alienability contrast. Classifiers are abundant (16 in Sikuani). There are three genders (masculine, feminine and neutral) and four numbers (singular, dual, plural and collective). Cases are only peripheral, but also numerous (8 in Sikuani). There are no articles, either defined or undefined.

Verbal morphology is also rich, featuring on the one hand negation, directional, valency-changing, number and object prefixes, and on the other mood, positional, tense, and subject suffixes. Verbs are divided into proper verbs and defective verbs, which have different subject suffixes and express the future periphrastically. Subject and object affixes show a clusivity distinction. There is no distinction between past and present, so the only tense distinction is future/non- future. Aspectuality and modality are expressed both through auxiliaries and particles. The latter are also used to show four different evidentials: sensorial inferential, auditive inferential, conjecture and hearsay (Queixalós in preparation).

Guahiban languages are typologically interesting in a number of ways.¹¹ They have positional suffixes expressing notions of ‘to do while sitting’, ‘to do while standing’, ‘to do while lying’ and ‘to do while hanging’ that are rare cross-linguistically (Newmann 2002: 4). Nominalization strategies (at least in Sikuani) are morphologically complex “particularly with regard to the retrieval of participants” (Queixalós 2012: 155-156). The stress pattern of this language family, which in Sikuani has been described as both iambic and trochaic (Kondo 2001), is also typologically rare (see 5.2 Stress for more details). From a diachronic point of view, the study of Guahiban classifiers may be particularly interesting, since the fact that cognacy is not predominant and that their nominal origin is still transparent suggest that they have evolved fairly recently (Queixalós in preparation). Nominal tense and aspect is another typologically interesting feature, which in Sikuani has been described in terms of aspect rather than of tense (Queixalós 2016). Finally, nominal plurality, which can only be formed after adding the singular suffix to the noun, is another unusual feature of Guahiban languages (Queixalós 1983: 3).

¹¹ Some of these features have only been described in Sikuani, but due to the low description status of the other languages in the family it is reasonable to assume that they are shared by most of its members. Further research should make this explicit.

2.1.6 Language contact

Guahiban languages have been influenced by North-West Arawakan languages, to the extent that different authors have proposed a genetic link between these two language families (see 2.1.1 Family origins for more details). Meléndez (2014) identified 213 words and expressions that have been borrowed from Achagua and Piapoco by Sikuani, presumably during both the precolonial and colonial period. Most lexical borrowings belong to “the domains of technology and agriculture-based cosmovision”, showing a relationship between two structurally different societies: the Arawak people, who were sedentary agriculturalists, and the Guahibo people, who were nomadic hunter-gatherers (Queixalós in preparation). To a lower extent, these borrowings also included typically borrowed lexicon, such as plants and animal names. Moreover, some pronominal forms are also shared between Guahiban and Arawakan languages (Queixalós 1993: 194).

Besides contact with Arawakan languages, Jolkesky (2016) has also proposed contacts between Guahibo and a number of language families based on shared lexicon: Chocoan, Puinave, Bora-Muinane, Nadahup and Yanomami. He identified 28 shared lexical terms with Chocoan languages; 16 with Puinave, 13 with Bora-Muinane, 8 with Nadahup languages and 5 with Yanomami languages. These contacts would have taken place between 1.500 and 2.000 years ago in the “Caquetá-Negro regional interaction sphere” (Jolkesky 2016: 594). This author proposes the Upper Negro river as the urheimat of the Guahiban family, where these contacts would have taken place before the migration of the proto-guahibo speakers to the Orinoco river via the Casiquiare river, caused by the expansion of Carib and Arawakan groups in their traditional territories.

2.2 The Yamalero language

2.2.1 Language name

There are different terms to name the Yamalero language (Glottocode: maya1284). The most common are Yamalero, Yamarero, Mayarero, Mayaraxi and Mariposo. I will try to explain how they might have evolved and therefore show that they all refer to the same linguistic variety. Kondo (1982: 52) proposed that *Mayaraxi* comes from the person's name *Mayara*, to which the suffix *-xi Mayara*, a plural diminutive, would be added. *Mayarero* looks very much like the Spanish equivalent for the term *Mayaraxi*, replacing the *-xi* suffix by the Spanish *-ero* suffix (used, among other functions, to indicate someone's job). *Yamarero* is probably the result of a metathesis between the first two syllables of the term *Mayarero*. Finally, *Yamalero* seems the result of a dissimilation process through which a rhotic element

became lateral in the third syllable of *Yamarero*, although there are no laterals in Yamalero (unlike in Spanish). Therefore, it is very likely that all these names are used to refer to the same linguistic variety.

Among these slightly different names, I have chosen to use *Yamalero* in this thesis because this is the name used by the language community itself. It is not the most common name in the scarce literature on the language (probably *mayaraxi* is), but since nowadays the community I worked with does not recognize this name and taking a community-based approach rather than a researcher-based approach (Dryer 2019), I have decided for *Yamalero*. There is another name, etymologically unrelated to the previous ones, which has sometimes been used to refer to Yamalero: *Mariposo*. However, I have not considered using it because it has pejorative connotations. This term (from Spanish *mariposa* ‘butterfly’) is used by other ethnolinguistic groups to identify the Yamalero by the skin spots that some of them have in their faces, hands or feet (Zamudio et al. 2014a: 60).

2.2.2 Mentions in the literature

Yamalero, or any of the terms discussed above, have only been mentioned recently in Guahiban languages literature (and indeed Yamalero has not been included in section 2.1.2 Family membership above). There may be at least three reasons for that. The first one is that the Yamalero language had never been studied before that. The second one is that it had been studied, but using another language name. The third one is that it had been studied at an earlier stage, namely when its speakers were part of a larger group. I will hypothesize that the third option is the closest one to reality and that the language spoken by the larger group the Yamalero were part of is Playero.

The first mention in the literature I could find on the Yamalero language is from Kerr & Berg (1973: 90), who included the “Mayaraxi” within the Cuiban ethnolinguistic groups. Ortiz & Queixalós (1981) report about the “Yamarero” variety and classify it as a Cuiban group as well. Kondo (1982: 43-45) uses the term “Mayarero” and also includes them within the Cuiban varieties. Moreover, she mentions that Wamone Cuiba (from Mochuelo) call them “Mayáraxi”. After these initial links to Cuiba, in the 90s this changed dramatically and Yamalero has been systematically related to Playero from then on. Ortiz (1988 personal communication, cited in Queixalós 1993: 196) pointed out that those who the Wamone Cuiba call “Mayaraxi” are indeed the Playero, while Queixalós (1993: 196-197) himself grouped both Yamarero and Playero in the same linguistic variety. This is also what Fabre (1998: 540) suggested in his internal classification of the Guahiban family, in which Playero appears

between parentheses as an equivalent term for Yamarero. Finally, Ardila (2000: 571) also uses the terms Yamarero and Playero indistinctly.

As for linguistic data, there are even less materials available than those listed above for Playero. Only two short wordlists have been published so far. The first one was part of the ornithological lexicon comparison among some Guahiban varieties (Ortiz & Queixalós 1981) and included 5 terms in Yamalero. The second one was published in a lexical comparison between Cuiban and Sikuani varieties and contained 31 terms in Yamalero (Queixalós 1993: 212-213). When this thesis becomes publicly accessible, these materials will be significantly expanded by a wordlist of 375 terms, the Swadesh-Rohe wordlist (see Appendix 3. Lexical comparison between Guahiban languages). The terms in this wordlist had already been collected by different authors and published by Hubber and Reed (1992). Now, data on Yamalero has been added to it, which will enable new comparative work and the study of recurrent sound changes between Yamalero and these languages (Playero, Sikuani, Cuiba, Hitnü and Guayabero). Although this is out of the scope of this study, a bird's eye on these wordlists seem to suggest that Playero is the closely related linguistic variety to Yamalero. If this is confirmed, it would support the idea that both groups were part of a larger ethnolinguistic group in the past, as it has been suggested by other signs (see 1.2 Ethnolinguistic history of the Colombian Yaruro).

2.2.3 Language vitality

The UNESCO language vitality rating system (UNESCO 2003) has been used to assess the vitality of the Yamalero language. This system seems to me the most comprehensive system to assess language vitality up to date. The nine criteria it includes enables the researcher to look at the language from different angles, unlike some of the previous systems such as GIDS (Fishman 1991), EGIDS (Lewis & Simons 2010) and, to a lesser extent, LEI (Campbell et al. 2017).

1. Intergenerational language transmission: Stable yet threatened (5-)

Yamalero is the language that parents use when addressing their children. Only parents who are originally from another community do not use Yamalero with their children; however, in these cases kids are raised bilingual, because the other member of the couple will talk Yamalero to them.

2. Absolute number of speakers: 250 - 300

There are no exact numbers for Yamalero speakers. However, the number of ethnic Yaruro and Yamalero according to Colombia's last census (DANE 2018) is 278 people (136 Yaruro

and 142 Yamalero). Since the only people who do not speak Yamalero are those who recently arrived to the community, and taking into consideration that the census data is 3 years old, the current number of Yamalero speakers must be between 250 and 300 people.

3. Proportion of speakers within the total population: Unsafe (4)

As it has just been stated, nearly all community members speak Yamalero. Exceptions include people who recently joined the community, i.e., men or women from other indigenous communities who just married to a community member, or descendants from former community members who go back to the community, but do not speak Yamalero.

4. Shifts in domains of language use: Multilingual parity (4)

Yamalero is the language community members use to socialize among themselves. However, Spanish is the preferred language for communications involving the whole community, such as assemblies or public announcements, because not everybody can understand Yamalero. In addition, Spanish can also be occasionally used in conversations between Yamalero speakers.

5. Response to new domains and media: Minimal (1)

Spanish is the language used in new domains such as school and media. At school, Yamalero is only taught two hours per week, while all other courses take place in Spanish. Youtube videos watched by the few community members who have a smartphone are played in Spanish. Series and news watched in the only house where there is a TV are broadcasted in Spanish as well.

6. Materials for language education and literacy (3)

Yamalero's alphabet is currently being developed, so a practical orthography is being taught to children at school. The only written materials available are two small books used at school: one teaching the orthography and the other one containing short texts.

7. Governmental and institutional language attitudes and policies, including official status and use: Passive assimilation (3)

According to the Colombian Constitution (1991), native languages are official in their own territories. In addition, the law 1381/2010 was approved to reinforce the use and preservation of these languages. However, the language the administration currently uses to address to Yamalero speakers is Spanish (i.e. official letters), so no practical development of this officiality can be appreciated.

8. Community members' attitudes toward their own language: Robust (4)

Community members are proud of their own language and speak it with no sign of shame. They consider that language is part of their identity. In addition, most of them share the feeling that Yamalero should be studied so that it can be taught better at school.

9. Type and quality of documentation: Inadequate (1)

Currently, there are no public audio or video recordings of the Yamalero language and there are also no published grammatical works. The only available materials consist of three short wordlists (see 2.2 The Yamalero language for more details): one of 31 terms (Queixalós 1993), another one of 5 terms (Ortiz & Queixalós 1981) and a third one which I have not been able to consult (Ortiz 1977). This phonological description aims to start filling this gap.

10. Summary & Discussion

Taking into consideration the previous criteria, I would label the Yamalero language as “vulnerable” according to UNESCO ratings. The main reason not to consider it endangered is that the level of intergenerational transmission is very high. However, I do not think it can be considered “safe”, for two main reasons. The first one is that Spanish is starting to gain presence in some language domains, such as public announcements. The second one is that the community size is significantly small and therefore it is still at demographic risk.

I have been able to include information for the nine UNESCO criteria after one month of participant observation in one of the three Yamalero-speaking communities and after collecting published and orally reported information about the other two. The only criteria I was a bit less confident with is the one dealing with language attitudes. I addressed it based on the people I had most contact with and taking into consideration whether their attitudes can be inferred to other community members. But certainly there is the risk that my perception is biased and therefore the best way to go would be to do a language survey that includes information about the languages that people in each household speak and their attitudes towards them. This can only be achieved with long-term participant observation, a research method that has proved to be the most effective for this kind of sociolinguistic research (Rosés Labrada 2017:36-41). I hope to be able to do it in my future field trips.

Using rating systems to classify the degree of endangerment of a language has been a recurrent topic of discussion. Authors who are against it usually claim that it is too simplistic to use numbers for a situation as complex as language shift (Moore et al. 2010). Members of the UNESCO Ad Hoc Expert Group on Endangered Languages (2003) were already aware of this criticism and in fact they emphasized that “languages cannot be assessed simply by adding the numbers; we therefore suggest such simple addition not be done” (*italics in original*). I agree with them that language shift is a complex situation, very much linked to the local context. Therefore, the current indexes are probably not good enough to objectivize

many of the language shift processes, but I do not think they are bad enough to reject their use. I think that they can provide relevant information, and that is why I have used the UNESCO rating system here (Ginebra 2022).

2.2.4 Orthography

Two different proposals have been made to establish an orthography for the Yamalero language. The first one was made by the Quinto Patio community in 1997, which by then integrated both ethnic Yamalero and Yaruro. The second one was made by and for the Únuma community in 2021, ethnically Yaruro, so it is not currently being used by the Yamalero people.

There is only one difference in these two orthography proposals, which concerns the representation of the [x] sound. In the first proposal, [x] was represented by a *j* grapheme with diaeresis, that is, *j̈*. This decision was probably taken following the agreement by the Colombian indigenous leaders to use this grapheme (Mosonyi, Mosonyi & García 2000: 271). However, due to a number of impracticalities, the Yaruro community decided to switch *j̈* to *x*. The two orthography proposals can be seen in table 1.

Table 1. Orthography proposals for Yamalero.

IPA symbol	1997 proposal	2021 proposal	Example	Gloss
a	a	a	amo	'grandparent'
b	b	b	bo	'house'
d	d	d	dudubi	'bag'
e	e	e	ena	'mother'
i	i	i	ibo	'stone'
h	j̈	j̈	jotojoto	'heron (sp.)'
k	k	k	kokota	'fish (sp.)'
m	m	m	mini	'river'
n/ɲ	n	n	nebü	'ant'
o	o	o	obo	'mosquito (sp.)'
p	p	p	pone	'ray'
p ^h	p̈j̈	p̈j̈	pjuda	'parrot'

s	s	s	semeta	'root'
t	t	t	tjutjubi	'chigger'
t ^h	tj	tj	tatamo	'fish (sp.)'
ts̃	ts	ts	tsodopa	'plate'
u	u	u	unu	'hill'
u	ü	ü	ütjübüdü	'heron (sp.)'
w	w	w	wakadi	'piranha'
x	j	x	xonebü/jonebü	'bird (sp.)'
j	y	y	yodata	'hat'

As it can be seen in table 1, both proposals are easy to learn by native speakers, since there is virtually a one-to-one correspondence between phonemes and graphemes. Nevertheless, Yamalero's orthography should probably be best conceived as under development. One of the main participants in the 2021 proposal, who is also one of the two school teachers in the community, often shared with me some of his concerns about this last proposal. One of them has to do with the possibility to include a grapheme for the palatal nasal segment, probably the same that is used in Spanish: *ñ*. An argument in favor of this idea would be that [ɲ] is a sound that native speakers can clearly distinguish from [n]. An argument against it would be that its appearance is very infrequent in the language and that there are other sounds that native speakers perceive different from the way they are represented, such as [r] or [ʃ]. Another issue that might change in future orthography proposals is the graphic representation of stress. So far accent marks are not used in the written representation of Yamalero, but there are words which are only distinguished by stress (see 5.2 Stress), so using accent marks might help language learners to identify words. On the other hand, there are other ways to distinguish these words, e.g. through context. Therefore, these are two still open issues that might introduce new changes to Yamalero's orthography.

3. Methodology

3.1 Meta-documentation

3.1.1 Project background

This project has a well-defined starting point: an email by Jorge Emilio Rosés Labrada (University of Alberta) in late August 2021. By then I was about to start my one-year MA programme at Leiden University and I was trying to figure out which would be a good language to work with for my MA thesis. My focus was on a typologically interesting, underdescribed language in South America. One of the possibilities was Jodī (isolate, Venezuela), so since Rosés Labrada had recently worked with this language (2019) and had been doing fieldwork in nearby areas, I asked him about the convenience of trying to start a language documentation project of the Jodī language. He advised me against it for a number of reasons, but instead he suggested that I worked with the Pumé (Yaruro) language. More specifically, he pointed out that although Pumé is usually listed as a Venezuelan language, there is also a Pumé-speaking community in an indigenous reserve in neighboring Colombia, which might be a good fieldwork site.

This is how I started considering the option to do fieldwork with the Pumé community in the Caño Mochuelo reserve (Casanare, Colombia). I presented this idea to by then my only thesis supervisor, Rik van Gijn, and his first response (“Pumé? I have never heard of it”) while he looked it up on Glottolog confirmed to me that it was a good choice. He also suggested that, since I was already thinking of working on the documentation and description of Pumé for my potential PhD thesis, it might be a good idea to start working on the description of its phonology. However, by that time Leiden University regulations to prevent the spread of covid-19 did not allow student trips to countries labeled orange by the Dutch Ministry of Foreign Affairs, as it was the case with Colombia (and most countries outside the European Union). Thus, I focused on working on establishing contacts with the Pumé community, while I hoped that the drop in covid-19 cases that was taking place in Colombia after August 2021 changed the Dutch government's traveling policy to this country.

In order to reach the Yaruro community and ask them about the possibility of doing fieldwork with them, I started by contacting two professors at the Universidad Nacional de Colombia who also work on indigenous languages in Colombia: María Emilia Montes and Ana María

Ospina.¹² They had no experience working in the area where the Yaruro community is settled (the Colombian Eastern Plains in the Casanare department), but Montes did have a student who had recently presented a course paper on Yaruro and who had some contacts in the reserve, since he is originally from the neighboring Arauca department: José Valerio Saenz. I got in touch with him and he provided me with all kinds of details about the Caño Mochuelo reserve and everyday life there. Although he had never visited the Yaruro community, he had links with other communities and the information he gave me was extremely useful in planning the logistic issues of my field trip. He also sent me Rocky's telephone number, a member of the Casanare's Indigenous Regional Organization (ORIC), the indigenous authority in the area. I told him about my plans to work with the Yaruro language and the dates that would be feasible to me. They checked this with the Yaruro community, got a positive response, and authorized my visit. They also informed me that the community's priority in working with a linguist would be the creation of a language dictionary. Along this process, I also contacted other organizations that work on indigenous issues in the area, but unfortunately I never succeeded in reaching them: the Colombian Indigenous National Organization (ONIC), the Etnollano Foundation, the Colombian Amazon Indigenous Peoples National Organization (OPIAC), and the Gaia Amazon Foundation.

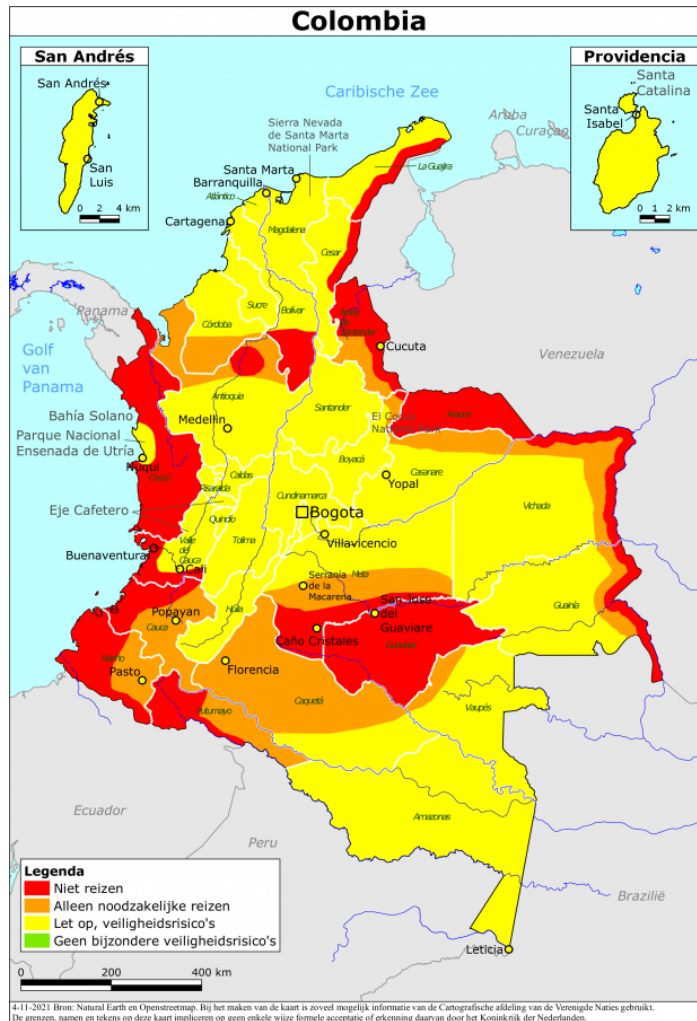
3.1.2 Field trip

In early November 2021, the Dutch government's policy on traveling to Colombia changed. Some areas became yellow, which meant that Leiden University allowed student trips to these areas (see figure 7). My fieldwork location, the Caño Mochuelo reserve, was at the border between a yellow area and an orange area (compare figure 7 with figure 1). Fortunately, the University allowed the trip, so I started to prepare everything I needed to make it possible. I was planning to stay in the field from late January to early March 2022.

As for economic issues, I was awarded a grant of 1.200€ from the Leiden International Students Fund (LISF) and another one of 1.000€ from the Sustainable Humanities Internship Fund. This amount allowed me to cover all the costs that emerged from my field trip, considering that I virtually did not need to spend money buying documentation equipment. A documentation kit was generously provided by the Leiden University Phonetics Lab, including a video camera, a microphone, a camera and a mic tripod, batteries, memory cards, cables, etc. I only bought a portable solar panel to be able to charge my personal laptop, which I used for text annotation and data organization, and my personal mobile phone, which I used as an audio back-up during video recordings. Regarding health issues, I

¹² These contacts were facilitated by Jorge Emilio Rosés Labrada, so I also thank him because of this.

Figure 7. Dutch government's travel advice for Colombia on January 24th 2022.



Source: [Dutch government](#)

took the recommended vaccinations for the area I was traveling to (yellow fever and rabies), I contracted health insurance and I created my first-aid kit, which included Malarone pills, serum and iodine, but also vitamins and sun and mosquito protection (among others).

Once in Colombia, I landed in Bogotá, where I had the opportunity to meet on-site both María Emilia and José Valerio, as well as David Guerrero, another former student from María Emilia who had worked with indigenous languages in Colombia and who is now a PhD student. I received precious advice from all of them and a few days later I took a plane to Yopal, the capital of the Casanare's department. In Yopal I met Rocky and other ORIC members, such as the anthropologist Fabio Eusse, who introduced me more in detail to the indigenous lifestyle in the Caño Mochuelo reserve. They also put me in contact with the reserve indigenous authorities, who issued an entrance permission for me. Finally, we

bought together the few things I was missing to travel to the Yaruro community: a hammock to sleep and (some more) gifts for the community.

The trip to Únuma, the current Yaruro's village, lasted two days. The first day consisted of a 7 hours trip by car from Yopal to Cravo Norte, the closest non-indigenous village to the reserve entrance. Rocky had to travel there for family reasons around the same dates, so I took advantage of this and we traveled together. We spent the night in Cravo Norte and the following day two members of the Yaruro community came to pick me up by motorbike. One of them was Marco Julio García, a young community leader. Since there is a 3 hours ride from Únuma to Cravo Norte, we first spent some time getting to know each other in Cravo Norte and in the afternoon we left for Únuma.

I finally arrived in Únuma on January 31st 2022 and stayed until March 3rd 2022, which accounts for 31 days of fieldwork. I had a host family, Marco Julio's, who lives with his wife and his two children: a 9 years old girl and a 8 years old boy. I ate meals with them, to which I contributed an important amount of groceries I had bought on my way to the community following Rocky's advice, and economically when they were over. Since their house is not big, I did not sleep with them, but in a small one-room house next to theirs that was empty at that moment. I also took advantage that in the community there is a communal room which has a table and is usually only used for meetings to use it as working space, so I also spent an important amount of time there.

3.1.3 Ethical issues

The same day I arrived in Únuma, community leaders called for a meeting in order to introduce me to community members. In this meeting I explained that I like languages and that I wanted to learn their language, because it is very different from all the languages I knew at that moment. I also explained that I was part of an European university which had given me the money to be there and study their language. In addition, I also told them that I knew that they had been working on the creation of teaching materials in Yamalero and that I was very interested in knowing more about it and to see which would be the better way to work together. Félix, one of the two school teachers, told me what they had done so far and highlighted that it is important to have linguists working with indigenous communities, as some of their neighboring communities do. He also pointed out that by working together we could achieve very interesting results, so he proposed to have a meeting soon to talk about all this in more detail. I showed total agreement with these ideas and also said that what we linguists usually do is work with as many different people as possible, so I welcomed anyone who was interested or curious about his language to come to talk to me.

A few days later, I had a meeting with community leaders and school teachers to discuss how to work collaboratively. I told them that we linguists usually work with an unknown language to us first, by video recording a native speaker and transcribing and translating what he or she said, and second, by translating words and sentences from a common language to the community's language (see 3.2 Data collection for more details). By then I had already started working with a language consultant, but since people did not seem to have a specific interest in working with their language, I emphasized that this was important and I asked them to think about people who would be interested in joining the project. We also talked about outputs. I told them that since my university had given me some money to be there, I was expected to produce a study on the sounds of Yamalero in exchange. But I also emphasized that since they were sharing all this knowledge to me, I was also expecting to give something to the community in exchange. They told me that their priority was to have a bilingual dictionary, which I had already been told about. Since I was only going to be in the community for a month, I clarified that it was necessarily going to be a short dictionary, but this sounded reasonable to everybody. They also told me that they had recently printed their teaching materials, so they could be in charge of the logistics part. I proposed to be in charge of the economic part, since I had already reserved a small part of my budget for this purpose. Finally, I asked them how they would feel if video recordings and language materials were made public for academic purposes. They answered that they want their language to be known to others, that this is a reason for joy. So since the meeting was productive and successful, we started working on these terms and we agreed to meet again in case other issues arose.

Although I had been told that people would not be uncomfortable being recorded and appearing in an online repository in an academic setting, each time I worked with a new language consultant, either video or audio recording him or her, I told them about that. I also asked them that if they agreed, I would record them showing proof of that, since sometimes researchers do not behave ethically and therefore it has become a common practice in linguistics to have speakers informed consent. I collected oral informed consent because some of my language consultants were illiterate and because it seemed to me a more natural, appropriate way to do it.

Before I left the field, I tried to do another meeting with community leaders, but they had been quite busy during the whole period I spent in their community, so I was not successful. I did have the opportunity to talk separately to some of them and I told them that I was happy about the time I had spent in the community, but also that the data I could collect was much less than what I expected. They had already realized about that, and told me that they were sorry because they had been very busy during the month I spent there. They also showed

their satisfaction about the fact that we could start working together, and told me that they were expecting me to be back. I replied that I would very much like to be back, but also that this did not depend only on me, but on whether I got the university funds again. Therefore, taking into consideration the low amount of collected data and the prospects for future fieldtrips, we agreed that the best would be not to print a dictionary at that moment as we had agreed, but to wait for a better dictionary, both in terms of quantity and quality. I also told them that in the case that I could not be back, I would send them the money and the materials to print what we had done so far.

3.2 Data collection

3.2.1 Wordlists elicitation

Data collection consisted of two main techniques: vocabulary elicitation and text collection. Initially, the vocabulary list I used was based on Dyck & Dyck (2015), the only digital vocabulary of the Pumé language. Since this is the language I was expecting the Yaruro community to speak (see 1.2 Ethnolinguistic history of the Colombian Yaruro for more details), I wanted to check dialectal differences that this community may have developed in comparison to the Pumé spoken in Venezuela. Once I figured out that this was not the case, I tried to collect some more data that could be used to compare Yamalero to the other Guahiban languages. I found a lexical comparison based on the Swadesh-Rowe wordlist (375 terms) which had been published for most Colombian languages (Huber & Reed 1992), including the five Guahiban languages (Sikuani, Cuiba, Hitnü, Guayabero and Playero), so I decided to use it for my vocabulary elicitation sessions. Naturally, many terms coincided with Dyck & Dyck's vocabulary, so I did not need to elicit them again. For the new ones, I had to manually prepare the wordlists that were missing, given the obvious lack of printing facilities in the field. All in all, I finally completed a Yamalero's version of the Swadesh-Rowe wordlist, which can be found in Appendix 3. Lexical comparison between Guahiban languages together with the versions for the other Guahiban languages.

Best practice in vocabulary elicitation is to give to the language consultant a hard copy of the wordlist that it is expected to be elicited, check for words that the consultant is unsure about their meaning, and finally record each word with three repetitions. Since the consultants I often worked with in elicitation were illiterate (see 3.2.3 Language consultants), I could not do that. Instead, I would ask them for the translation of a Spanish word in Yamalero and if they hesitated or did not come up with a response in average time, I would ask them whether they know that word in Spanish and, if not, I would explain to them its meaning. This

system is slower and probably more risky, since I found out that once I had gained some confidence with my language consultants, they would more often ask for clarifications of the words they were given.¹³ For this reason, I double checked all terms in the Swadesh-Rowe wordlist I am including in the appendix at least once, and in case that there was disagreement between the first and the second speaker, I asked for the opinion of a third language consultant.

3.2.2 Text collection and annotation

Text collection was the other method used for collecting language data. This is the more widely used technique for morphosyntactic descriptions, but also for phonological ones. However, the amount of text collection during this fieldwork was low. The main reason for that has to do with the challenges that any language documentation project needs to face at an initial stage, plus the shortcoming that represented spending some days trying to find out what language did the Yaruro community actually speak. The first days of my fieldwork were devoted to socializing with community members, explaining to them what I was doing in their community, and how I was planning to do it. Then, when I started recording texts, I also had to spend some time finding out who might be a good language consultant (actually I did not stop doing this until the day I left). This was particularly challenging in the Yaruro community, since it is a small community (some 135 people), where kids represent a huge majority and women are not used to interacting with men. This left the collective of adult men as my main choice, but this is also the social group that is employed more hours per day, so it often took some time to make an appointment work. Actually, on my last day in the field I started working with a young man that enjoyed translation tasks and who I hope to be able to keep working with in the future.

The situation described above led to the collection of two texts only, video and audio recorded, which add up to some 15 minutes. They are still not representative of the huge variation that languages may show in terms of age, sex, genres or spontaneity, so this should be considered a priority in further research on Yamlaero (Himmelman 1998). The two collected texts are of about 7 minutes each and feature the language of two adult men. They are both staged communicative events, where participants had been proposed a topic to talk about beforehand. Both texts feature historical narratives about the traditional Yamalero practices and how they have changed up to the present time. Metadata was collected for each session and each participant (also for those participating in elicitation

¹³ This might be related to the probably unconscious behavior of not showing “weakness” (in this case, lack of proficiency in Spanish) to an outsider.

sessions). Templates for both sessions metadata and participants metadata can be found in Appendix 1 and Appendix 2.

Time-aligned transcriptions were created with the help of native speakers using the ELAN software (Max Planck Institute for Psycholinguistics 2022). Transcriptions were written following the last proposal of Yamalero's orthography. A dedicated tier was used to account for allophonic variations and phonological processes that are out of the scope of a language orthography. Time-aligned translations to Spanish were also created in ELAN for both texts. Texts have not been morphosyntactically annotated yet, but detailed annotations were taken by hand during the translation process. These fieldnotes should enable a first analysis using dedicated software such as FLEEx (Summer Institute for Linguistics 2022).

Data used for phonetic analysis is mostly taken from elicitation sessions, although when this was not enough, text data has also been used. Recordings have been cleaned first using the Audacity software (Audacity Team 2021) and then analyzed using Praat software (Boersma & Weenink 2012).¹⁴

3.2.3 Language consultants

During elicitation and text annotation tasks I worked with different native speakers: Félix Tudupial, José Luis García, Hualdo García, Graciela Tudupial and Marco Julio García. All of them are native speakers of Yamalero who are also proficient in Spanish. All of them are also currently living in Únuma.

Félix Tudupial is a 37 years old male. He was born in Quinto Patio, when the Yaruro people lived there with the Yamalero. His parents were both Yamalero speakers. He went to school in San José, a Maiben Cuiba-speaking community, and in Getsemaní, a Sikuaní-speaking community, where besides learning Spanish, he also acquired passive knowledge of these two languages. He is married to a Yamalero-speaking woman and they live together in Únuma, with their children and grandchildren. He is one of the two school teachers and he enjoys thinking about his language. That is why I worked with him mostly in text transcription, and also when I wanted to have detailed translations or discuss phonological phenomena.

José Luis García is the oldest speaker I worked with, probably in his fifties, although his exact age (as everybody in the community aged above 40) is uncertain. He was born when the mixed Yamalero-Yaruro group was still a nomadic group, somewhere near the Meta river in the Vichada department. His parents were both Yamalero speakers, although his maternal

¹⁴ I want to thank Alba Hermida for teaching me how to use Audacity and a few clues about Praat.

grandfather was one of the two Yaruro elders who did speak this language. He did not receive education, but he learnt Spanish through contact with creoles. He is married to a Yamalero-speaking woman and after living in Topochales for some time, they moved to Únuma a few years ago. He works as a day laborer for other members of the community or the communities nearby, mainly on the weekends. That is why I had plenty of time to work with him on weekdays. Since he is illiterate, we mostly worked on the elicitation of vocabulary lists.

Hualdo García is one of José Luis younger brothers. His exact birth place and age are also uncertain, but he is probably somewhere in his forties. He also learnt Yamalero from his parents and did not go to school either. Actually, he started working in a creole's estate as young as 12 years old, where he became fluent in Spanish. When he was 18 he married a Sikuni woman from the Getsemaní community, where they lived for some years. She does not speak Sikuni because this language is being lost in this community, but Hualdo acquired some passive knowledge from older speakers. Now he lives in Únuma and he also works as a day laborer, mainly in tasks related to the field. We worked together on vocabulary elicitation as well as on text transcription. Although he is also illiterate, he could repeat slowly and clearly what others said in video recordings, so this was a very fruitful partnership.

Graciela Tudupial is a 19 year old woman, one of Félix's daughters. She was one of the first kids born in Únuma. Her parents are both native Yamalero speakers, so she learnt this language from them and Spanish at primary school. She also studied secondary school in Morichito, within the Sáliba community. Her husband is also a Yamalero native speaker. She spends most of her time taking care of her two children and doing household tasks, but she has recently also been elected as a captain of the community. That is why her free time is more limited than the others' consultants, but we could do some vocabulary elicitation sessions together. In these sessions, I did not perceive significant changes in comparison to men's speech.

Finally, Marco Julio García is the penultimate of the García siblings. He is 26 years old and unlike his brothers José Luis and Hualdo, he did attend primary school. In fact, he was the first member of the Únuma community to attend secondary school as well, in Getsemaní, where he acquired passive knowledge of Sikuni. That is why he became the first Yaruro teacher in the community's primary school, a role that so far was reserved for teachers from other communities. He is married to a Yamalero-speaking woman and after being a member of the Junta de Cabildo, the reserve political body, he is now the secretary of the Yaruro

community. That is why his time is also very limited, but besides doing some elicitation together, he also told me a lot about the community's practices and beliefs.

4. Segmental phonology

4.1 Vowel segments

The Yamalero vowel inventory is made up of six contrastive segments. Vowels are distinguished according to their height, frontness, and rounding. There are three high vowels, one front /i/ and two back (one rounded /u/ and one unrounded /ɯ/); two mid vowels, one front /e/ and one back /o/; and one low vowel /a/. This latter vowel has not been described in terms of fronting yet, because further research is needed to determine whether it is a central vowel, as it would be typologically expected, or a back vowel, as phonetic evidence seems to suggest (see figure 8 below).

Table 2. Yamalero's vowel inventory.

	Front	Back	
		Unrounded	Rounded
High	i	ɯ	u
Mid	e		o
Low	a		

This vowel inventory is a prototypical inventory for Guahiban languages. All languages show three high vowels, although in some cases the third one is analyzed as an unrounded central vowel and in others as an unrounded back vowel (see 4.1.1 The /ɯ/ vowel for more details). In addition, in some Cuiba varieties there is also a second series of mid vowels (Merchán 2000: 387; Machal 2000: 226), which might be an influence of Pumé (Mosonyi & Mosonyi & García 2000: 547).

Vowel length does not seem to be distinctive in Yamalero, as in most of Guahiban languages (Queixalós [1985a: 104-105] for Sikuni, Kerr & Berg [1973: 95-97] for Cuiba, Lobo-Guerrero & Herrera [1983: 20-22] for Hitnü and Keels for [1984: 96-110] Guayabero). Although there are length differences in the pronunciation of vowels (they usually range from 80 to 180 milliseconds), they are probably better explained as for their relationship to the stressed syllable and their position within the word. No minimal pairs have been attested and no differences in vowel length have ever been mentioned by any of my language consultants. However, a duration contrast in the vowel system has been proposed for Sikuni by Kondo (1985c: 61-66) and Mosonyi, Guevara & Guevara (2000: 276-277), although these authors

acknowledge that native speakers of these varieties can't systematically recognize long vowels.

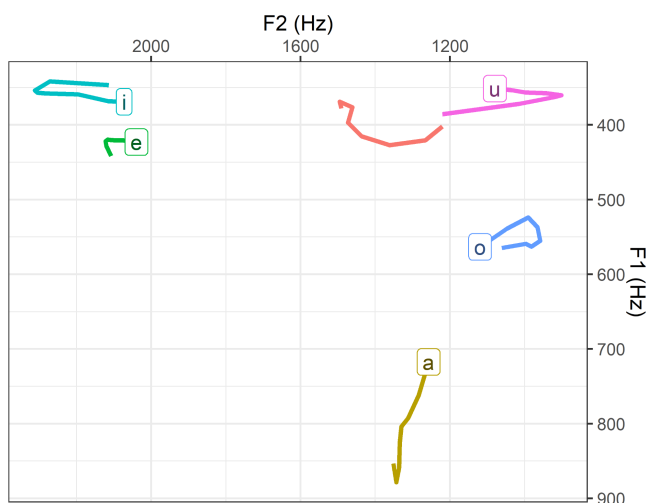
Distinctive contrasts among phonetically similar vowels can be found in table 3.

Table 3. Yamalero's contrastive vowels opposition.

Contrast	Yamalero	Gloss	Yamalero	Gloss
/i/ vs /e/	/ʔpi.di/	'to grab'	/ʔpe.di/	'cassava bread'
/e/ vs /a/	/ʔhe.da/	'canoe'	/ʔha.da/	'turtle'
/a/ vs /o/	/ʔo.ba/	'to whistle'	/ʔo.bo/	'mosquito (sp.)'
/o/ vs /u/	/ʔbo/	'house'	/ʔbu/	'hammock'
/u/ vs /ʉ/	/ʔu.nu/	'hill'	/ʔbu.nuʉ/	'agouti'
/e/ vs /o/	/ʔne/	'tree'	/ʔno/	'pepper'
/o/ vs /ʉ/	/ʔne.bo/	'rod'	/ʔne.buʉ/	'ant'

The space distribution in six vowel qualities can be confirmed using acoustic vowel-plotting evidence. This was achieved using data from six words where each of these vowels is found in the same context (word initial position followed by an alveolar nasal):¹⁵ *ine* 'phosphorus', *ena* 'mum', *amo* 'grandpa', *ono* 'parrot', *unu* 'hill' and *ünbia* 'howl'. Using Praat (Boersma & Weenink 2012) I measured the values for the first and second formants, and then using R (R Core Team 2021) I plotted these values into figure 7.

Figure 7. Scattered vowel plot for a young male Yamalero speaker.



¹⁵ This is not the ideal, most neutral context, but once I realized, collecting new data was not possible any more. Therefore, it is expected that further research confirms or modifies these results.

4.1.1 The /u/ vowel

It is cross-linguistically more common to find /i/ in a paradigm with three high vowels than /u/ (Moran & McCloy 2019). Moreover, the presence of the /i/ vowel in the Greater Amazonian area is one of its main features (Dixon & Aikhenvald 1999: 8; Aikhenvald 2012: 109-112; Michael et al. 2015). However, this segment is virtually nonexistent in the languages of the Colombian and Venezuelan Plains. Excluding Guahiban languages, which will be discussed below, it is only found in Piaroa (Mosonyi 2000: 657), but it is absent in Sáliba, Pumé, Puinave, Tunebo or the Arawakan languages Achagua, Piapoco and Kurripako, a language family in which this segment is fairly widespread (Estrada 2000: 682; Mosonyi, Mosonyi & García 2000: 547; Girón Higueta 2008: 22; Headland & Headland 1976: 20; Meléndez 1998: 23; Reinoso 2002: 51; Granadillo 2006: 74). In contrast, /u/ is found in Pumé and Puinave, and it is allophonic in Piaroa. In Yamalero, the presence of /u/ instead of /i/ is supported by three different arguments: phonetic evidence, native speaker's perception and analyses from other Guahiban languages.¹⁶

First, acoustic evidence is shown in figure 1 above. The third high vowel is clearly located closer to /u/ than half way between /u/ and /i/. Second, when native speakers need to explain how to articulate this vowel to a non-native speaker, they make use of /u/: "it is as you were pronouncing an /u/, but smiling".

Third, although there is variation regarding how the third high vowel is analyzed in Guahiban varieties, /u/ is the most commonly found option. It is described as a "high back vowel" in Parawa Sikvani (Queixalós 1985a: 84-85), Venezuelan Sikvani (Mosonyi, Guevara & Guevara 2000: 273), Wamone Cuiba (Kerr 1995: 14), Waü Sikvani (Kondo 1985a: 8; Kondo & Kondo 2014: 17) and in Hitnü (Lobo-Guerrero & Herrera 2000: 613). It is only described as a "high central vowel" in Waü Sikvani by Ardila (2000: 572), Capanaparo Cuiba (Machal 2000: 229), and Guayabero (Tobar 2000: 600), this latter language after it had been previously analyzed with phonemic /u/ (Tobar 1989, cited in Queixalós in preparation). Interestingly, in Maiben Cuiba, Merchán (2000: 587) proposes the existence of two different allophones in complementary distribution: [u] between labial and velar phonemes and [i] in all other contexts.

¹⁶ Velupillai (2012: 77) also points out that /u/ is the typologically more common unrounded back vowel.

4.1.2 Nasality

Some vowels are pronounced with some degree of nasal airflow. However, nasal vowels are much less frequent than their oral counterparts. They are usually found in two different contexts: following or preceding a nasal consonant (1) and following a pharyngeal consonant (2).

(1)

(a) /nuhw/	['nũ.hũ]	'monkey'
(b) /xambja/	['xãm.bja]	'to bark'

(2)

(a) /haka/	['hã.ka]	'fish (sp.)'
(b) /oota/	[ʔõ.'o.ta]	'butterfly (sp.)'

This is not surprising, and has actually received some attention in phonetic literature. On the one hand, nasal consonants may influence adjacent vowels by spreading the trait [+nasal] (Ladefoged & Maddieson 1996: 298-300). On the other hand, glottal fricatives and stops may also produce nasalization of the following vowel, i.e. rhinoglottophilia (Matisoff 1975; Sprigg 1987). Therefore, and in the absence of (near-)minimal pairs, nasality doesn't seem to be a contrastive feature to distinguish vowel segments.

The phonetic nature of nasal vowels in Yamalero is in line with the analysis of nasalization provided by previous descriptions on Guahiban languages. Only Kondo & Kondo (1967: 93-95) and Mosonyi, Guevara & Guevara (2000: 270) analyze nasal vowels as phonemic for Sikuni. In other descriptions nasal vowels are listed as marginal and phonetic clues to understand their nasal realizations are given (Queixalós 1985a: 28-30, 71-72).

4.1.3 Height assimilation

In fast speech, the low vowel /a/ becomes /e/ when following or preceding /i/ or /j/ (3). On the other hand, it becomes /o/ when following or preceding /u/ or /w/ (4). This assimilation can also be found across syllable boundaries.

(3)

(a) /dajnata/	['dej.na.ta]	'fly'
(b) /petsobjan/	/'pe.'tso.bjen]	'lion'

(4)

(a) /kawkude/	[kow.'ku.re]	'pour!'
(b) /kuana/	[ku.'o.na]	'to hit'

These examples show a process of height assimilation, through which a low vowel becomes a mid vowel in the context of a high vowel or a glide. It is unclear whether this assimilation process also works when the second element of the vowel sequence is /u/. If /a/ turned into [o], it would be a phonological argument to show the backness of the /w/ segment, while if it did not, it would be an argument to show its centrality. However, the examination of these vowel sequences has not led to conclusive evidence so far, so further research is needed to clarify this issue.

4.2 Consonant segments

The consonant inventory of Yamalero has 16 segments, as shown in table 4. There are three series of stops. Voiceless stops have bilabial, alveolar and velar articulations, while voiced stops and aspirated voiceless stops have only bilabial and alveolar articulations. Therefore, there is a three-way contrast in bilabial and alveolar plosives, but only a one-way contrast in velar plosives (see 4 and 4.2.2 Voiced stops). There is one (alveolar) affricate and three fricatives, with alveolar, velar and glottal articulations. As for nasals, there are three phonemic nasal segments, although the palatal nasal has a marginal status (see 4.2.5 Nasals). There are two semi-vowel approximants, one labiovelar and one palatal. Finally, there are no phonemic liquids, although /d/ has a flap allophone between vowels (see 4.2.2 Voiced stops).

Table 4. Yamalero's consonant inventory.

	Bilabial	Alveolar	Palatal	Velar	Glottal
Voiceless stops	p	t		k	
Voiced stops	b	d			
Aspirated stops	p ^h	t ^h			
Affricates		t͡s			
Fricatives		s		x	h
Nasals	m	n	ɲ		
Approximants	w		j		

This consonant inventory is very similar to the inventories presented by other Guahiban languages. The only differences with Sikuni are that this language also has a phonemic rhotic and a lateral, while it lacks a phonemic palatal nasal (Queixalós 1985a: 23-26). In comparison to Cuiba, the only difference is that this language has /k^h/ instead of /x/, plus that

\widehat{tj} is also analyzed as phonemic (Merchán 2000: 586). Hitnü looks a bit less alike, since it shows both the differences presented for Sikuni and for Cuiba (except for the phonemic \widehat{tj}) and it also lacks /d/ (Lobo-Guerrero & Herrera 2000: 613). Guayabero is the language which presents more changes, since it has lost the full series of aspirated stops, has added a voiceless bilabial fricative instead, has two liquids but no palatal nasal as in Sikuni and Hitnü, and a palatal affricate instead of an alveolar affricate (Tobar 2000: 601).

The series of aspirated stops, therefore, is probably inherited from Proto-Guahiban. However, it is also found in other languages in the Colombian and Venezuelan Plains: in the language isolate Pumé (Mosonyi, Mosonyi & García 2000: 548-556), in the closely related Piaroa and Mako (Krute 1988: 37-61; Rosés-Labrada 2015: 161-205), and in Kurripako, which is among the innovative North Arawakan languages that has developed them (Granadillo 2006: 73-76 Aikhenvald 1999: 76-77). As for the gap in the velar articulation, in addition to Sikuni and the Capanaparo variety of Cuiba (Machal 2000: 227), it is also found in Mako, where the aspirated velar has evolved to /h/ (Rosés Labrada 2015: 175).

The second velar gap, now within the series of voiced stops, is not only common within Guahiban languages, but also in most of the languages in the area, which, except for the language isolate Puinave, all have a voicing opposition in stops. The voiced velar plosive is absent in Piaroa and Mako, in the three Arawakan languages Kurripako, Piapoco and Achagua (Granadillo 2006: 73-76; Reinoso 2002: 39-65; Meléndez 1998: 19-28), and it is an allophone of /k/ in the Chibchan language Tunebo, which also lacks /d/ (Headland & Headland 1976). In fact, /g/ is only phonemic in Pumé and in Sáliba (Mosonyi, Mosonyi & García 2000: 548-556; Estrada Ramírez 2000: 682-686).

The status of the palatal nasal is less homogenous. In addition to Cuiba, it is analyzed as a phoneme in Pumé, and Sáliba, while in Piaroa and Kurripako it is analyzed as a phoneme by some authors (Krute 1988: 41; Mosonyi 2000a: 641-645), but as an allophone by others (Mosonyi 2000b: 657-659; Granadillo's 2006: 73-76). In other languages in the area (Mako, Puinave, Achagua and Piapoco), it is analyzed as an allophone of /n/, while no mention of a palatal nasal (either phonetic or phonemic) is made for Tunebo.

The lack of phonemic liquids is typologically rare, but it might respond to an areal feature. The common pattern among Amazonian languages is to have one phonemic liquid with one allophonic liquid (typically a flap and a lateral), in this is also the case for the neighboring Piaroa and Mako (Pumé also has a phonemic flap but no allophonic lateral). Sáliba and Piapoco have two phonemic liquids (as also does Sikuni), but they show allophony in certain contexts. In contrast, Yamalero and Cuiba, together with Puinave, have no phonemic liquids. They have a flap which is an allophone of /d/ in intervocalic and word-internal coda

positions (or an allophone of /t/ in the case of Puinave). A similar distribution is found in Tunebo, where [d] is analyzed as an allophone of /r/ word-initially and after nasal stops.

The lack of liquids and the presence of an intervocalic flap as an allophone of a phonemic alveolar plosive are two features that spread further to the south. In the Vaupés, the same distribution has been described for the closely related languages Yuhup and Hup (Ospina 2002: 76-82; Epps 2008: 46). The flap is also an allophone of /d/ in Kakua, although this language presents a phonemic // (Bolaños 2016: 30). Most (Eastern and Western) Tukanoan languages also show this allophony, although except for Tucano and a few others, they have also developed a phonemic flap (Chacón 2014: 280; Ramírez 1997: 31). This is also the case of Tariana, which has been widely influenced by Tucano due to intensive long-term language contact (Aikhenvald 2003: 26).

Outside the Vaupés, close to the Peruvian border, an allophonic flap for a voiced alveolar stop has also been reconstructed for proto-Witoto, although nowadays both Ocaina and Witoto languages have developed a phonemic flap. In the Peruvian Amazon, Aguaruna is a Chicham (also known as Jivaroan) language that has a very marginal flap phoneme, no lateral phoneme either, but an flap that is an intervocalic allophone of /t/ (Overall 2007: 22, 38-40). Finally, in South-Western Colombia, close to Western Tukanoan languages, there is a Barbacoan language, Awa-Cuaquier, which also has a flap as an allophone of /d/, although it does have a phonemic lateral (Curnow 1997: 24-25).

Contrastive pairs among Yamalero’s phonetically similar consonants can be found in table 5.

Table 5. Yamalero’s contrastive consonants opposition.

Contrast	Yamalero	Gloss	Yamalero	Gloss
p/p ^h	/p ^h u.da/	‘parrot’	/pu.ka/	‘lake’
p/b	/u.pa/	‘shoot with arrow’	/u.ba/	‘to plant’
p ^h /b	/o.p ^h o/	‘termite’	/o.bo/	‘mosquito (sp.)’
b/w	/o.ba/	‘whistle’	/o.wa/	‘older sister’
b/m	/ta.'ba.da/	‘rug, carpet’	/ta.'ma.da/	‘village’
t/t ^h	/me.t ^h a/	‘maybe’	/me.ta/	‘Meta (river)’
t/d	/to.'do.ta/	‘to push’	/do.'bo.ta/	‘to pull’
t ^h /d	/t ^h u.'t ^h u.bi/	‘chigger’	/du.'du.bi/	‘bag’
t/ts	/tu.'hu.ba/	‘to smell’	/tsu.'tsu.ba/	‘to suck’

t ^h /t ^s	/'i.t ^h a/	'in the ground'	/'i.t ^s a/	'if'
t ^s /s	/'t ^s e.ma/	'cigar'	/'se.ba/	'to cook'
d/n	/'do.no/	'dew'	/'no.no/	'janitor fish'
t/n	/'ko.te/	'bag (sp.)'	/'ko.ne/	'bun (sp.)'
t/p	/pe.'ta.bw/	'egg'	/pe.'pa.bw/	'wine'
d/b	/'du.de/	'to hang up'	/'bu.ba/	'to knit'
n/m	/'e.na/	'mother'	/'e.ma/	'rain'
ŋ/j	/'sa.ŋa/	'only'	/a.'jai/	'dangerous'
ŋ/n	/'sa.ŋa/	'only'	/'e.na/	'mother'
k/x	/'ku.a/	'sprout'	/'xu.a/	'this'
x/h	/'xwe.ta/	'to twist'	/'hwe.ta/	'to wash'
k/h	/'a.kwe/	'grandmother'	/'a.hwe/	'smooth'
k/t	/'e.ka/	'to sit'	/'e.ta/	'to lend'

4.2.1 Aspirated plosives

Yamalero shows a typologically uncommon pattern of aspirated stops, since it has /p^h/ and /t^h/ while missing /k^h/. When there is a gap in the series of aspirated stops, it is usually /t^h/ the missing element (Velupillai 2012: 70-71; Moran & McCloy 2019). However, I will basically use three arguments to show why I think that Yamalero is missing /k^h/.¹⁷ The first one is that (near) minimal pairs have been found for /p^h/ ~ /p/ (5) and for /t^h/ ~ /t/ (6), but not for /k^h/ ~ /k/.

(5)

- (a) /p^huda/ ['p^hu.ra] 'parrot'
(b) /puka/ ['pu.ka] 'lake'

(6)

- (a) /met^ha/ ['me.t^ha] 'maybe'
(b) /meta/ ['me.ta] 'Meta (river)'

¹⁷ Mako (Saliban) also has a velar gap in its series of aspirated stops. In this case, /k^h/ has evolved to /h/ (Rosés-Labrada 2015: 175).

The second argument is that native speakers do not perceive a difference between [k^h] and [k]. That's why *pj* and *tj*, representing [p^h] and [t^h], have been included in the orthography the community recently developed, unlike *kj* (Comunidad Únuma 2021).

The third argument is that Guahiban languages are undergoing a phonological change that is turning aspirated plosives into fricatives.¹⁸ The velar segment seems to be the segment that is ahead in this change. In Sikvani, this is a completed process (Queixalós 1985a: 26). In Wamone Cuiba, [k^h] is analyzed as an allophone of /x/ word-initially (Kerr 1995: 19; Berg & Kerr 2018: 11). In Maibén Cuiba and in Hitnū, [k^h] is found in free variation with /x/ (Merchán 2000: 586; Lobo-Guerrero & Herrera 1983: 4, 2000: 613, respectively). In Yamalero, this seems to be a completed process too, since when /k^h/ is found in a Cuiba Maibén word, /x/ is found in its Yamalero counterpart (see table 2).¹⁹

Table 6. Cognates with velar fricatives or velar aspirated plosives in Yamalero and its closely related Waü Sikvani, Wamone Cuiba and Maiben Cuiba varieties.

Yamalero	Waü Sikvani ²⁰	Wamone Cuiba ²¹	Maiben Cuiba ²²	Gloss
xán	xáni	xáni	k ^h án	l
áxa	á:xa	áxa	k ^h áxa	dad
petáxu	petáxu	petáxu	peták ^h u	food
daxíta	daxíta	daxíta	dak ^h íta	all
xáne	xáne	xáne	k ^h áne	to eat
imoxója	imoxó:-jo:	imoxójo	imok ^h ójo	near
pexúta	pexú:to	pexúto	pék ^h u	seed

However, in Yamalero the voiceless velar /k/ is slightly aspirated, which can be confused with [k^h] in an acoustic analysis. Figure 8 shows a spectrogram of the word *ikatsa* 'again', with plain /k/. It can be observed that, between the plosive release and the beginning of the following vowel, there is a positive voice onset time (VOT), characteristic of aspirated stops. The VOT phase is around 30 ms long, but this does not necessarily imply the presence of an aspirated velar stop. Actually, Cho & Ladefoged (1999: 223-224) showed that unaspirated

¹⁸ The only language that seems to behave differently in this respect is Guayabero, which has three aspirated allophones in complementary distribution with the series of voiceless plosives (Tobar 2000: 600).

¹⁹ This is similar to the lenition process that takes place in Liverpool English, through which voiceless plosives are realized as fricatives (or affricates) in different contexts (Honeybone 2001: 237-242).

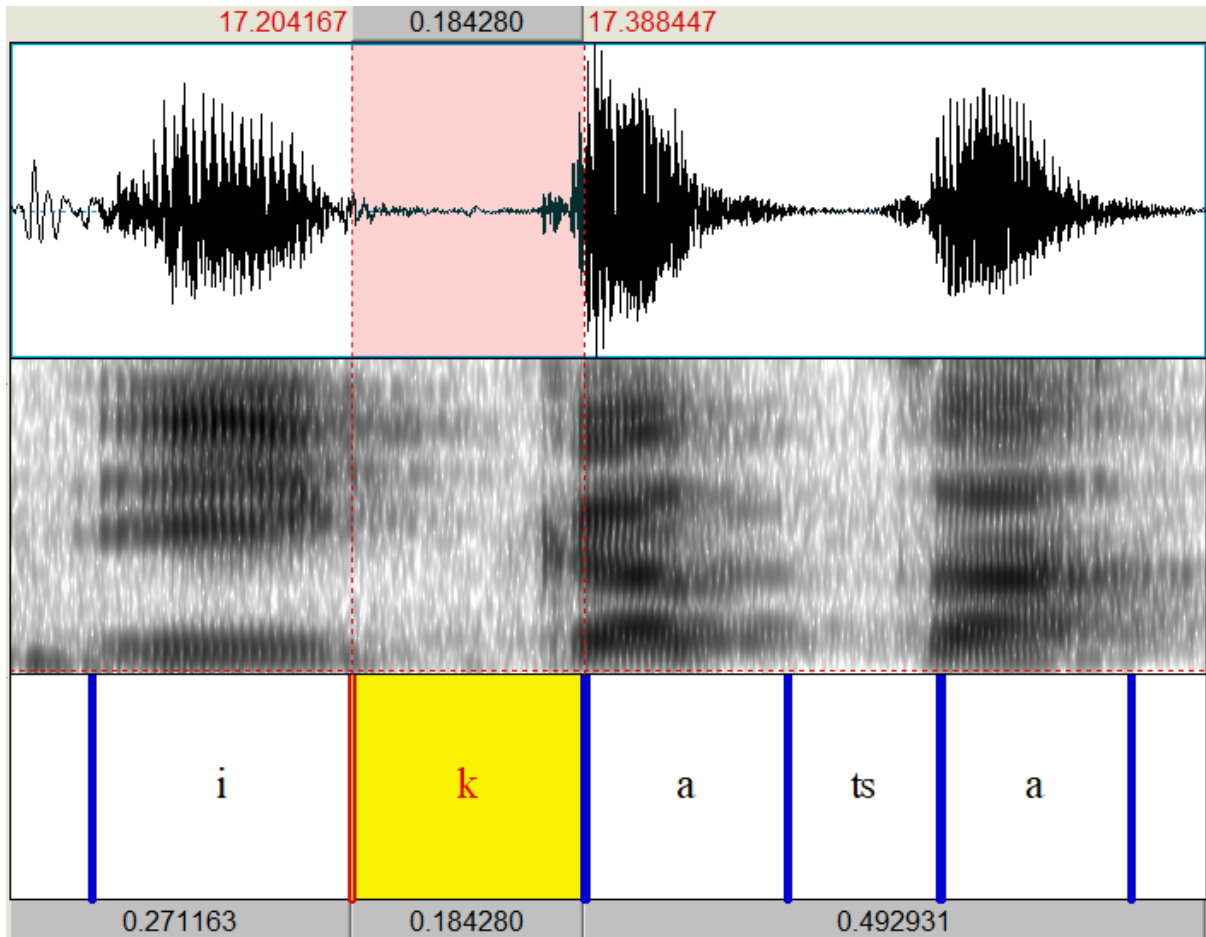
²⁰ Data from Huber and Reed (1992), using primary data from Victor and Riena Kondo.

²¹ Data from Huber and Reed (1992), using primary data from Isabel Kerr and Marie Berg.

²² Data from Merchán (2000: 595-597).

voiceless plosives also have slightly positive VOT, which is longer in the case of velar stops (usually between 20 and 35 ms). Therefore, the aspiration shown in figure 8 should not be seen as a trace of old phonological aspirated stops, but as a property of Yamalero's voiceless velar stops.

Figure 8. Spectrogram of the word *ikatsa* 'again'.



In fact, Yamalero seems to have gone one step beyond in this lenition process, since the plain voiceless plosive can also be realized as a velar fricative. This variation can take place between vowels, at syllable or word boundaries, in both stressed and unstressed syllables.

(7)

- (a) /pekot̪sa/ [pe.'xo.t̪sa] 'light'
 (b) /huja#kabobode/ ['hu.ja.xa.bo.'bo.re] 'now lead!'

However, this variation is not found in all cases, since some words seem to only allow the plosive segment.

(8)

- (a) /wakepeta/ ['wa.ke.pe.ta] 'mosquito (sp.)'
(b) /xajka/ ['xej.ka] 'tasty'

As stated above, the lenition process affecting Guahiban languages does not concern velar segments only. A similar process is currently ongoing for labial segments in most of these languages. Different Sikuni varieties (Queixalós 1985a: 26; Ardila 2000: 571; Mosonyi, Guevara & Guevara 2000: 272; Kondo & Kondo 2014: 18), Maiben and Capanaparo Cuiba (Merchán 2000: 586; Machal 2000: 228), and Hitnü (Lobo-Guerrero & Herrera 1983: 4, 2000: 613) show free variation between [p^h] and [ɸ], while [p^h] is analyzed as an allophone of /f/ in word initial position in Wamone Cuiba. However, this process does not seem to have started in Yamalero, since no traces of [ɸ] or [f] are found. More specifically, if we compare Sikuni and Cuiba words with /ɸ/ to its Yamalero counterpart, we always find an aspirated plosive.

Table 7. Cognates with labial aspirated plosives or labial fricatives in Yamalero, Sikuni and Cuiba

Yamalero	Waü Sikuni ²³	Wamone Cuiba ²⁴	Gloss
op ^h ébu	oɸáebi	oɸáebi	paca
pekó ^h e	pekóroɸeto	pekuáraɸe	wing
pematabkop ^h op ^h obu	pekoɸóɸowi	pekoɸóhi	lungs
op ^h óta	oɸó-to	ó ^h oto	ant (sp.)
itap ^h áphana	itaɸá:ka	hiopéka	thin
wáj ^h o	wajáɸo	wék ^h ua	savannah

Evidence for the lenition of the alveolar aspirated stop is found only in Waü Sikuni (Ardila 2000: 572). In Parawa Sikuni this process is found in an “incipient stage” (Queixalós 1985a: 26), while it doesn’t appear in other Sikuni varieties nor other languages within the Guahiban family, including Yamalero.²⁵

²³ Data from Huber and Reed (1992), using primary data from Victor and Riena Kondo.

²⁴ Data from Huber and Reed (1992), using primary data from Isabel Kerr and Marie Berg.

²⁵ Nevertheless, it would not be surprising that a lenition process involving the aspirated alveolar stop takes place in the future, since plosive segments tend to behave as a phonological class.

4.2.2 Voiced stops

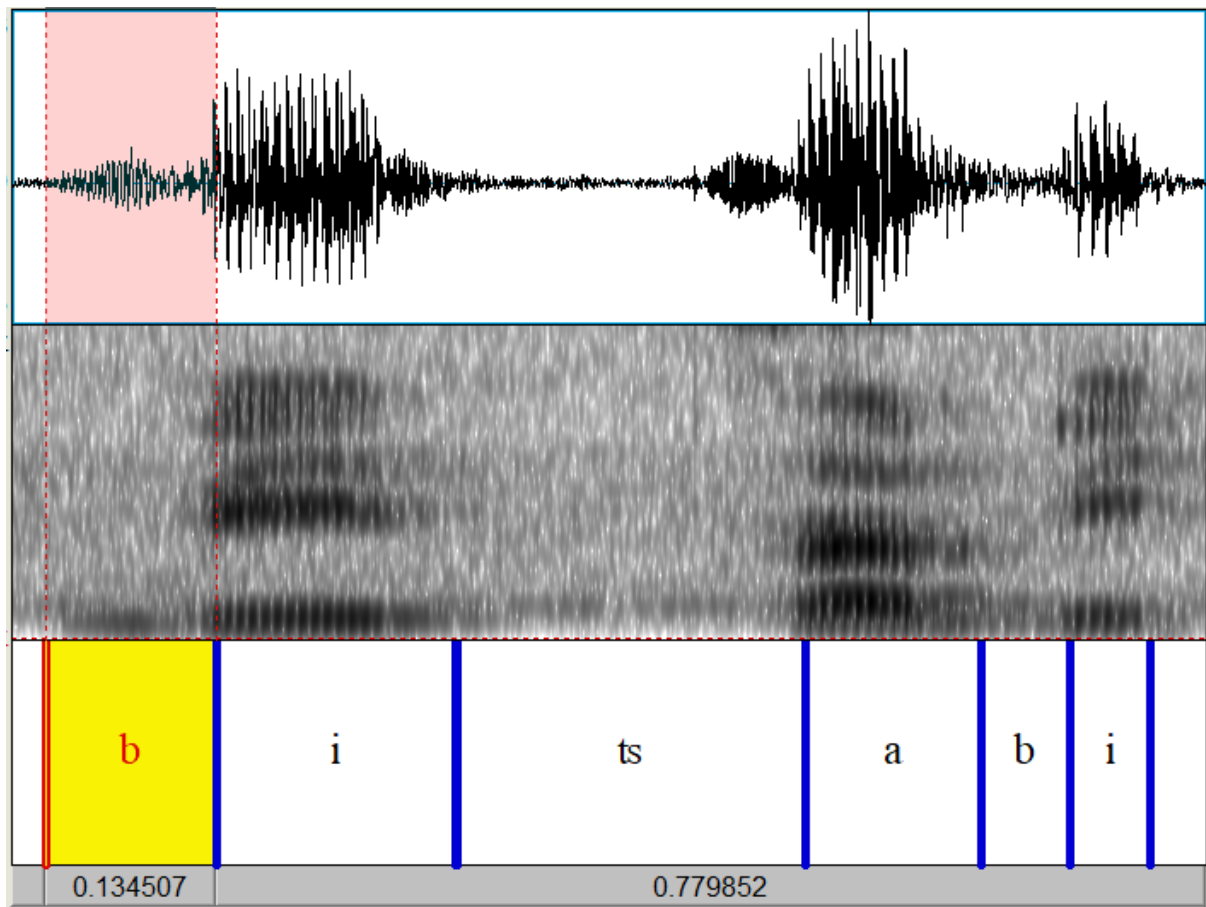
As in aspirated stops, Yamalero has bilabial and alveolar articulations for voiced stops, but it lacks their velar counterpart. However, a velar gap in a series of voiced stops is typologically more common cross-linguistically (Maddieson 1984: 35-36; Moran & McCloy 2019; Nikolaev 2022: 169-170), in South America (Michael et al. 2015) and, as detailed above in 4.2 Consonant segments, in the Colombian and Venezuelan Plains and within the Guahiban language family (Queixalós 1993: 198-200).

Segments /b/ and /d/ have been reported to be preglottalized in most Guahiban varieties: Parawa Sikvani (Queixalós 1985a: 82-83), Orocué Sikvani (Kondo & Kondo 1967: 97-98), Waü Sikvani (Ardila 2000: 571), Maiben Cuiba (Merchán 2000: 586) and Hitnü (only /b/, since /d/ is not attested [Lobo-Guerrero & Herrera 2000: 613]). In Guayabero, the most divergent language within the Guahiban family, it seems that preglottalization is being lost, since it is only found in /b/, and only in stressed syllables (Tobar 2000: 601). This might be an areal feature, since allophonic variation between plain voiced stops and preglottalized voiced stops is also found in Arawakan (Achagua [Meléndez 1998: 26-27], Piapoco [Reinoso 2002: 42-43]) and Saliban languages (Piaroa [Mosonyi 2000: 657], Mako [Rosés Labrada 2015: 174]). Moreover, in Mako there is a phonemic distinction between plain voiced stops and their preglottalized counterparts (Rosés Labrada 2015: 178-194).²⁶

Nevertheless, Yamalero seems to have lost both preglottalized realizations of /b/ and /d/, since no traces of preglottalization are found either through hearing or in spectrograms. Figure 9 shows a spectrogram of *bitsabi* 'arrow', a word with a word initial /b/ segment and an intervocalic /b/ segment. Signs of preglottalization would include some shadow before the plosive release (Matoušek et al. 2012), but such shadow is not found in either case.

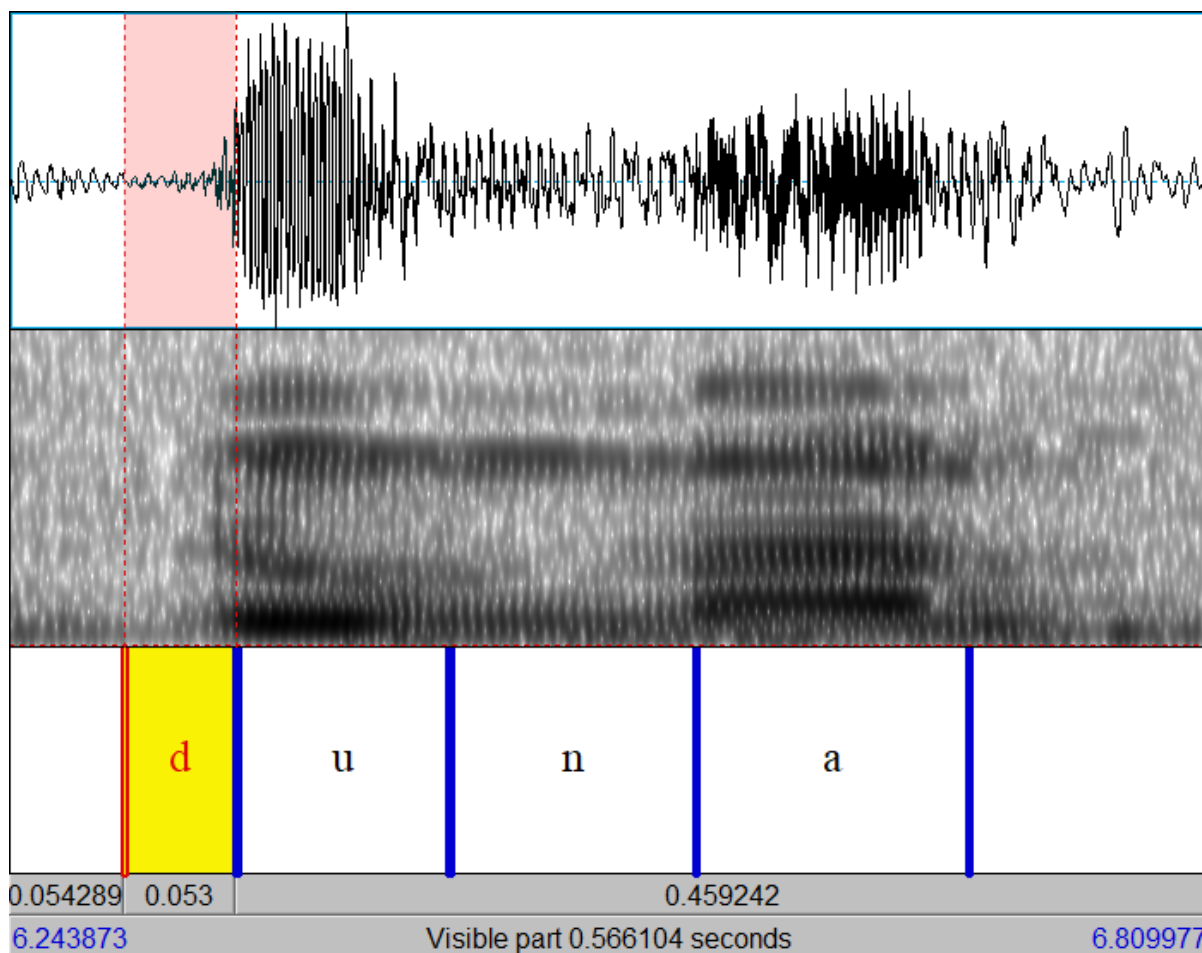
²⁶ In this language, in addition to voiced stops, a preglottalization opposition is also phonemic in the case of the palatal affricate and the labiovelar approximant. It is allophonic in nasal stops.

Figure 9. Spectrogram of the word *bitsabi* 'arrow'.



An initial /d/ has similar acoustic characteristics, as is shown in figure 10, a spectrogram of the word *duna* 'to rain'. Again, no sign of preglottalization can be found before the /d/ explosion bar.

Figure 10. Spectrogram of the word *duna* ‘to rain’.



Thus, in this respect Yamalero seems to resemble more to its neighboring languages Pumé, Puinave, Sáliba, Kurripako and Tunebo, which show no traces of preglottalization either, than to other members of the Guahiban family (Mosonyi & Mosonyi & García 2000: 548-556; Girón Higueta 2008: 19-145; Estrada 2000: 682-686; Granadillo 2006: 73-76; Headland & Headland 1976). However, preglottalization of voiced plosives is not only a feature of Guahiban languages. Allophonic preglottalization is also found in other languages in the area, such as Piaroa, Achagua and Piapoco, while in Mako it has phonemic status (Krute 1988: 37-61; Meléndez 1998: 19-28; Reinoso 2002: 39- 65; Rosés-Labrada 2015: 161-205).

The voiced alveolar stop /d/ has two main allophones, which are in complementary distribution. Word-initially and after a nasal stop, it is realized as [d] (9), while between vowels and in word-internal coda position it is realized as a flap [r], although some variation is found in the latter position (10).²⁷

²⁷ Flapping of intervocalic /d/ is a process also found in the Algerese dialect of Catalan (Pais 1970).

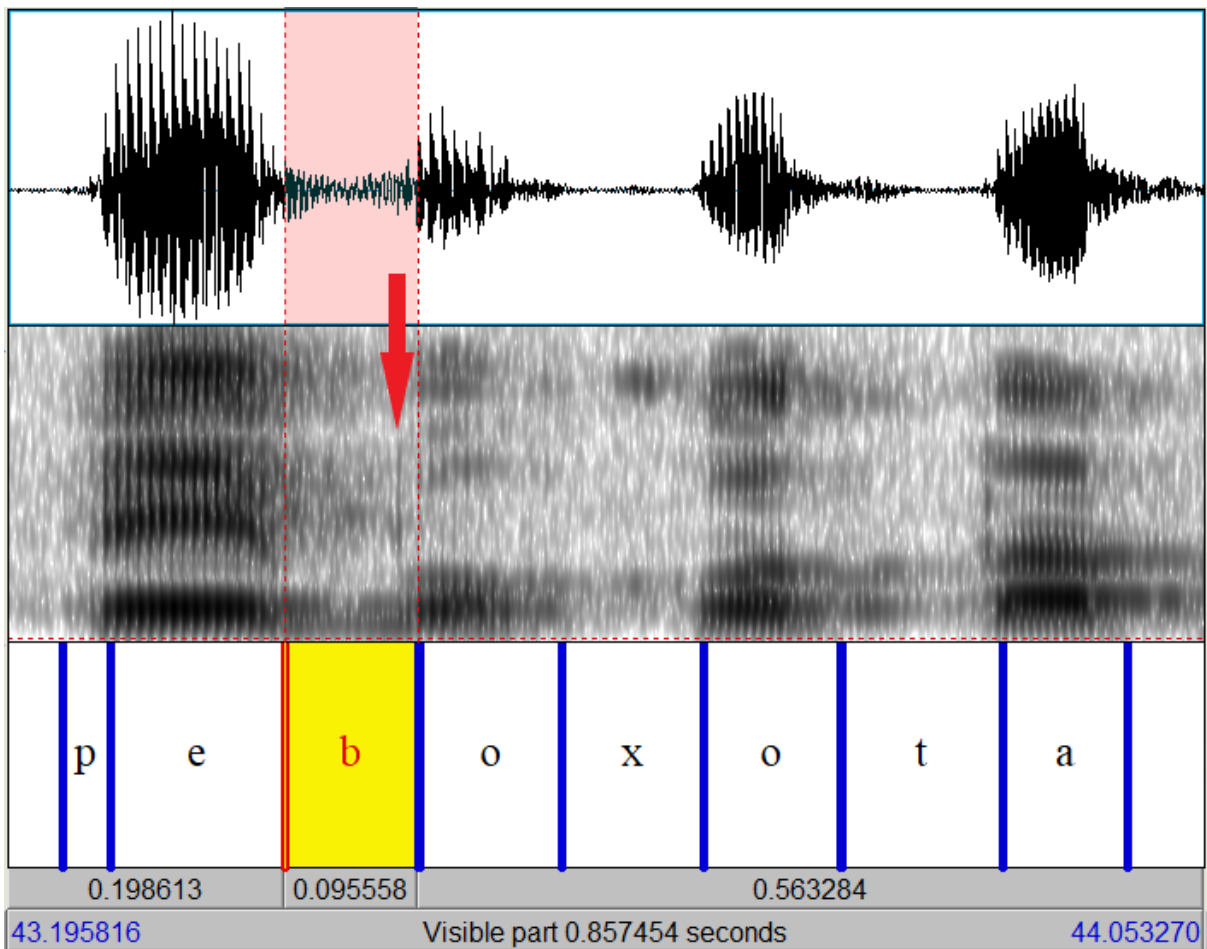
- (9)
- | | | | |
|-----|-----------|-------------|--------|
| (a) | /dohi/ | ['do.hi] | 'hard' |
| (b) | /kwindja/ | ['kwin.dja] | 'boy' |
- (10)
- | | | | |
|-----|------------|---------------|---------|
| (a) | /tsodobo/ | [tso.'ro.bo] | 'mud' |
| (b) | /badhjeta/ | [bar.'hje.ta] | 'sharp' |
| | | [bad.'hje.ta] | |

This distribution is very common among Guahiban languages and it is also found in a number of languages in North-Western South America (see 4.2 Consonant segments). In Maiben Cuiba and Capanaparo Cuiba, /d/ also has a [d] allophone word-initially and after nasal segment, and a flap allophone [r] between vowels and in coda position word-medially (Merchán 2000: 586; Machal 2000: 229). A similar distribution can also be found in Wamone Cuiba (Kerr 1995: 19; Berg & Kerr 2018: 11), Parawa Sikuni (Queixalós 1985a: 24-25, 120-121), and Waü Sikuni (Ardila 2000: 573). Hitnü might be the most innovative language in this respect, since it lacks a /d/ phoneme, but has a trill or a flap depending on the context (Lobo-Guerrero & Herrera 1983: 4, 2000: 613).

Moreover, in these contexts it is also possible to find a retroflex allophone. It is still unclear what its distribution is, since it has been attested both in word initial position and between vowels. It is also unclear whether it is a retroflex voiced stop or a retroflex flap. No similar segments have been attested in Guahiban languages, since the only retroflex segment reported is a retroflex lateral (in Waü Sikuni [Kondo & Kondo 1967: 92], Parawa Sikuni [Queixalós in preparation] and Hitnü [Lobo-Guerrero & Herrera 2000: 613]). In contrast, some languages in the area do have either an allophonic retroflex flap (Puinave, Piapoco) or an allophonic voiced retroflex stop (Tunebo). Therefore, more research, specifically palatographical evidence, is needed to shed some light on this issue.

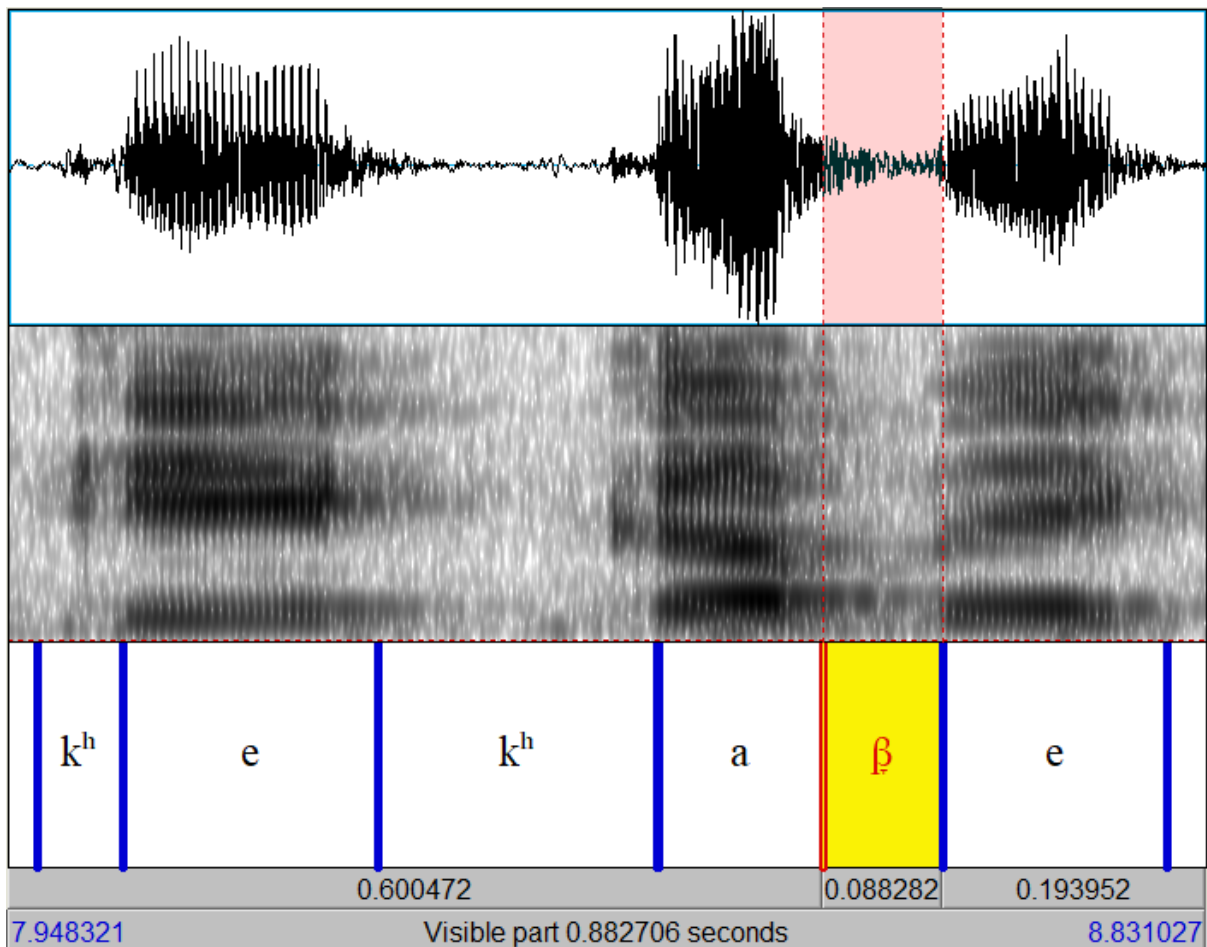
As for the voiced bilabial stop, it shows variation in intervocalic position. It is usually realized as [b], but in some cases [β] can also appear. Figure 11 shows a spectrogram for the word *pebokota* 'claw', which has an intervocalic [b] in the onset of the second syllable. An explosion bar featuring a plosive sound can be observed before the beginning of the next vowel.

Figure 11. Spectrogram of the word *pebokota* ‘claw’.



On the other hand, figure 12 shows an spectrogram for the word *kekabe* ‘five’, with an intervocalic /b/ in the onset of the last syllable. In this case, no explosion bar before the vowel is found, and there is a continuation in the vowels’ first and second formant, typical of approximant sounds (Katz & Fricke 2017: 10).

Figure 12. Spectrogram of the word *kekabe* ‘five’.



The lenition of voiced plosives in intervocalic position is a phonological reduction not commonly found in Guahiban languages; in fact, its absence is explicitly pointed out in Wamone Cuiba’s (Kerr 1995: 17-18; Berg & Kerr 2018: 10-11) and in Waü Sikuaní’s analysis (Kondo 1985a: 9; Kondo & Kondo 2014: 18). Only Guayabero shows an intervocalic [β], where it seems to be in complementary distribution with [b] (Tobar 2000: 601). This language is also the only Guahiban language with virtually no preglottalized voiced stop allophones, which seems to indicate that both in Yamalero and Guayabero the articulation of voiced plosives is somehow weaker. Although lenition of voiced plosives is not common in Guahiban languages, it is found in the neighboring Saliba language (Ramírez Estrada 2000: 684), in Pumé, but so far only for the velar plosive (Mosonyi & Zamponi forthcoming), and in Spanish (Romero 1995), which might be influencing some of these languages.

In addition, in fast speech intervocalic /b/ can undergo one more change and be reduced to [w] (11). There are few examples of this reduction in the current data, so it is not possible to determine yet whether there are more elements conditioning this lenition.

- (11) /kadidiba/ [ka.ri.'ri.wa] ‘rub’

Finally, /b/ can become voiceless if it is followed by a voiceless segment. In this context, it is realized by its allophone [p]. Moreover, if the following segment is a plosive or an affricate segment, it is also unreleased. These two phenomena can only take place when /b/ is found in coda position (a).

- (12)
- (a) /homobta/ [ho.'moḅ.ta] 'spider'
- (b) /petabbaka/ [pe.taḅ.ba.'ka] 'root'

4.2.3 Voiceless stops

A series of three voiceless stops is found in Yamalero: /p/, /t/ and /k/. These elements are common in all Guahiban varieties. The velar segment seems to have two different allophones, depending on the following vowel. Its articulation seems to move backwards when it is followed by /a/ and /o/ (13), and to move forward when it is followed by any other vowel (14). However, there is some variation in the first case, so this is an issue that needs further research, especially palatographical evidence.

- (13) /nekona/ ['ne.ko.na] 'leaf'
- ['ne.ḵo.na]
- (14) /ake/ [a.'ḵe] 'cold'

This distribution is similar to what is found in other Guahiban languages. In Sikuni, /k/ is palatalized before the /i/ and /e/ vowels (Queixalós 1985a: 43-44). In Maiben Cuiba, [k] and [q] are described as allophones of /k/ in free variation (Merchán 2000: 586). In Capanaparo Cuiba, the /k/ segment is also described as 'postvelar' (Machal 2000: 227).

4.2.4 Affricates and fricatives

Yamalero shows one alveolar affricate segment /t͡s/ and three fricative segments: /s/, /x/ and /h/. The alveolar sibilant fricative is palatalized before /i/ but not before /e/ (15), while the alveolar affricate is palatalized before both /i/ and /e/ (16).

- (15)
- (a) /pemasipa/ [pe.ma.ʃi.'pa] 'head'
- (b) /seba/ [ʃe.ba] 'to cook'
- (16)
- (a) /t͡sipeba/ [t͡ʃi.'pe.ba] 'to say'
- (b) /t͡sewa/ [t͡ʃe.wa] 'dry'

This palatalization process is commonly found among Guahiban languages. The alveolar affricate is also palatalized before /i/ in Parawa Sikvani (Queixalós 1985a: 43) and in Hitnü (Lobo-Guerrero & Herrera 2000: 613), and in contact with /i/ and /e/ in Waü Sikvani (Ardila 2000: 571). In Capanaparo Cuiba, the palatal affricate is commonly found before /i/, but it is also possible that it occurs in a different context, so it has been analyzed as a phoneme (Machal 2000: 230). This segment has also been considered phonemic in Maiben Cuiba (Merchán 2000: 586) and in Guayabero (Tobar 2000: 601).

The alveolar fricative, on the other hand, is less commonly palatalized than its affricate counterpart. No traces of palatalization are found in Sikvani (Queixalós 1985a: 43; Ardila 2000: 571) and Hitnü (Lobo-Guerrero & Herrera 2000: 614). In Guayabero, /s/ is palatalized following front vowels (Tobar 2000: 601), and in Wamone Cuiba after /i/ and /b/ (Kerr & Berg 1973: 93). The palatal fricative is only considered to be phonemic in Capanaparo Cuiba (Machal 2000: 230).

4.2.5 Nasals

Yamalero has three phonemic nasals: bilabial /m/, alveolar /n/ and palatal /ɲ/. The latter is much less common than the other two, but a satisfactory distribution for its restricted distribution has not yet been found. If we look at other Guahiban varieties, two main patterns are found: languages where [ɲ] is allophonic and languages where /ɲ/ is phonemic.

In Sikvani (Queixalós 1985a: 75), Hitnü (Buenaventura 1993: 35-36) and Guayabero (Tobar 2000: 600) [ɲ] is an allophone of /n/ in slightly different contexts (all of them involving the presence of the /i/ vowel). On the other hand, in Cuiba it is analyzed as a phoneme. In Maiben Cuiba it has a limited distribution, since it can not appear word-initially (Merchán 1989: 15, cited in Queixalós in preparation); however, in Wamone and Capanaparo Cuiba there is no restriction as for its position within the word, so /ɲ/ is found word-initially as well (Berg & Kerr 2018: 11; Machal 2000: 228).

Therefore, the distribution in Yamalero seems to resemble that of Cuiba more than to the other Guahiban languages. Nevertheless, these two languages also seem to favor certain contexts for the palatal nasal to appear. In Yamalero, in the only three attested cases, /ɲ/ is always followed by /a/ (17), while in the different Cuiba varieties it is mostly followed by /o/ (18) (Berg & Kerr 2018: 11, translation my own).

(17)

(a) /kaxwoɲa/	[ka.'xwo.ɲa]	'to teach'
(b) /saɲa/	['saɲa]	'only'

- (c) /pemaŋahawa/ [pe.'ma.ŋa.ha.wa] 'white thing'
- (18)
- (a) *jopa teaiño* 'I don't know/I can't see'
- (b) *ñojéi* 'to be shining white'
- (c) *paiñawa* 'your stuff'

The very low frequency that the palatal nasal has in my data and the appearance restrictions that it has in other Guahiban languages suggest that this segment may have been the result of a recent phonological process, consisting of palatalization of /n/ before /i/ and subsequent /i/ deletion in certain contexts. This would typically produce a lengthening of the resulting palatal nasal, which does not seem to be the case in my examples. Comparing figure 13, the spectrogram of a word containing a palatal nasal, and figure 14, the spectrogram of a word containing an alveolar nasal, both nasals have similar duration (around 100 milliseconds). Therefore, further research is needed in this direction, which should first aim at finding more words in Yamalero that contain a palatal nasal.

Figure 13. Spectrogram of the word *kaxuoña* 'to teach'.

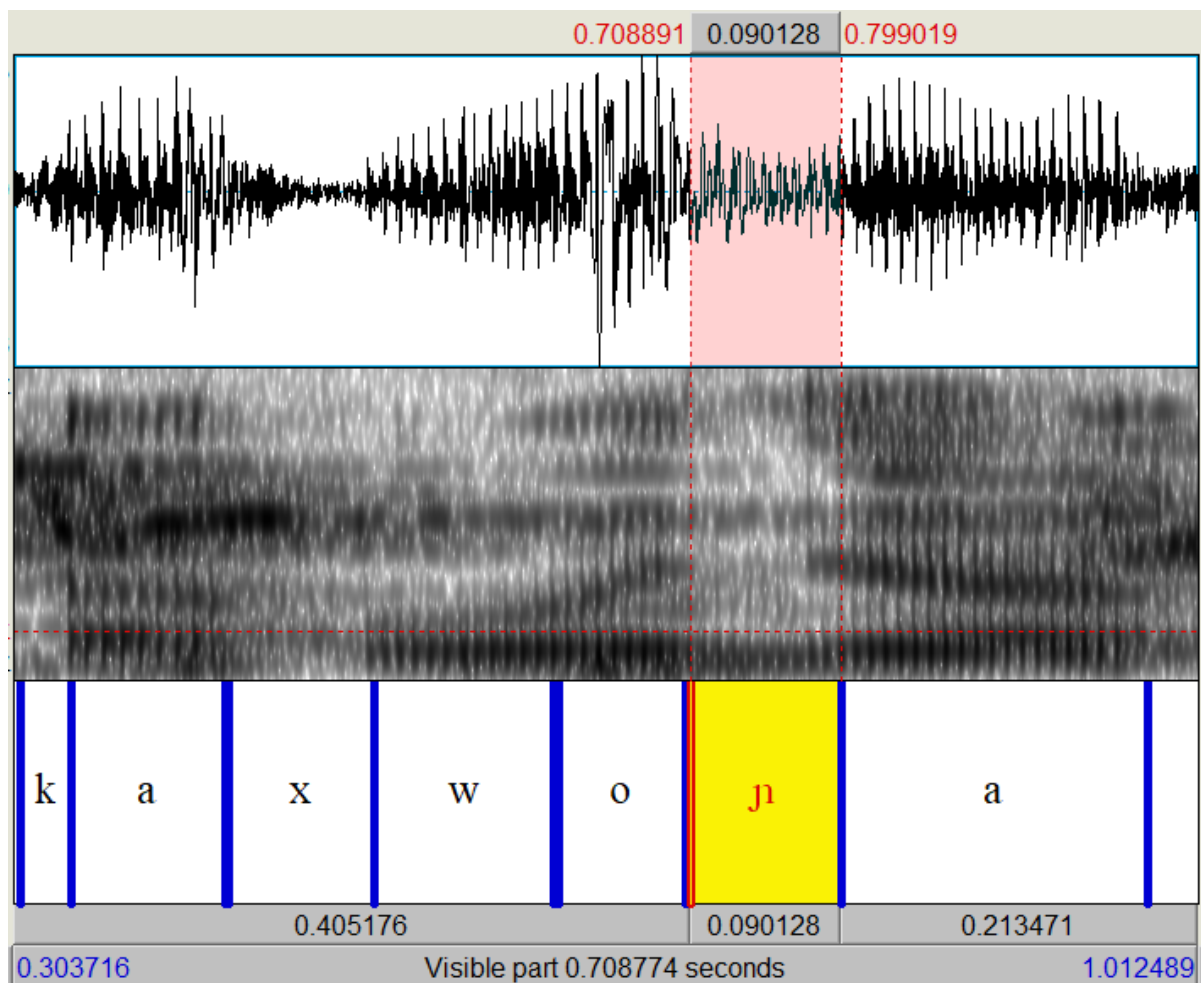
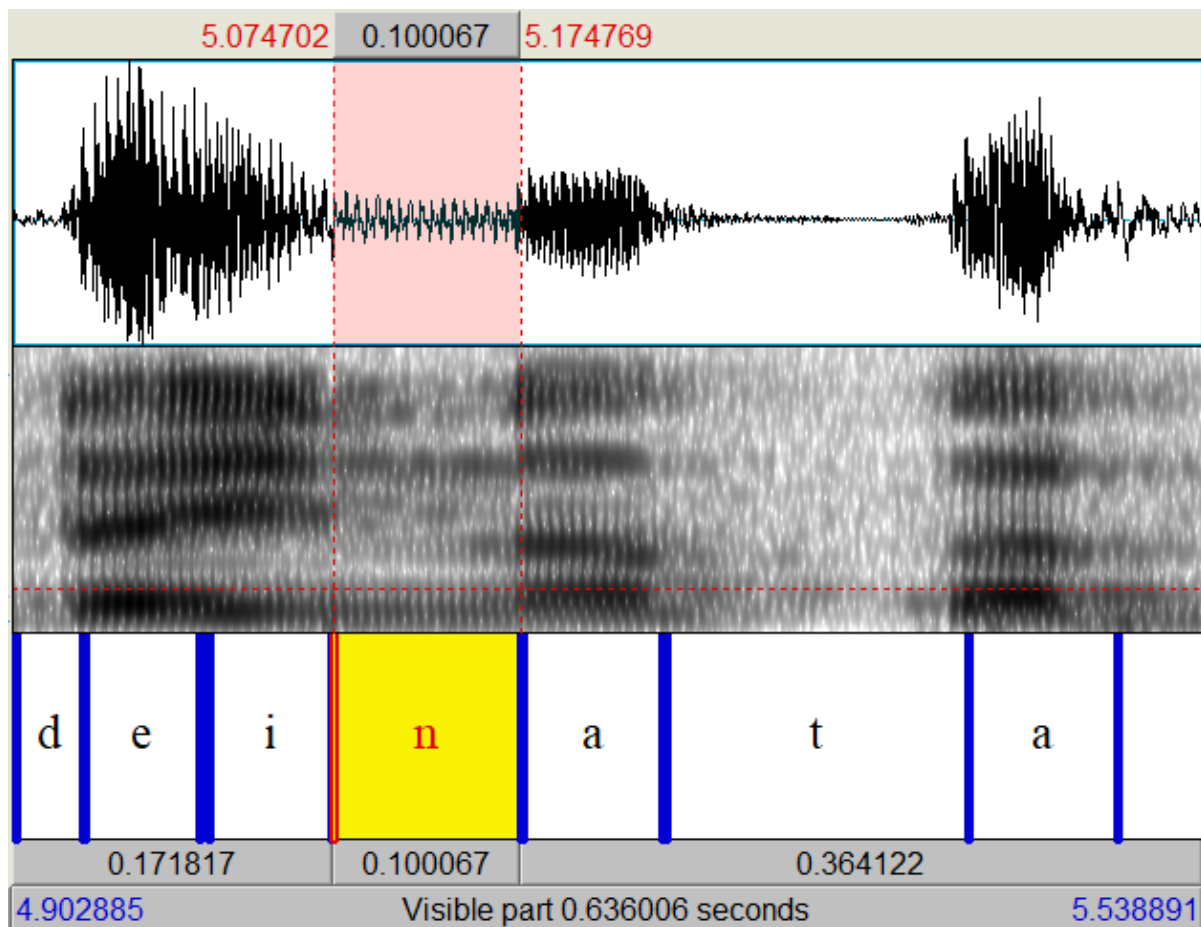


Figure 14. Spectrogram of the word *dainata* ‘fly’.



Finally, the alveolar nasal has a velar allophone, which occurs before the velar nasal.

- (19) /unkathə/ [ˈuŋ.ka.tʰə] ‘after’

This allophone is also found in most Guahiban languages, such as Maiben Cuiba (Merchán 2000: 586), Hitnü (Buenaventura 1993: 35) and Guayabero (Tobar 2000: 600).

4.2.6 Approximants

Yamalero has two approximants, /w/ and /j/, which can be classified as semi-vowels. They have been analyzed as phonemic when they are the only segment in onset position and also when they are found between a consonant and a vowel. If in this context they were allophones of their corresponding high vowel, realizations like the first ones in (20) and (21), where /u/ does not become a glide, would not be attested (Levi 2011: 351-352).

- (20)
- (a) /huota/ [ˈhu.o.ta] ‘cane’
- (b) /tahwopa/ [ta.ˈhwo.pa] ‘to kick’

(21)

- (a) /xuatabu/ [xu.'a.ta.bu] 'arrow'
(b) /baxwa/ ['ba.xwa] 'this, that'

The semivowel /w/ has a consonantal approximant allophone [β] (see Martínez-Celdrán 2004 for a discussion on this terms), which is found in free variation with /w/ between two /i/ vowels.

- (22) /hiwi/ ['hi.wi] 'people'
 ['hi.βi]

This allophonic variation is common among Guahiban varieties. In fact, in most cases the [β] allophone has a wider distribution. In Hitnü and Waü Sikuni it is only found before /i/ and before front vowels respectively (Lobo-Guerrero & Herrera 2000: 613; Ardila 2000: 572). But in Parawa Sikuni and in Maibén Cuiba both allophones are found in free variation in virtually all contexts (Queixalós 1985a: 72; Merchán 2000: 586). Finally, in Orocué Sikuni [w] is analyzed as an allophone of /v/ (Kondo & Kondo 1967: 91).

The semivowel /j/ also has a fricative allophone [j̥] occurring sometimes word-initially, although the [j] pronunciation is significantly more common. This is found both in stressed and also unstressed syllables.

(23)

- (a) /jamwxw/ ['ja.mu.xw] 'lightning'
 ['ja.mu.xw]
(b) /jawati/ [ja.'wa.ti] 'poison'
 [ja.'wa.ti]

This shows some optional strengthening effects in initial position, where approximants can be realized with a more consonantal articulation. This allophonic variation is also found in Capanaparo Cuiba and in Maibén Cuiba, although in the latter variety [j̥] can surprisingly only be found in intervocalic position (Machal 2000: 229; Merchán 2000: 586). In Orocué Sikuni, [j̥] is reported to fluctuate with [dj] (Kondo & Kondo 1967: 92). No variation is reported in other Sikuni varieties.

4.3 Borrowing

Yamalero has borrowed a number of loanwords from Spanish, which in some cases include segments that are absent in Yamalero's segments inventory. My data includes four such segments: /f/, /r/, /l/ and /g/. Some of them have been adapted to Yamalero's native

phonology while others have been borrowed. Adapted segments seem to be connected to old loanwords, but this might not be the only reason to find them. As for borrowed segments, none of them seems to have been nativized, since they do not occur in native Yamalero words.

The voiceless labiodental fricative /f/ is a segment that may have entered the language in two different time periods. In a first stage, when bilingualism with Spanish was probably not widespread among Yamalero speakers, it was adapted to /p/, the closest segment within Yamalero's consonant inventory (24). In a second, more recent stage, the labiodental fricative was borrowed with no phonological adaptation (25).²⁸

(24) /pumaba/ [pu.'ma.ba] 'to smoke' (Llanero Spanish /fumaba/)

(25) /kafe/ [ka.'fe] 'coffee' (Llanero Spanish /kafe/)

The trill /r/ has also been adapted to Yamalero's phonology, since it is pronounced as a flap (a). However, it is unclear whether this is due to the presence of old borrowings or due to the phonological characteristics of Yamalero. The flap segment is in complementary distribution with the voiced alveolar plosive segment, occurring in typical lenition contexts (see 4.2.2 Voiced stops for more details), which seems to indicate that this language dislikes articulatory strong elements in these contexts. Since trills are segments that need important articulatory efforts to be produced, it is possible that this is the reason why they are produced as flaps.

(26)

(a) /ado/ [a.'ro] 'rice' (Llanero Spanish /aro/)

(b) /lintedna/ [lin.'ter.na] 'flashlight'

On the other hand, the alveolar lateral // and the voiced velar stop /g/ have been borrowed from Spanish in loanwords such as those in (27). Their distribution is still limited to loanwords and no spread to native Yamalero words has been detected.

(27)

(a) /selula/ [se.lu.'la] 'cell phone' (Llanero Spanish /selula/)

(b) /gasolina/ [ga.so.'li.na] 'petrol' (Llanero Spanish /gasolina/)

²⁸ Actually, /f/ is the most commonly borrowed segment worldwide (Grossman et al. 2020: 5319), which is probably related to the fact that it is a segment that emerged late in the evolution of human speech (Blasi et al. 2019)

4.4 Insertion and deletion

4.4.1 Insertion

There are two insertion processes which have been clearly identified: initial glottal insertion and velar insertion after the /aw/ sequence. Glottal insertion is found optionally preceding a vowel in word initial position.

(28) /oota/ [ʔõ.'õ.ta] 'insect (sp.)'

Initial glottal insertion has been described in most Sikuni varieties, which also allow word medial insertion when the flanking vowels belong to different syllables (Kondo & Kondo 1967: 97-98; Queixalós 1985a: 45; Mosonyi, Guevara & Guevara 2000: 273). No insertion cases have been reported in Cuiba or other varieties within the Guahiban language family.

Velar insertion is found following the /aw/ sequence in syllables with no coda, also optionally.

(29)

(a) /pema~~u~~ta/ [pe.'ma~~u~~k.ta] 'rope'
 (b) /naw~~u~~tapuna/ ['na~~u~~k.ta.pu.na] 'to stand up'

Synchronically, this is probably best analyzed as an insertion. However, diachronically, this might be the result of an uncompleted sound change. If we look at the cognates of these words in Sikuni and Cuiba, in both cases a velar segment is found. However, this is not systematic, since other words with velar insertion in Yamalero do not have a velar segment in their corresponding Sikuni and Cuiba words.

Table 8. Sikuni and Cuiba cognates for words with velar insertion in Yamalero.

Yamalero	Waü Sikuni ²⁹	Wamone Cuiba ³⁰	Gloss
[pe'ma u k.ta]	pemáka; pemáito	búmaka; pemito	rope
['na u k.ta.pu.na]	nú:ka	únkua	to stand up
[pe.'t h a u k.ta]	petópa:	petópa	leg
[ʃi.ʃi.'ba u k.ta]	sisibárito	sisibáito	hummingbird
[da u k.t h u]	dáit h i	dít h i	sweet potato
['ne u k.t h u]	newit i	newit h i	tiger

²⁹ Data from Huber and Reed (1992), using primary data from Victor and Riena Kondo.

³⁰ Data from Huber and Reed (1992), using primary data from Isabel Kerr and Marie Berg.

[a.'sauk]	asai	ási	alive
-----------	------	-----	-------

It is also possible that /k/ is part of the underlying representation of the word. This is what data from Sikuni might suggest. In this language, two forms are given for 'rope': the first is the underived generic form of the noun (*pemáka*), while the second is the singular form of the noun, in which the suffix *-to* has been added (*pemáito*). This process might also imply the deletion of /k/, that in Yamalero would not be completely deleted. Whatever the case may be, this is an issue that needs further analysis, either from a diachronic perspective or from a morphological perspective.

4.4.2 Deletion

Deletion takes place in syllables whose onset is /h/ and whose vowel is identical to the vowel in the preceding syllable. This process is typical of fast speech. Deletion may affect the vowel only, or the whole syllable.

(30)

- (a) /nehewa/ [ne.hwa] 'stick'
 (b) /nehetadkua/ [ne.'tar.kwa] 'to walk'

This deletion process may affect stressed syllables as well. In this case, stress moves to the previous syllable.

(31)

- (a) /pe.kai.bo.'ho.ta/ [pe.kai.'bo.ta] 'mouth'
 (b) /bo.'ho.na.wi/ ['bo.na.wi] 'otter'

Very similar deletion processes can be found both in Sikuni and Cuiba (Queixalós 1985a: 72; Mosonyi 1975: 12).

4.5 Sound symbolism

Sound symbolism is a very general term which has been used to describe a variety of phenomena. In Yamalero, two different kinds of sound symbolism have been identified: corporal sound symbolism and imitative sound symbolism (Hinton, Nichols & Ohala 1994: 2-4). Corporal sound symbolism "expresses the internal state of the speaker, emotional or physical". Some examples are given in (32).

(32)

- (a) /tsutsuba/ [tsu.'tsu.ba] 'to suck'

- | | | |
|------------------|-------------------|--------------|
| (b) /awauhi/ | [aw.'gaw.hi] | 'to cry' |
| (c) /tautauna/ | [tau.k.'tau.na] | 'to swell' |
| (d) /xenexenehi/ | [xe.nẽ.xe.'nẽ.hi] | 'to breathe' |

On the other hand, imitative sound symbolism (also called onomatopoeic words in traditional literature) represents environmental sounds. In Yamalero, it is common to find bird's names (33) and to a lesser extent other animal names (34) whose phonological form represents the animal sound.

(33)

- | | | |
|--------------|-------------|---------------|
| (a) /kekede/ | ['ke.ke.re] | 'buzzard' |
| (b) /hoko/ | ['hõ.kõ] | 'heron' (sp.) |
| (c) /maha/ | ['mã.hã] | 'macaw' |

(34)

- | | | |
|------------|----------|---------|
| (a) /misi/ | ['mi.ji] | 'cat' |
| (b) /idi/ | ['i.ri] | 'mouse' |

Both in corporal sound symbolism cases and in imitative sound symbolism cases, Yamalero follows the most common strategies to create sound symbolic forms: reduplication and unusual suprasegmentals, e.g. nasalization (Hinton, Nichols & Ohala 1994: 9). Syllable reduplication is found among corporal sound symbolism (32), while vowel reduplication is found among imitative sound symbolism (see (33) and (34)). Moreover, nasalization (see 4.1.2 Nasality for a more detailed account) is mostly found within bird names (33).

5. Suprasegmental phonology

5.1 Syllable structure

Syllable structure is usually CV in most Yamalero words. However, codas are also attested with some restrictions, while complex onsets whose second element is a glide are also allowed. A list with all attested syllable types follows, with relevant examples.

(35)

- (a) V /i.'so/ 'firewood'
- (b) CV /'pa.bi/ 'cultivated area'
- (c) VC /uun.ka/ 'full'
- (d) CVC /'xan/ 'I'
- (e) CCV /ko.'pje.tʰa/ 'before'
- (f) CCVC /'kwɪn.xwa.ja/ 'small'

Details as for which position(s) segments can and can not fill are given in table 9 (the sign # is used to mark word boundary, while \$ is used to mark syllable boundary). Any consonant can occupy the onset position in a syllable, except for /ŋ/ when this syllable is in word initial position. In addition, /w/ and /j/ can occupy the second position in an onset, forming a complex onset. On the other hand, the coda position is much more restricted, since it can only be filled by nasal segments (/m/ and /n/) and voiced plosives (/b/ and /d/). In this case, no complex codas seem to be allowed, since no glides followed by any of the four aforementioned segments have been attested. Voiced plosives are not attested word-finally, so only /m/ and /n/ can be found in this position.

Table 9. Distribution of Yamalero's consonants according to their position within the syllable and the word.

	p	b	p ^h	t	d	t ^h	k	ts̃	s	x	h	m	n	ŋ	w	j
#_	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
\$_	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
_\$	✓	✓			✓							✓	✓			
_#												✓	✓			
\$_C_															✓	✓

It is typologically uncommon to find more restrictions in word final position than in syllable final position. In fact, it is likely that this is an innovation in Yamalero, after an earlier stage in which no codas were allowed at all. Both word medial and word final codas seem to have emerged as a result of /w/ deletion. It is still unclear what the exact context for deletion was, but syllables with /b, d, m, n/ onsets and a /w/ nucleus seem very favored. This is what is suggested by data from Sikuani, which might represent Yamalero’s earlier stage. A lexical comparison between these two linguistic varieties shows that in the context where Yamalero has a coda element, Sikuani shows /i/ (later analyzed as /w/ by the same authors [Kondo & Kondo 2014: 17]).

Table 10. Words with codas or /i/ in Yamalero, Sikuani and Cuiba.

Yamalero	Waü Sikuani ³¹	Wamone Cuiba ³²	Gloss
pe'runja	perúhuni:	pérun	old man
pe'ebta	pee:bárito	peébato	tongue
pepe'dabta	peperabĩto	peparito	skin
ho'mobta	hómobito	hamóuto	spider
'xan	xáni	xan	I
ba'hapan	póni:	bapón	he
pe'un	pewini	péwin	name
pematakapanpa'nen	penamatakaitórobini	pentakáponaein	leader

This analysis is in line with the restrictions on syllables in these languages that have been observed in the literature. Parawa Sikuani does not show phonemic codas. This position can only be filled phonetically after conditioned vowel deletion in certain contexts (Queixalós in preparation). Waü Sikuani codas are also only found (very infrequently) after optional deletion of some segments, which might be “the beginning of an evolution process in the language syllable structure” (Ardila 2000: 573). On the other hand, Cuiba allows nasals in codas in word final position and other segments in word medial position (Merchán 2000: 587, Machal 2000: 232-33). Hitnü and Guayabero show more options for filling consonantal coda positions (Lobo-Guerrero & Herrera 2000: 615; Tobar 2000: 602). Therefore, Cuiba and Yamalero might be at a similar evolutionary stage in shifting towards more coda-filling options, while Sikuani only seems to have started this process. The trigger for this change

³¹ Data from Huber and Reed (1992), using primary data from Victor and Riena Kondo.

³² Data from Huber and Reed (1992), using primary data from Isabel Kerr and Marie Berg.

might be the influence of neighboring Arawakan languages such as Achagua and Piapoco, which show a similar process but with /i/ instead of /u/. In Tania Granadillo's words: "Is common in many Arawak languages, [that coda position] is restricted to only nasals and [it] is generally the result of vowel elision, most commonly /i/" (Granadillo 2006: 75).

Finally, syllables can combine in different quantities to form words. The shorter word can be made up of one syllable only, but it is difficult to establish the maximum number of syllables that can make up a morphologically simple word, since an important amount of knowledge on Yamalero's morphology is needed. However, underived words with at least five syllables seem to be present in my data.

5.2 Stress

Stress has been a topic of discussion within Guahiban linguistics, and it has been considered "one of the most intricate fields in Sikuani's phonology" (Queixalós 1985a: 96). Except for Mosonyi's analysis of Sikuani, who speaks about a language without stress (Mosonyi 1964 cited in Kondo 1985c: 59), stress has traditionally been defined as phonemic and mostly marked by high pitch in all Guahiban languages: Sikuani (Kondo & Kondo 1967: 95; Queixalós 1985a: 30, 104), Cuiba (Kerr & Berg 1973: 97), Hitnü (Lobo-Guerrero & Herrera 1983: 23) and Guayabero (Keels 1984: 127; Tobar 2000: 602). However, in Sikuani its phonemic status has been later questioned (Kondo 1985c; Mosonyi, Guevara & Guevara 2000: 273-282). These authors argue that minimal pairs given for contrastive stress in previous works are indeed minimal pairs showing an opposition between short and long vowels (they treat length as phonemic in Sikuani's vowel system). Moreover, Kondo (2001: 138) also reanalyzes the way stress is marked in Sikuani syllables, moving from high pitch to "loudness".

Here, a preliminary analysis of Yamalero's stress will be presented, which still leaves some questions unanswered and therefore requires further research. The following minimal pairs seem to suggest that there is a phonemic distinction in Yamalero's stress.

(36)

- | | | | |
|-----|--------|----------|--------|
| (a) | /pepa/ | [pe.'pa] | 'half' |
| (b) | /pepa/ | ['pe.pa] | 'pure' |

(37)

- | | | | |
|-----|----------|-------------|----------|
| (a) | /kexewa/ | ['ke.xe.wa] | 'one' |
| (b) | /kexewa/ | [ke.xe.'wa] | 'nearby' |

(38)

- | | | |
|--------------|-------------|----------------------|
| (a) /bahada/ | [ba.'ha.ra] | 'yes (confirmation)' |
| (b) /bahada/ | ['ba.ha.ra] | 'no (denial)' |

Native speakers' perception is that these pairs differ in stress only; for this reason, they suggested to me that it would be useful to introduce an accent sign into Yamalero's orthography in order to distinguish them.

Stress is mostly found in penultimate syllables, although it can also be found in the antepenultimate and in the last syllable of a word (as in some of the examples above). This is also the case in other Guahiban languages: Sikuni (Queixalós 1985a: 96-108; Kondo 1985c: 66-74; Mosonyi, Guevara & Guevara 2000: 273-282), Cuiba (Kerr & Berg 1973: 97; Merchán 2000: 587), Hitnü (Lobo-Guerrero & Herrera 2000: 617) and Guayabero (Keels 1984: 125; Tobar 2000: 602). However, only in Sikuni attempts have been made to establish rules for stress assignment (Queixalós 1985a: 96-108; Kondo 1985c: 66-74; Mosonyi, Guevara & Guevara 2000: 273-282). These three works coincide in the importance of syllable weight above syllable position in the word. Thus, if the antepenultimate syllable of a word is heavy, it will also be stressed. If none of them is heavy, the penultimate will be stressed. This should probably be taken as tendencies, rather than rules, since all authors acknowledge the existence of exceptions.

While it seems that these tendencies can also be observed in Yamalero, it is very difficult to achieve conclusive results without a consistent knowledge of Yamalero's morphology. A trisyllabic word with stress in the antepenultimate syllable might look like a word not following the general tendency to stress the penultimate syllable, but it is likely that it really does it, since the last syllable might be a classifier or another suffix that is added to the root (39). On the other hand, words with stress in the last syllable is possible that they actually also follow the preference for stressing the penultimate syllable, since they might be monosyllabic words with a prefix (40) or words where a suffix has taken the primary stress from the root (41).

(39)

- | | | |
|---------------|--------------|-------------|
| (a) /jamxuta/ | ['jam.xu.ta] | 'gun' |
| (b) /hudpabo/ | ['hur.pa.bo] | 'fish hook' |

(40)

- | | | |
|------------|----------|---------|
| (a) /peha/ | [pe.'hã] | 'blood' |
| (b) /pewi/ | [pe.'wi] | 'meat' |

(41)

- | | | |
|--------------|-------------|--------|
| (a) /pupuda/ | [pu.pu.'ra] | 'soup' |
|--------------|-------------|--------|

(b) /petabtapa/ [pe.taḿ.ta.'pa] 'pants'

The data suggest that suffixes may affect the location of stress in words. In Sikuani, unstressed suffixes provoke a stress shift within the root, while stressed suffixes take the primary stress from the root (Kondo 1985c: 70-74). In Yamalero this also seems to be the case, although the preliminary analysis of Yamalero's morphology makes this venture particularly challenging. However, in (42) an example is given for the sake of illustration. In (a) the underived disyllabic noun is stressed in the penultimate syllable. In (b) the unstressed singular suffix is added and stress is moved towards the last syllable of the root. Finally, in (c) a stressed suffix is added, which does not affect the location of the primary stress

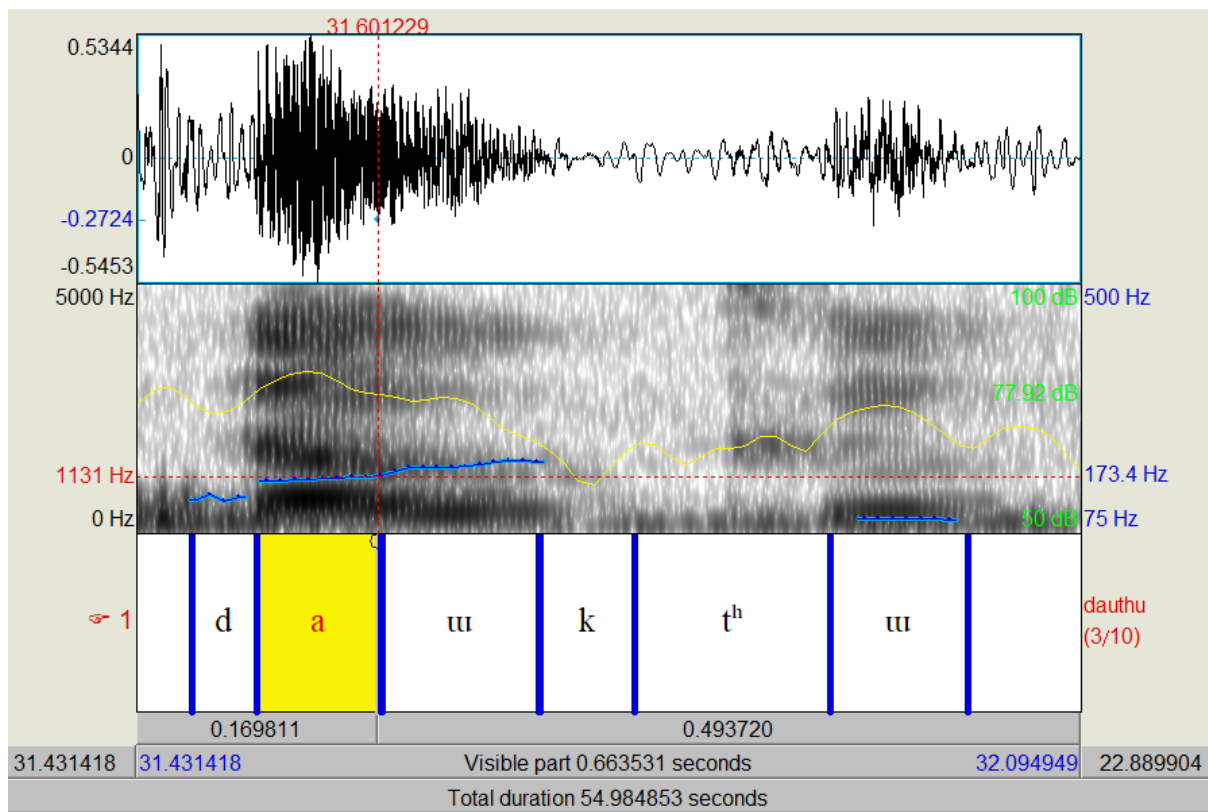
(42)

(a) /ibo/	[i.bo]	'stone (generic)'
(b) /ibota/	[i.'bo.ta]	'stone (singular)'
(c) /ibomihita/	[i.bo.mi.'hi.ta]	'pebbles'

The fact that suffixing is likely to change stress and that Guahiban languages are polysynthetic languages makes it a daunting task trying to establish what type of metrical foot Yamalero follows. In the paper where Kondo analyzed this issue for Sikuani, she concluded that this language shows both trochaic and iambic patterns: trochaic by default and iambic as lexically marked (Kondo 2001: 164). This is typologically rare, since WALS only lists 4 languages within a sample of 323 that show a dual pattern (both trochaic and iambic), none of them in South America (Goedemans & van der Hulst 2013). Thus, an analysis of Yamalero metrical feet is promising but probably premature at this stage.

It is also still unclear what the most prominent phonetic correlate of stress is. High pitch and vowel length seem to be the two best indicators, the latter most commonly found among words which do not follow the general tendency to stress the penultimate syllable. Figure 15 shows an example of the most common stress pattern: a word with stress in the penultimate syllable marked by high pitch. The stressed vowel's pitch, marked by the blue line, is clearly higher (173 Hz) than the unstressed vowel's pitch (around 100 Hz).

Figure 15. Spectrogram of the word *daütjü* ‘sweet potato’.



On the other hand, words with stress in the penultimate or in the last syllable usually mark stress by lengthening the stressed vowel. They can also show higher pitch, especially in the case of last syllable stressed words. Figure 16 shows a spectrogram for the word *nekona* ‘leaf’, which is stressed in the penultimate syllable. The vowel in this syllable lasts 220 milliseconds, almost twice the length that vowels in the unstressed syllables have (around 120 ms). In this case, pitch in the three syllables is virtually the same (around 165 Hz), so something else is needed to distinguish stress.

Figure 16. Spectrogram of the word *nekona* 'leaf'.

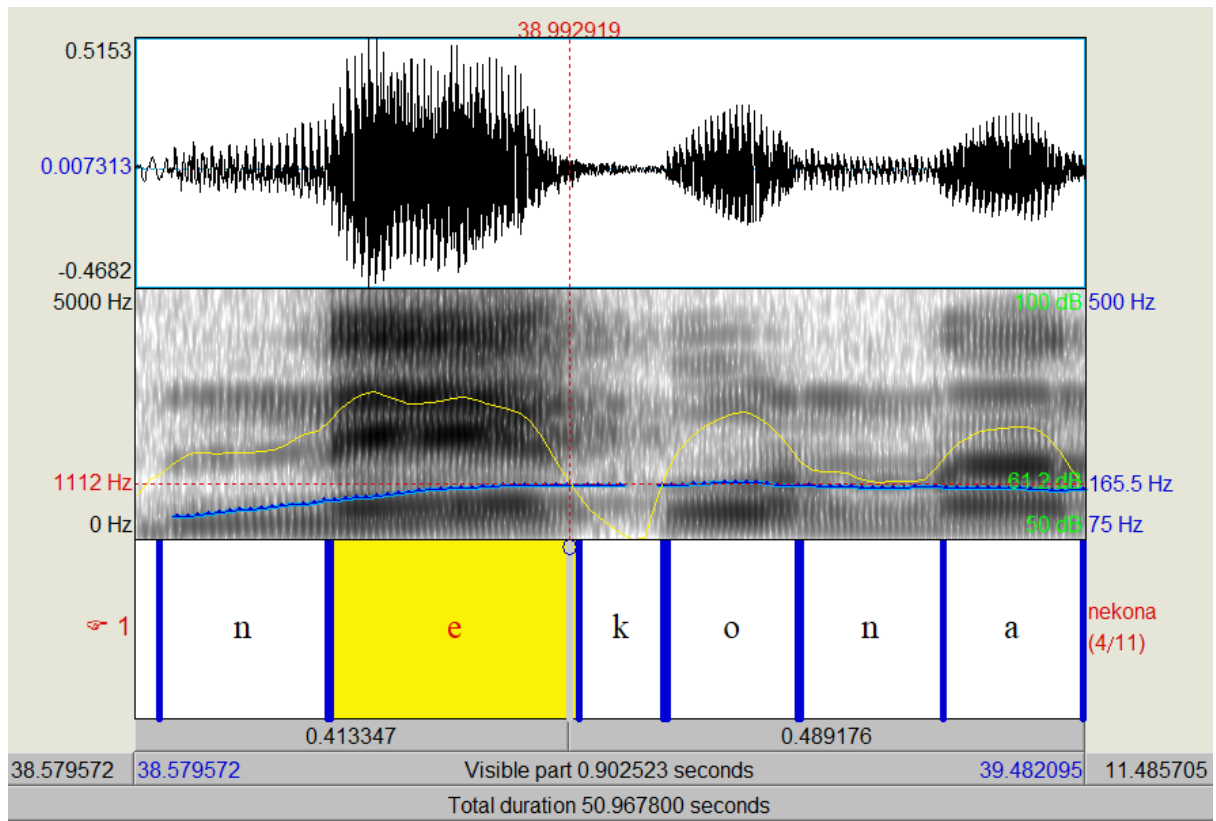
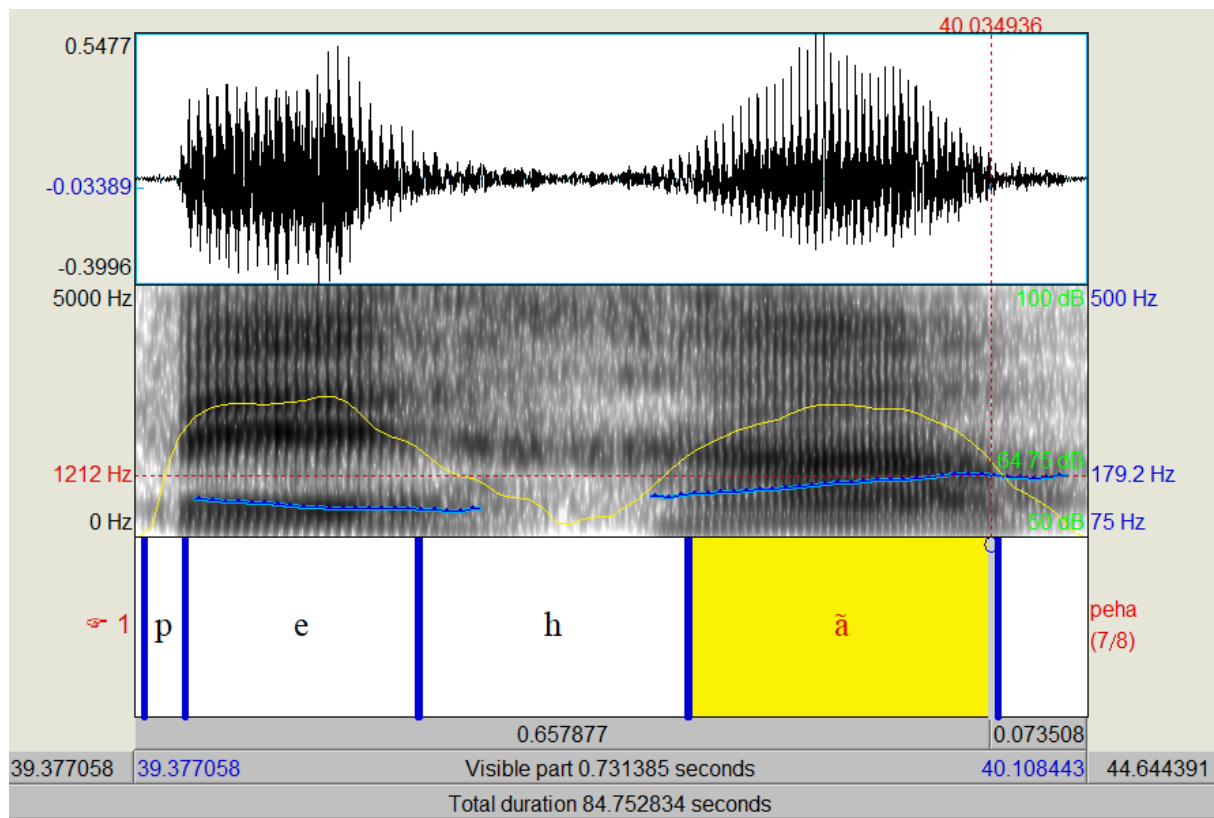


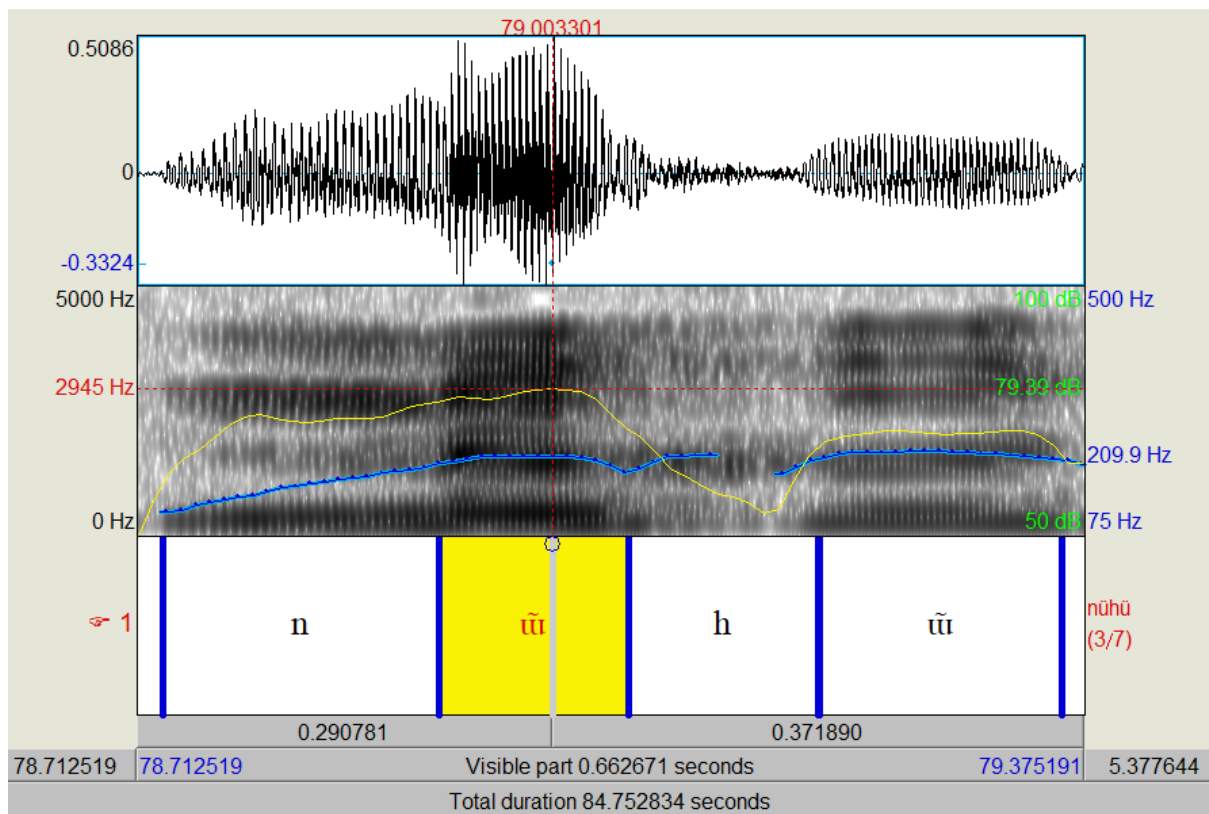
Figure 17 also shows a word where vowel length is significantly longer in the stressed syllable (260 ms) than in the unstressed syllable (180 ms). In this case, the stressed syllable is the last one, so its pitch is also higher (180 Hz) than the unstressed syllable's pitch (130 Hz).

Figure 17. Spectrogram of the word *peha* ‘blood’.



Finally, there are some cases, not very common, in which neither high pitch nor vowel length are useful to distinguish which the stressed syllable is. In these cases, the stressed syllable is pronounced with higher intensity. Figure 18 shows a spectrogram for the word *nühü* ‘monkey’, which is stressed in the penultimate syllable. This syllable has slightly lower pitch (210 Hz) than the last syllable’s pitch (220 Hz) and its vowel is also slightly shorter (120 vs 160 ms). Contrastingly, looking at the yellow line, it is possible to see that the stressed syllable’s intensity is significantly higher (80 dB) than the unstressed syllable’s intensity (70 dB).

Figure 18. Spectrogram of the word *nūhū* ‘monkey’.



As it can be seen from the previous spectrograms, syllable duration may be affected by stress, but it mostly lengthens the vowel, rather than the whole syllable. Since this lengthening only affects a small set of words (those which do not have stress in the penultimate syllable), and when it occurs it does not significantly change the structure of the word, Yamalero is probably best described as a syllable-timed language. Moreover, it does not show typical features from stress-timed languages, such as vowel reduction in unstressed syllables. This analysis has also been proposed in similar terms for Sikuaní (Kondo 1985c: 67).

6. Summary and conclusions

This thesis has provided an account of the situation of the Yamalero language within the Guahiban language family and has described the most prominent elements of its phonological system. In the first place, it has been shown that the Yaruro people from the Caño Mochuelo (Colombia) no longer speak their traditional language (Pumé), but a Guahiban language (Yamalero), which so far had not been highlighted in the literature (Ministerio de Cultura 2010: 4; Zamudio et al. 2014b: 59). This language still presents high rates of intergenerational transmission, but it is starting to be replaced by Spanish in some language domains, so after one month of participant observation in the Yaruro community, I have labeled it as “vulnerable” according to the UNESCO criteria for the assessment of endangered languages (2003).

The position of the Yamalero language within the Guahiban language family is unclear. Some authors have suggested that it is the same language as Playero and that both belong to the Cuiba-Sikuani dialect continuum (Queixalós 1993: 196-197; Fabre 1998: 540; Ardila 2000: 571). I have shown that indeed the Playero and the Yamalero might have been part of the same ethnolinguistic group until the late 1940s, when the former moved to the neighboring areas of Venezuela (Zamudio et al. 2014b: 59). Shortly after, this group probably integrated the two Yaruro members who are the direct ancestors of the current Colombian Yaruro, a community that has recently splitted from the main Yamalero group.

On the other hand, Playero (and therefore, Yamalero) has also been proposed to be an independent language within the Guahiban language family (Kondo 1982: 46; Lobo-Guerrero 1979, cited in Queixalós 1993: 193; Huber & Reed 1992). This thesis has not analyzed this issue in depth, but it provides a comparative lexical wordlist (see Appendix 3) with data from Yamalero, Playero and other Guahiban languages that shows that Playero is indeed the closest linguistic variety to Yamalero, and that this language has a similar degree of similarity to both Sikuani and Cuiba. However, more research is needed in this direction, specially pointing out recurrent sound changes between these languages.

As for the phonological description, a system of six vowels, with an unrounded high back vowel has been proposed. Amazonian languages typically show a high central vowel as the sixth element of the system (Dixon & Aikhenvald 1999: 8). However, it has been shown that the presence of /u/ instead of /i/ might be an areal feature of the Colombian and Venezuelan Plains. In any case, further research should show evidence that /u/ and /i/ behave as a phonological class. Similar evidence is also needed for a more detailed description of the low vowel, which may also be described as a central or as a back vowel. Finally, vowel

length and nasality have not been considered to be phonemic, the latter being phonetically conditioned.

As for the consonant system, it has been shown that Yamalero has a series of aspirated stops that is being replaced by fricative segments, as in most languages within the Guahiban family. Yamalero is one of the most conservative varieties in this respect, because although it has lost its aspirated velar segment, it does not have a fricative allophone for the aspirated bilabial segment, as most Guahiban languages do (Sikuani, Cuiba, Hitnū). However, it does show a fricative allophone for the plain voiceless velar, an alternation that is not found in its closely related languages.

Yamalero is also different to the three Guahiban languages mentioned above as for its voiced plosives, which do not seem to have preglottalized allophones. In fact, glottalization is only found optionally in words whose first segment is a vowel, while it is a more widespread phenomena in other languages, such as Sikuani, where it can also appear between two vowels word-medially (Queixalós 1985a: 45). In this respect, Yamalero resembles more to Guayabero, whose preglottalized voiced stops can only be found in certain environments. This language, together with Yamalero, are the only Guahiban languages that show a pattern of lenition in their voiced bilabial plosives (Tobar 2000: 601). Nevertheless, they are not closely related languages, so it is possible that this change is driven by another language that is influencing both of them, like Spanish, which shows a regular pattern of lenition of voiced plosives (Romero 1995).

Yamalero has been analyzed as a language lacking phonemic liquids, with an allophonic flap in complementary distribution with /d/ surfacing in intervocalic and coda positions. This is a common distribution in north-west Amazonia, which is also found in some Tukanoan and Nadahup languages (Aikhenvald & Dixon 1999: 371), and with little differences in Puinave (Girón Higueta 2008: 56-57) and Tunebo (Headland & Headland 1976), among others. In this respect, Yamalero is closer to Cuiba than to Sikuani, since this latter language has a phonemic lateral and its rhotic element, although very occasionally, can also be found in word initial position (Queixalós 1985a: 24-25, 120-121).

The resemblances between Yamalero and Cuiba can also be observed in the status of the palatal nasal and in the syllable structure of both languages. Unlike in Sikuani, where the palatal nasal is an allophone of /n/ in the context of /i/, in Yamalero and Cuiba this segment can also be found in other contexts, although it has a marginal status in both cases. Syllable structure is also very similar in these two languages, since they allow very few segments in coda position. In some cases this has been the result of vowel deletion, a process that is also found in Arawakan languages in the area (Granadillo 2006: 75). Sikuani is likely to

follow this evolution as well, because it already shows optional vowel deletion in certain cases (Queixalós 1985a: 73; Ardila 2000: 573).

Regarding stress, it has been analyzed as phonemic, as in most descriptions of Guahiban languages. The rules of stress assignment have not been defined yet, since a strong knowledge of Yamalero's morphology is needed to determine how affixation affects stress. However, it is most often found in the penultimate syllable, although stress in the last and in the antepenultimate syllables is also possible. It is also unclear how stress is expressed. High pitch and vowel length seem to be the best two indicators, but intensity might also play a role, especially in words whose stressed syllable is not the penultimate one.

There are also a number of issues on which no satisfactory description has been reached and therefore require further research. As for vocalic processes, vowel fusion and change is a phenomenon described for both Guahiban languages (Queixalós 1985a: 64-66; Lobo-Guerrero & Herrera 2000: 616) and Arawakan languages (Granadillo 2006: 75), but data on these processes was too little to make any generalization. Vowel harmony has also been described for Sikuni (Queixalós 1985a: 60-61), but it has not been treated in this description because it would imply a knowledge of Yamalero morphology that I do not have at the moment of writing this thesis. Finally, a more detailed account of nasality will probably be given with further research involving nasal airflow measurement (Chi et al. 2012).

As for consonant segments, the use of palatography will probably help in determining more precisely the places of articulation of /k/ according to the following vowel (Anderson 2008). This technique should also shed some light on the issue of whether the retroflex allophone I have been speculating about is a retroflex plosive or a retroflex flap. A better understanding of the morphology of Yamalero should also provide a better explanation for what for now has been analyzed as a velar insertion. Finally, further research on the palatal nasal and on the phonological processes that may have triggered its emergence is also very much desired.

All in all, this phonological description has been one of the few descriptive works on Guahiban languages in the last 20 years and the first descriptive work on Yamalero. Its main phonological traits have been described, compared with those of other Guahiban languages and other languages in the Colombian and Venezuelan Plains. Unanswered issues should be addressed again in the future, together with a morphosyntactic description of the language that I hope to accomplish in the following years.

7. References

- Adelaar, Willem F. H. and Pieter C. Muysken. 2004. *The Languages of the Andes*. (Cambridge Language Surveys.) Cambridge: Cambridge University Press
- Aikhenvald, Alexandra Y. 1999. The Arawak language family. In *The Amazonian languages*. Edited by R. M. W. Dixon and Alexandra Y. Aikhenvald, 65–105. Cambridge, UK: Cambridge Univ. Press.
- and R. M. W. Dixon. 1999. Other small families and isolates. In: R. M. W. Dixon and Alexandra Y. Aikhenvald (eds.), *The Amazonian Languages*, 341–383. Cambridge: Cambridge University Press.
- . 2003. *A grammar of Tariana, from northwest Amazonia*. (Cambridge Grammatical Descriptions, 161). Cambridge: Cambridge University Press.
- . 2012. *The languages of the Amazon*. Oxford: Oxford University Press.
- Anderson, Victoria B. 2008. Static palatography for language fieldwork. *Language Documentation & Conservation* 2(1):1–27.
- Ardila, Olga. 2000. Fonología del Guahibo (o Sikuani). González de Pérez, M. S. & Rodríguez de Montes, M. L. (eds), *Lenguas indígenas de Colombia: una visión descriptiva*. Bogotá: Instituto Caro & Cuervo. 571-573
- Audacity Team. 2021. Audacity(R): Free Audio Editor and Recorder [Windows]. Version 3.0.2 retrieved March 17th 2022 from <https://audacityteam.org/>
- Aschmann, Richard P. 1993. Proto Witotoan. In *Summer Institute of Linguistics: Publications in Linguistics*, 114. Dallas, Texas: The Summer Institute of Linguistics and the University of Texas at Arlington.
- Berg, Marie and Isabel Kerr. 1973. The Cuiva language grammar. In *Language Data Amerindian Series*, 1. Dallas: SIL.
- Bjork-James, Carwil. 2015. Hunting Indians: Globally circulating ideas and frontier practices in the Colombian Llanos. *Comparative Studies in Society and History*, 57(1), 98-129.
- Blasi, Damián E., Steven Moran, Scott R. Moisiuk, Paul Widmer, Dan Dediu & Balthasar Bickel. 2019. Human sound systems are shaped by post-Neolithic changes in bite configuration. *Science* 363(6432). <https://doi.org/10.1126/science.aav3218>

- Boersma, Paul, and David Weenink. 2012. *Praat: Doing phonetics by computer*. Vol. 6.1.50.
- Bolaños, Katherine. 2016. *A Grammar of Kakua*. PhD dissertation. University of Amsterdam: LOT Publications 433.
- Brinton, Daniel G. 1891. *The American Race: a Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America*. New York.
- Buenaventura V., Edgar. 1993. *Observaciones preliminares acerca del idioma macaguán: apuntes culturales, fonología, apuntes gramaticales, vocabulario macaguán-español*. Bogotá: ILV.
- Campbell, Lyle. 1997. *American Indian Languages. The historical linguistics of Native America*. New York: Oxford University Press.
- . 2012. Classification of the indigenous languages of South America. In: L. Campbell & V. Grondona (eds.), *The Indigenous Languages of South America* (The World of Linguistics 2), 59-166. Berlin: Mouton de Gruyter.
- , Nala Huiying Lee, Eve Okura, Sean Simpson and Kaori Ueki. 2017. *The Catalogue of Endangered Languages (EiCat)*. Database available at <https://endangeredlanguages.com/lang/2956>, Accessed on 2021-06-11.
- Castillo, Cleto M., Hugo Obregón Muñoz & Jorge Díaz Pozo. 2003. *Morfología Yarura*. Caracas: República Bolivariana de Venezuela, Ministerio de Educación Cultura y Deportes.
- Castro Agudelo, Luz Marina. 1993. Yaruro o Pumé. In Romero Moreno, María Eugenia & Luz Marina Castro Agudelo & Amparo Muriel Bejarano (eds.), *Geografía Humana de Colombia. Región Orinoquia*, Tomo III, Volumen II. Santafé de Bogotá: Instituto Colombiano de Cultura Hispánica.
- Chacón, Thiago C. 2014. A Revised Proposal of Proto-Tukanoan Consonants and Tukanoan Family Classification. *International Journal of American Linguistics* 80. 275-322.
- Chamberlain, Alexander F. 1913. Linguistic stocks of South American Indians (with distribution map). *American Anthropologist*, 15: 236-47.
- Chi, Yujie, Kiyoshi Honda, Jianguo Wei, Hui Feng & Jianwu Dang. 2015. Measuring oral and nasal airflow in production of Chinese plosive. 10.21437/Interspeech.2015-488

- Cho, Taehong & Peter Ladefoged. 1999. Variation and universals in VOT: evidence from 18 languages. *Journal of Phonetics*, 27(2), 207–229. <https://doi.org/10.1006/jpho.1999.0094>
- Christian, Diana R. & Esther Matteson. 1972. Proto Guahiban. In *Comparative studies in Amerindian languages* (Janua Linguarum, Series Practica, 127), pp. 150-159. The Hague: Mouton.
- Colombia, República de. 1991. Constitución Política, de 6 de julio de 1991, en Procuraduría General de la Nación http://www.procuraduria.gov.co/guiamp/media/file/Macroproceso%20Disciplinario/Constitucion_Politica_de_Colombia.htm, Accessed on 2022-03-25.
- . 2010. Ley 1381/2010, de 25 de enero, en International Labour Organization <http://ilo.org/dyn/natlex/docs/ELECTRONIC/83298/91870/F921480766/COL83298.pdf>, Accessed on 2022-03-25.
- Comunidad Únuma. 2021. *Yadudumone pejume baxuan*. Bogotá.
- Crevels, Mily. 2007. South America. In C. Moseley (ed.) *Atlas of the World's Endangered Languages*, 103-196. London & New York: Routledge.
- . 2012. Language endangerment in South America: The clock is ticking. In: L. Campbell & V. Grondona (eds.), *The Indigenous Languages of South America* (The World of Linguistics 2), 167-234. Berlin: Mouton de Gruyter.
- Curnow, Timothy. 1997. *A grammar of Awa Pit (Cuaiquer): An indigenous language of south-western Colombia*. PhD dissertation. Australian National University.
- Departamento Administrativo Nacional de Estadística. 2018. Base de datos REDATAM Censo Nacional de Población y Vivienda 2018. <http://systema59.dane.gov.co/bincol/RpWebEngine.exe/Portal?BASE=CNPVBASE4V2&lang=esp>, Accessed on 2022-03-25.
- Dixon, R. M. W. and Alexandra Y. Aikhenvald. 1999. Introduction. In: R. M. W. Dixon and Alexandra Y. Aikhenvald (eds.), *The Amazonian Languages*, 1–22. Cambridge: Cambridge University Press.
- Dryer, Matthew S. 2019. Language names and nonlinguists: A response to Haspelmath. *Language Documentation & Conservation* 13: 580-585.

- & Haspelmath, Martin (eds.) 2013. *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at <https://wals.info/languoid/genus/guahiban#7/4.920/289.500>, Accessed on 2022-06-11.)
- Dyck, Merrill & Teresa Ann Dyck. 2015. Yaruro dictionary. In: Key, Mary Ritchie & Comrie, Bernard (eds.) *The Intercontinental Dictionary Series*. Leipzig: Max Planck Institute for Evolutionary Anthropology. Available online at <http://ids.cld.org/contributions/251>, accessed on 2022-01-24.
- Eberhard, David M., Gary F. Simons, and Charles D. Fennig (eds.). 2022. *Ethnologue: Languages of the World*. Twenty-fifth edition. Dallas, Texas: SIL International. Online version: <https://www.ethnologue.com/language/gob>.
- Epps, Patience. 2008. *A grammar of Hup*. (Mouton Grammar Library, 43.) Berlin, New York: Berlin: Mouton de Gruyter.
- & Lev Michael (eds.) [In preparation]. *Amazonian languages: an international handbook*. Berlin and Boston: de Gruyter Mouton.
- Estrada Ramírez, Hortensia. 2000. La Lengua Sáliba. In González de Pérez, María Stella and Rodríguez de Montes, María Luisa (eds.), *Lenguas indígenas de Colombia: una visión descriptiva*, 681-702. Santafé de Bogotá: Instituto Caro y Cuervo.
- Fabo, P. 1911. *Idiomas y etnografía de la región oriental de Colombia*. Barcelona: José Benet.
- Fabre, Alain. 1998. *Manual de las lenguas indígenas sudamericanas I*. Munich: Lincom Europa.
- Fernández, Manuel & Marcos Bartolomé. 1895. *Ensayo de gramática hispano-goahiva*. Bogotá: Imprenta Nacional
- Fishman, Joshua A. 1991. *Reversing Language Shift: Theoretical and Empirical Foundations of Assistance to Threatened Languages*. Clevedon, UK: Multilingual Matters.
- Gilij, Filippo S. 1782. *Saggio di storia americana; o sia, Storia naturale, civile e sacra de' regni, e delle provincie spagnuole di Terra ferma nell'America Meridionale*. Vol. 3: Della religione, e delle lingue degli Orinochesi, e di altri Americani. Rome: L. Peregò.
- Ginebra, David. 2022. Yamalero (Colombia) – Language vitality report. In Beer, Samuel, Assignment 1. Issues in Language Endangerment and Documentation. Leiden University Center for Linguistics.

- Girón Higueta, Jesús Mario. 2008. *Una gramática del Wánsöjöt (Puinave)*. PhD dissertation. Vrije Universiteit Amsterdam.
- Goedemans, Rob & Harry van der Hulst. 2013. Rhythm Types. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at <http://wals.info/chapter/17>, Accessed on 2022-06-07.)
- Gómez, Augusto J. 1998. La guerra de exterminio contra los grupos indígenas cazadores-recolectores de los llanos orientales (siglo xix y xx). *Anuario Colombiano de Historia Social y de la Cultura*; núm. 25 (1998); 351-376.
- Granadillo, Tania. 2006. *An Ethnographic Account of Language Documentation among the Kurripako of Venezuela*. PhD dissertation. University of Arizona.
- Greenberg, Joseph H. 1987. *Language in the Americas*, Stanford, Stanford University Press.
- Grossman, Eitan, Elad Eisen, Dmitry Nikolaev & Steven Moran. 2020. SegBo: A database of borrowed sounds in the world's languages. In *Proceedings of the 12th Language Resources and Evaluation Conference*, 5316–5322. Marseille, France: European Language Resources Association.
- Guerreiro de Pirela, Yandira C. 2016. *Lengua indígena yaruro: una gramática tipológica-referencial*. PhD dissertation. Universidad de Córdoba.
- Hammarström, Harald, Robert Forkel, Martin Haspelmath & Sebastian Bank. 2022. *Glottolog* 4.6. Leipzig: Max Planck Institute for Evolutionary Anthropology. <https://doi.org/10.5281/zenodo.6578297> (Available online at <https://glottolog.org/resource/languoid/id/play1240>, Accessed on 2022-06-11.)
- Headland, Paul and Edna Headland. 1976. Fonología del tunebo. *Sistemas fonológicos de idiomas colombianos* 3. 17-26.
- Himmelmann, Nikolaus. 1998. Documentary and Descriptive Linguistics. *Linguistics* 36. 161-195. Bogotá: ILV/MG.
- Hinton, Leanne, Johanna Nichols & John Ohala. 1994. Introduction: Sound-symbolic processes. In: Hinton, Leanne, Johanna Nichols & John Ohala (eds.) *Sound Symbolism*. Cambridge: Cambridge University Press; 1-12
- Honeybone, Patrick. 2001. Lenition inhibition in Liverpool English. *English Language & Linguistics*, 5(2). 213-249.

- Huber, Randall Q. and Robert B. Reed. 1992. *Vocabulario Comparativo: Palabras Selectas de Lenguas Indígenas de Colombia*. In Huber, Randall Q. and Robert B. Reed (eds.) Santafé de Bogotá: ILV.
- Instituto Nacional de Estadística. 2015. *Censo nacional de población y vivienda 2011. Empadronamiento de la población indígena*. Caracas: Instituto Nacional de Estadística.
- Jolkesky, Marcelo P. D. V. 2016. *Estudo arqueo-ecolinguístico das terras tropicais sul-americanas*. PhD dissertation. Universidade de Brasília.
- Katz, Jonah & Melinda Fricke. 2018. Auditory disruption improves word segmentation: A functional basis for lenition phenomena. *Glossa: a journal of general linguistics*. 3. 38. 10.5334/gjgl.443.
- Kaufman, Terrence. 1990. Language history in South America: what we know and how to know more. In: D. L. Payne (ed.), *Amazonian linguistics. Studies in Lowland South American languages*, 13-73. Austin: University of Texas Press.
- . 1994. The Native Languages of South America. In: C. Mosley & R. E. Asher (eds.), *Atlas of the World's Languages*, 46-76. London: Routledge.
- . 2007. South America. In: R. E. Asher & C. Moseley (eds.), *Atlas of the World's Languages*, 59-94. (2nd edition). London: Routledge.
- Keels, Jack. 1984. Fonología y morfología del guayabero. In: Viola G. Waterhouse (ed.), *Sistemas fonológicos de idiomas colombianos* 5. Instituto Lingüístico de Verano/Ministerio de Gobierno: Bogotá. 85-152.
- . 1986a. Adverbial clauses in Guayabero. Bogotá: ILV. Ms.
- . 1986b. Cohesion and coherence in Guayabero. Bogotá: ILV. Ms.
- . 1986c. Guayabero narrative discourse: an overview and articulation into sections. Bogotá: ILV. Ms.
- . 1986d. Peak marking features and paragraph structures. Bogotá: ILV. Ms.
- . 1986e. Proto-Guahiban. A comparative reconstruction of Cuiva, Guahibo, and Guayabero, Bogotá, ILV. Ms.
- . 1987. Guayabero sentence and paragraph structure. Bogotá: ILV. Ms.

- Kerr, Isabel J. and Marie L. Berg. 1973. Fonemas del cuiba. In: Viola G. Waterhouse (ed.), *Sistemas fonológicos de idiomas colombianos 1*. Ministerio de Gobierno: Bogotá.
- & ———. 1976. Notas sobre fonología y ortografía cuiba. *Sistemas fonológicos de idiomas colombianos* (V.G.Waterhouse, comp.), ILV/MG, Bogotá 1972 3. 139-141.
- . 1977. The centrality of dialogue in Cuiva discourse structure. In Robert E. Longacre and Frances Woods (eds.), *Discourse grammar: Studies in indigenous languages of Colombia, Panama, and Ecuador*, part 3, 133-173. Dallas: SIL.
- . 1995. *Gramática pedagógica del cuiba-wámonae*. Bogotá: ILV.
- and Marie L. Berg. 2018. *Wajume / Wamonae Pijumekopi Diwesi: Diccionario en Cuiba-Wamonae y Español*. Dallas, Texas: SIL International.
- Kondo, Riena W. 1976. Onomatopeya en guahibo. *Artículos en Lingüística y Campos Afines* 2. 21-32.
- . 1980. La sílaba en guahibo. *Artículos en Lingüística y Campos Afines* 7. 87-96.
- . 1982. La familia lingüística guahibo. *Artículos en Lingüística y Campos Afines*, 11. Lomalinda: Instituto Lingüístico de Verano, 37-75
- . 1984. Notas sobre la fonología guahiba. *Sistemas fonológicos de idiomas colombianos* (V.G.Waterhouse, comp.), ILV/MG, Bogotá 1972 5. 205-211. Lomalinda: Editorial Townsend.
- . 1985a. *El guahibo hablado: Gramática pedagógica del guahibo, lengua de la orinoquía colombiana*. Lomalinda: Instituto Lingüístico de Verano (2 vols).
- . 1985b. Guahibo kinship terminology. In William R. Merrifield (ed.), *South American kinship: Eight kinship systems from Brazil and Colombia*, 71-78. International Museum of Cultures Publication, 18. Dallas: International Museum of Cultures.
- . 1985c. Guahibo: Long vowels and stress. In: Ruth M. Brend (ed.), *From phonology to discourse: Studies in six Colombian languages*, Language Data, Amerindian Series 9, Summer Institute of Linguistics, Dallas.
- . 1996. El acento principal en guayabero. Ms.
- . 2001. Guahibo stress: both trochaic and iambic. *International Journal of American Linguistics*, 67-2. 136-166.

- and Víctor F. Kondo. 2014. *Diccionario Bilingüe: Guahibo-Español, Español-Guahibo. (El Guahibo Hablado, III.)* Dallas, Texas: SIL International.
- Kondo, Victor F. and Riena W. Kondo. 1967. Guahibo phonemes. In Viola G. Waterhouse (ed.), *Phonemic systems of Colombian languages*, 89-98. Norman: Summer Institute of Linguistics of the University of Oklahoma.
- . 1973a. Informe sobre algunas lenguas indígenas habladas en la Intendencia Nacional de Arauca (con cintas y listas de palabras). Ms.
- . 1973b. Swadesh-Rowe Word List - Guahibo. Ms. Available at <https://www.sil.org/resources/archives/63791>, Accessed on 2022-06-06.
- . 1975. A tagmemic description of Guahibo (sentence to morpheme). Bogotá, República de Colombia: Instituto Lingüístico de Verano and Ministerio de Gobierno.
- . 1977. Participant reference in Guahibo narrative discourse. In R.E. Longacre and F. Woods (eds.), *Discourse grammar* 3, 25-44. Dallas.
- , Andreanna Waller and Johan Waller. 2022. *Diccionario Básico Guayabero-Español Español-Guayabero*. Dallas: SIL.
- Krisologo B., Pedro J. 1983. *Manual glotológico del idioma wa-jibi: versión del río Vichada*. Caracas: Talleres Gráficos del Congreso de la República.
- . 2002. *Manual glotológico del idioma hapotein: versión del área del río Cunaviche*. Caracas: Ministerio de Educación, cultura y Deportes, Viceministerio de Cultura.
- Krute, Laurence D. 1989. *Piaroa nominal morphosemantics*. PhD dissertation. Columbia University.
- Ladefoged, Peter and Ian Maddieson. 1996. *The Sounds of the World's Languages*. Oxford: Blackwell.
- Levi, Susan. 2011. Glides. In *The Blackwell companion to phonology* (341–366). Blackwell Publishing Ltd.
- Lewis, M. Paul and Gary F. Simons. 2010. Assessing Endangerment: Expanding Fishman's GIDS. *Revue Roumaine de Linguistique* 55: 103–120.
- Lobo-Guerrero, Miguel. 1979. *El macaguane y la familia lingüística guahibo*. BA thesis. Universidad Nacional de Colombia.

- & Herrera, Xochitl. 1984. Los hitnü del Airico de Macaguane: contribución a su estudio lingüístico. Bogotá: LEG / Instituto Caro & Cuervo.
- & ———. 2000. 'El jitnu /hitnu/ del medio río Ele'. González, M. S. & Rodríguez, M. L. (eds) *Lenguas indígenas de Colombia. Una visión descriptiva*. Bogotá: Instituto Caro & Cuervo. 611-624.
- Loukotka, Čestmir. 1968. *Classification of South American Indian languages*, edited by Johannes Wilbert. Los Angeles: University of California Press.
- Machal, Marcelo. 2000. Cuiba (Jiwi). In Mosonyi, Esteban Emilio and Jorge Carlos Mosonyi (eds.), *Manual de Lenguas Indígenas de Venezuela*. Caracas: Fundación Bigott. 224-265
- Maddieson, Ian. 1984. Stops and affricates. In *Patterns of Sounds* (Cambridge Studies in Speech Science and Communication, pp. 25-40). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511753459.004
- . 2013. Vowel Quality Inventories. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at <http://wals.info/chapter/2>, Accessed on 2022-05-04.)
- Martínez-Celdrán, Eugenio 2004. Problems in the classification of approximants. *Journal of the International Phonetic Association*, 34(2). 201–210.
- Mason, John A. 1950. The Languages of South American Indians. Steward, J. (ed.) *Handbook of South American Indians*. Washington: Bureau of American Ethnology, 157-317
- Matisoff, James A. 1975. "Rhinoglottophilia: The Mysterious Connection between Nasality and Glottality". In Ferguson, Charles A.; Hyman, Larry M.; Ohala, John J. (eds.). *Nasálfest: Papers from a Symposium on Nasals and Nasalization*, Universals Language Project, Stanford University, Stanford. 265–87.
- Matoušek, Jindřich, Radek Skarnitzl, Daniel Tihelka & Pavel Machač. 2012. Removing Preglottalization from Unit-Selection Synthesis: Towards the Linguistic Naturalness of Synthetic Czech Speech. *IAENG International Journal of Computer Science*. 39. 123-130.
- Max Planck Institute for Psycholinguistics. 2022. ELAN. The Language Archive, Nijmegen, The Netherlands. Version 6.3. <http://tla.mpi.nl/tools/tla-tools/elan/>.

- Meléndez Lozano, Miguel Ángel. 1998. La lengua Achagua: Estudio Gramatical. *Lenguas Aborígenes de Colombia: Descripciones*, 11. Bogotá: CESO-CCELA.
- . 2014. Préstamos Arawak (Achagua, Piapoco y Piapoco-Achagua) a la lengua sikuani. *LIAMES: Línguas Indígenas Americanas* 14(1), 173-218.. 14(1), 173-218
- Merchán, Ana Joaquina. 1989. *Morfosintaxis de la actancia en la lengua de los maibén*. MA thesis. Universidad de Los Andes.
- . 2000. Breve presentación de la lengua cuiba (variante maibén). In González, M. S. & Rodríguez, M. L. (eds), *Lenguas indígenas de Colombia. Una visión descriptiva*. Bogotá: Instituto Caro & Cuervo. 585-598
- Michael, Lev, Tammy Stark, Emily Clem & Will Chang (eds.). 2015. *South American phonological inventory database v1.1.5*. Berkeley: University of California.
- Ministerio de Cultura. 2010. Yaruro (pumé). Caracterizaciones de los pueblos indígenas de Colombia. República de Colombia: Bogotá. <https://www.mincultura.gov.co/prensa/noticias/Documents/Poblaciones/PUEBLO%20PU ME-YARURO.pdf>, Accessed on 2022-06-17.
- Moseley, Christopher (ed.). 2010. *Atlas of the World's Languages in Danger*, 3rd Edition. Paris: The United Nations Educational, Scientific and Cultural Organization. <http://www.unesco.org/culture/languages-atlas/en/atlasmap.html>, Accessed on 2022-03-25.
- Moore, Robert E., Sari Pietikainen, and Jan Blommaert. 2010. Counting the losses: numbers as the language of language endangerment. *Sociolinguistic Studies* 4(1): 1-26.
- Moran, Steven & McCloy, Daniel (eds.) 2019. *PHOIBLE 2.0*. Jena: Max Planck Institute for the Science of Human History. (Available online at <http://phoible.org>, Accessed on 2022-06-01.)
- Morey, Robert V. 1969. Guahibo Linguistic Classifications. *Anthropological Linguistics* XI. 16-23.
- Mosonyi, Esteban E. 1964. Contribución al estudio de la fonémica, idioma guajibó. *Economía y Ciencias Sociales* 6. 93-103.
- . 1966. *Morfología del verbo Yaruro*. Caracas: Universidad Central de Venezuela.

- . 2000a. Breve Caracterización conjunta de las lenguas Curripaco y Piapoco. In González de Pérez, María Stella and Rodríguez de Montes, María Luisa (eds.), *Lenguas indígenas de Colombia: una visión descriptiva*, 641-656. Santafé de Bogotá: Instituto Caro y Cuervo.
- . 2000b. Elementos gramaticales del idioma Piaroa. In González de Pérez, María Stella and Rodríguez de Montes, María Luisa (eds.), *Lenguas indígenas de Colombia: una visión descriptiva*, 657-668. Santafé de Bogotá: Instituto Caro y Cuervo.
- , Jorge C. Mosonyi and Jorge Ramón García. 2000. Yaruro (Pumé). In Mosonyi, Esteban E. and Jorge C. Mosonyi (eds.), *Manual de Lenguas Indígenas de Venezuela*, 544-593. Caracas: Fundación Bigott.
- Mosonyi, Jorge C. 1975. *Introducción al estudio de la lengua cuiba*. Caracas: Facultad de Ciencias Económicas y Sociales de la Universidad Central de Venezuela.
- , Beatriz Guevara and Guillermo Guevara. 2000. Guajibo (Jiwi). In Mosonyi, Esteban Emilio and Jorge Carlos Mosonyi (eds.), *Manual de Lenguas Indígenas de Venezuela*. Caracas: Fundación Bigott. 266-334
- Naranjo, Nellyreth Pérez, Pamela Duarte, Juan Sebastián Hurtado & Oscar Armando Peña Gama. 2013. *Plan de salvaguarda de los pueblos indígenas del resguardo Caño Mochuelo*. Ministerio del Interior: Yopal
- Newman, John. 2002. A cross-linguistic overview of the posture verbs 'sit', 'stand', and 'lie'. *The Linguistics of Sitting, Standing, and Lying*, ed. John Newman, pp. 1–24. Amsterdam: John Benjamins.
- Nikolaev, Dmitry. 2022. A typology of consonant-inventory gaps. *Linguistic Typology*, vol. 26, no. 1, pp. 161-186. doi: 10.1515/lingty-2020-0128
- Obregón Muñoz, Hugo and Jorge Díaz Pozo. 1989. *Morfología Yarura*. Maracay: Instituto Universitario Pedagógico Experimental de Maracay.
- Olivari, Lucrecia & Luz Buitrago. 2012. *Respuesta de las comunidades y gobierno del Resguardo Indígena de Caño Mochuelo frente a la posible explotación petrolera*. Bogotá.
- Ortiz, Francisco. 1977. *Vocabulario y cuentos mayarxi (Arauca)*. Bocas del Bayonero: Jesús Antonio Ramírez.
- and Francisco Queixalos. 1981. Ornitología cuiba-guahibo. *Amerindia* 6. 125-147.

- Ortiz, María Mercedes. 2005. Limpiar las sabanas de serpientes, tigres e indios: la frontera llanera en La vorágine de José Eustasio Rivera. *Palimpsestvs*.
- Ospina Bozzi, Ana Maria. 2002. *Les structures élémentaires du "Yuhup Makú", langue de l'Amazonie Colombienne: morphologie et syntaxe*. PhD dissertation. Paris: Université Paris 7.
- Overall, Simon. 2007. *A Grammar of Aguaruna*. PhD dissertation. Melbourne: La Trobe University.
- Pais, Joan. 1970. *Gramàtica algueresa*. Barcelona: Barcino.
- Payne. David. 1991. A classification of Maipuran (Arawakan) languages based on shared lexical retentions. In *Handbook of Amazonian languages*, vol. 3, ed. Desmond C. Derbyshire and Geoffrey K. Pullum, 355-499. Berlin: Mouton de Gruyter.
- Petrullo, Vincenzo. 1939. The Yaruros of the Capanaparo River, Venezuela. *Bureau of American Ethnology Bulletin*. 123 (11):161–290.
- Queixalós, Francisco. 1980. *Phonologie sikuani*. PhD dissertation. París: Université Paris IV.
- . 1981. Love me do, o la persona indefinida en sikuani. *Thesaurus* 36/1: 104-109 .
- . 1983a. Notas de gramática sikuani. Documento destinado a la organización UNUMA. Bogotá: Centro Gaitán.
- . 1983b. Sex and grammar in Sikwani (Guahibo) kinship terminology. *Anthropological Linguistics* 25. 162-177.
- . 1985a. *Fonología sikuani*. Bogotá: PICC 71.
- . 1985b. L'organisation spatiale dans la grammaire sikuani. *Journal de la Société des Américanistes de Paris* 71. 115-128.
- . 1989. *Diccionario sikuani-español*. Lenguas aborígenes de Colombia, 1. Bogotá: CCELA.
- . 1993. Lenguas y dialectos de la familia lingüística guahibo. In María Luisa Rodríguez de Montes (ed.), *Estado Actual de la Clasificación de las Lenguas Indígenas de Colombia*, 189-217. Santafé de Bogotá: Instituto de Caro y Cuervo.
- . 1998. *Nom, Verbe et Prédicat en Sikuani (Colombie)*. Langues et Sociétés d'Amérique Traditionelle, 6. Paris: Peeters.

- . 2000a. Aproximación al nombre y al verbo Sikuani (o Guahibo): Categorías y Relaciones. In González de Pérez, María Stella and Rodríguez de Montes, María Luisa (eds.), *Lenguas indígenas de Colombia: una visión descriptiva*, 575-584. Santafé de Bogotá: Instituto Caro y Cuervo.
- . 2000b. *Syntaxe Sikuani (Colombie)*. Langues et Sociétés d'Amérique Traditionnelle, 7. Paris: Peeters.
- . 2012. Nominalization in Sikuani. Bruno, A.C., Pacheco, F., Queixalós, F., Telles, S. & Wetzels, L. (eds.) *La structure des langues amazoniennes II. Amerindia*, 35, 153-186
- . 2016. Aspect in Sikuani. Guentcheva, Z. (ed.) *Aspectuality and Temporality. Descriptive and theoretical issues*. Amsterdam/Philadelphia: John Benjamins, 265-294
- . [In preparation]. 'Guahiban'. In *Amazonian languages: an international handbook*, ed. by P. Epps & L. Michael. Berlin and Boston: de Gruyter Mouton.
- R Core Team. 2021. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.
- Ramirez, Henri. 1997. *A Fala Tukano dos Ye'pâ-Masa*. Vol 1. Manaus: Inspetoria Salesiana Missionária da Amazônia, CEDEM.
- Reinoso Galindo, Andrés E. 2002. *Elementos para una gramática de la lengua piapoco*. Bogotá: Ministerio de Cultura.
- Rivet, Paul. 1948. La famille linguistique guahibo. *Journal de la Société des Américanistes de Paris*, 37, 191-240
- Romero, Joaquín. 1995. *Gestural organization in Spanish: an experimental study of spirantization and aspiration*. PhD. dissertation. University of Connecticut.
- Rosés Labrada, Jorge E. 2015. *The Mako language: Vitality, Grammar and Classification*. PhD dissertation. The University of Western Ontario & Université Lumière-Lyon 2.
- . 2017. Language Vitality among the Mako Communities of the Ventuari River. *Language Documentation & Conservation* 11: 10-48.
- . 2019. Jodĩ-Sáliban: A linguistic family of the Northwest Amazon. *International Journal of American Linguistics* 85. 275-311.
- SIL FieldWorks. 2022. FieldWorks Language Explorer. <https://software.sil.org/fieldworks/>.

- Sprigg, Richard Keith. 1987. "'Rhinoglottophilia' re-visited: observations on 'the mysterious connection between nasality and glottality'". *Linguistics of the Tibeto-Burman Area*. 10 (1): 44–62.
- Swadesh, Morris. 1958. *La lingüística de las regiones entre las civilizaciones mesoamericanas y andinas*. Universidad Nacional Autónoma: Instituto de Historia.
- Tobar Ortiz, Nubia. 1989. El nominal en guayabero. *Lenguas de la Orinoquía*. Série Descripciones 4. 67-134.
- . 2000. Aspectos generales de la lengua Guayabero. In González de Pérez, María Stella and Rodríguez de Montes, María Luisa (eds.), *Lenguas indígenas de Colombia: una visión descriptiva*, 599-610. Santafé de Bogotá: Instituto Caro y Cuervo.
- UNESCO Ad Hoc Expert Group on Endangered Languages (Matthias Brenzinger, Arienne M. Dwyer, Tjeerd de Graaf, Collette Grinevald, Michael Krauss, Osahito Miyaoka, Nicholas Ostler, Osamu Sakiyama, María E. Villalón, Akira Y. Yamamoto, Ofelia Zapeda). 2003. *Language Vitality and Endangerment*. Document submitted to the International Expert Meeting on UNESCO Programme Safeguarding of Endangered Languages, Paris, March 10–12. <http://www.unesco.org/culture/ich/doc/src/00120-EN.pdf>, Accessed on 2022-03-25.
- Velupillai, Viveka, 2012. *An Introduction to Linguistic Typology*. Amsterdam and Philadelphia: John Benjamins.
- Waller, John. 1974a. El negativo en guayabero. *Artículos en Lingüística y Campos Afines* 1. 40-45.
- . 1974b. Niveles de proposición y oración en guayabero. *Artículos en Lingüística y Campos Afines* 1. 23-39.
- and Andreana de Waller. 1976. Fonología del guayabero. In V. G. Waterhouse (ed.), *Sistemas fonológicos de idiomas colombianos*, 45-56. Bogotá: ILV/MG.
- & Victor Kondo. 2012. *Una gramática pedagógica del Guayabero*. Dallas: SIL International.
- Zamudio, L., Toledo, A., Vargas, I., Vega, M., Ariza, J., & Chenut, P. 2014a. *Estudio Nacional de la Situación Alimentaria y Nutricional de los pueblos indígenas de Colombia ENSANI, 2012-2014. Pueblo Yamalero, resguardo Caño Mochuelo*. Bogotá, DC.

_____, _____, _____, _____, _____ & _____. 2014b. *Estudio Nacional de la Situación Alimentaria y Nutricional de los pueblos indígenas de Colombia ENSANI, 2012-2014. Pueblo Yaruro, resguardo Caño Mochuelo*. Bogotá, DC.

Appendix 1. Template for session metadata

ID	Title	Speaker	Subject lg	Working lg	Place	Country	Date	Data category	Discourse type	Media type

Duration	Social context	Planning type	Transcriber	Translator	Data inputter	Access type

Appendix 2. Template for participant metadata

Name	Sex	Age	Languages	Father lang	Mother lang	Partner lang	Place of birth	Lived in	Education	Occupation

Appendix 3. Lexical comparison between Guahiban languages

Gloss	Yamalero	Playero ³³	Sikuani ³⁴	Cuiba ³⁵	Hitnü ³⁶	Guayabero ³⁷	Comments
tongue	pe.'eb.ta	Pe-é-bor-to	pe.e:-bári-to	Pe-éba-to	P-ébrat	peh katʃ-iéʔ-t	
mouth	pe.kai.bo.'ho.ta	Pékiwóʔo-to	Pe-kuái-bo	Pe-koibó-to	Pe-kíboat	peh kátʃa	
lip	peu.'pied.ta	Pi-ɪpi-jór-to	Pi-úpi-jóro-to	Pe-opíra	Pi-ópipa	peh ʔiaɸbi-t	
tooth	pe.'wa.na.ta	Pe-wán-to	Pe-wóno-to	Pe-wáno	Wá-wan	peh biaʔ-t	
nose	pe.po.mo.'ho.ta	Pe-púmu	Pe-púmu:	Pe-poxón-to	Pe-púm	peh ɸumú	
eye	pei.ta.'xu.ta	P-íta-xú-to	P-i:ta-xú:-to	Pe-ita-maikéi-to	P-itpút	peh ʔiɸú-t	
ear	pe.mu.'xied.ta	Pe-múxu-joró-to	Pe-múxu-jóroto	Pe-muxu-joró-to	Pe-mkórat	peh netʃoʔ-t	
head	pe.ma.si.'pa	Pe-máta-ɸipá	Pe-mata-bóko-to	Pe-nta-sípa	Pe-matbók	peh mat-né-t	
forehead	pe.i.ta.pa.bo.'ko.ta	P-ita-ɸé-bokó-to	P-i:ta-pa:tʰái-to	Pé-itapa	Pi-pumátʃipa	peh mak	
hair	pe.ma.tu.tu.'na	Pe-mata-ná-to	Pe-máta-na:	Pe-nta-ná	Pe-mat-nát	peh mat-lá	
chin	pe.bw.xw.'sad.ta	Pe-búxu-solí-to	Pe-bixi-sáli-to	Pe-bixitéi-to	pe.bikárat	peh katʃ-biax-t	

³³ Data from Huber and Reed (1992), using primary data from Victor Kondo.

³⁴ Data from Huber and Reed (1992), using primary data from Victor and Riena Kondo.

³⁵ Data from Huber and Reed (1992), using primary data from Isabel Kerr and Marie Berg.

³⁶ Data from Huber and Reed (1992), using primary data from Edgar and Clementina Buenaventura.

³⁷ Data from Huber and Reed (1992), using primary data from Jack Keels and Victor and Riena Kondo.

beard	pe.bu.xu.'na	Pe-búxu-pi-ná-to	Pe-bixi-pi-na:	Pe-opí-na	Pe-bik-nát	peh biax-lá	
neck	pe.wi.'si.ta	Pe-wi-jí.to	Pe-wi:-sí-to	Pe-usí-to; pe-wisí-to	Pe-wú-tjít	peh katja-ríama	
chest	pe.ma.tab.'kid.ta	Pe-máta-takiri	Pe-mí:-pa:	Pe-ntákari	pi-apútjipar	peh matieφ-t	
woman's breast	pe.mi.i.'pu.ta	Pe-mí-to	Pe-mí:-to	Pe-mí-to	Pe-mít	peh mi-t	
abdomen	pe.ko.'tso.do	Pe-kótsoro	Pe-kóto-to	Pe-kotéri	Pe-kuéter	peh wéh-t	
back	pe.'hu.ma	Pe-húma	Pi-húma	Pé-ima	heptjĩ	peh matwiah-t	
shoulder	pe.i.ta.'ka.da	Pe-koφí; pe-kóφi	Pe-koφia	Pe-utukúra	Pe-bútar	peh táka	
arm	pe.mu.xu.'si.pa	Pe-máxi	Pe-máxi	Pe-máxi	pe-mútjĩ-pap	peh miax	
upper arm	pe.mu.xu.si.pa.'wi.ta	Pe-máxi-tai-to	Pe-máxi-t ^h ai-to	Pe-máxi-thai-to		peh miax	
elbow	pe.mu.xu.'sad.ta	Pe-máxi-solí-to	Pe-máxi-ita-xú:-to	Pe-máxi-soí-to	Pe-mútjítábra	peh miax-taéna	
hand	pe.'ka.be	Pe-kóbe	Pe-kóbe	Pé-kobe; pe-kóbe	Pe-kó	peh keʔé	
finger	pe.ka.be.'si.bo	Pe-kóbe-jĩ-bo	Pe-kóbe-sí:-to	Pe-kóbesí-to	Pe-ko-tjĩpar	peh kotíja	
fingernail	pe.ko.pi.'bo.ko	Pe-kópi-bokó-to	Pe-kopí:-boko-to	Pe-koibokó-to	Pe-kuíbat	peh ki-bók-t	
leg	pe.'t ^h au.ta	Pe-tái-to; pe-tópa	Pe-tópa:	Pe-tópa	Pe-bémiti	peh tit	

thigh	pe.tab.pa.na.'wi.ta	Pe-tábu-kíara	pe-topa-t ^h ai-to	Pe-t ^h i-to	P-utni	peh bentawiah-t	
knee	pe.ma.ta.'pad.xi	Pe-máta-parihé-to	Pe-máta-baka	Pe-nta-bóko-to	Pe-matiakuérat	peh brix-t	
shin	pe.si.ma.'pa	Pe-sí-maká-to	Pe-sí:-huma-pa:	Pe-táxu-jaweré-to	Pe-t̃j̃ipa	peh ʔoφnáeja-tit	
foot	pe.'ta.xu	Pe-táxu	Pe-táxu	Pe-táxu	Pe-tkút	peh titiak	
toe	pe.ta.xu.'si.bo	Pe-táxu-bo-jí-bo	Pe-taxu-sí:-to	Pe-taxu-sí-to	Pe-ku-t̃j̃ipar	peh tiak-tíja	
skin	pe.'ju.du; pe.pe.'dab.ta	Pe-pérab-to	Pe-perabĩ-to	Pe-pari-to	Pe-péri	peh biʔ-t	Respectively: human; animal
bone	pe.'pi.hi.bo	Pe-píhi-bo	Pe-sí:-to	píwa	Pe-t̃j̃ít	peh tit	
blood	pe.'ha.na; pe.'ha	Pe-hána	Pe-hána; pi-hána	Pe-hána	hána	peh hal	Respectively: human; animal
heart	pe.ma.tab.'tu.ta	Pe-mátabi-ti-to		Pe-n ^h i-to	Pi-átbitat	peh matpia-t	
lungs	pe.ma.'tab.ko.p ^h o.'p ho.bw	Pe-koφóφo-bi	Pe-koφóφo-wi	Pe-koφóhi	Pe-kopí	peh xatáedal	
penis	pe.bo.'wa.ta	Pe-bowá-to	Pe-bowá:-to	Pe-bowá:-to	Pe-boát	peh bo	
vulva	pe.tu.'xu.ta	Pe-tuxúto	Pe-tú:xuto	Pe-tuxú-to	Pe-tú	peh sil	
man	'pe.bwn	Pébi-ni	pé:bi	Pébi-n	pébi	poi	
male	'pe.bwn	Pébi-ni	pé:bi; híwi-to-ni	Pébi-n; peb-to	pébit	ʔatón	

woman's breast	pe.ti.di.'wa	Petíri-wa	Petíri-wa:	petsiríwa; jabi-jo	warapéni	puwís	
people	'hi.wi	Hiwí-moné	híwi	híwi	Pé-kui	hiw	
husband	pia.ha.se.'we.di	Pia-séwari	P-amóna; piha-pé:bi	pía pébi-n; pi-séuri	Pe-bárkui	pámal	
wife	pia.'ha.wa	φia-séwari	Píha-wa:	Pío-wa; pi-séuri	Pe-bákui; pe-bárkui	Píh-ow	
father	'a.xa	axá; áxa	á:xa:; á:pa:	áxa	atéi; áit; áti	ʔax	
mother	'e.na	éna	é:na:	éna	enána	ʔen	
baby, infant	pe.ne.'kue.ta	Pe-níφue-to	Pe-nákue-to	Pexuí-jo	jawír; jawírbaŋ	naxiwal	
old man	pe.a.ti.'din; pe.'dun.ja	Peruhu-ni	Perúhu-ni:	pérun; ámo	pertí	Patíʔ-in	Respectively: formal; informal and for animals
water	me.'da	miní	mé:ra:	méra	men	min	
river	'mi.ni	miní	méne; pépa-mene	méne	pemnát	nawél; min lám-t	
island	pe.tu.'ne.ta	Pe-tuné-to	Pe-tu:náe-to	Pe-tunáe-to		Tanáe-t	
lake	'pu.ka	puká	púka	púkua	pemátpep	puka	
swamp	'pa.na.bo	Ira-honó	φorá-bo	p'hóto	asbóp	sasáʔk	

spring of water	-	-	-	méne nawowota-rúku a	-	minakóla	
waterfall	ka.'si.ba	-	Mene-hiréwa	méne natsibota-rúku a	t̃for (SP)	minat̃fóla	
rapids	'thad.tha.da	-	ho:ka:	méne dáunwei	hokuát		
flame, fire	i.'so.ko.t̃sa	l-só-to	l-só-to; náwa	l-jóto; ishoto náwa	penarrútabia	hit, law	
ash	pu.'ma.na	ipúmana	i:pumana	ipúna	ismar	weru?sa	
characoal	pei.'te.de	litaré-to	i:ré:-to	Pe-itaré-to	itrét; pitrét	Leh-t	
smoke	pe.'tsu.xu	t̃-tsixi	t̃-tsixi	múrei; íjo tsixi	bunánbe	?itmúm	
firewood	i.'so	l-só-to	i:-so:	Í-so (isho)	isót	?j	
skin	pei.ta.'po.hu.bo	lta-boxó-bo	ltá-boxo	pe-ita-bóko(-to)	mátet̃ji; máto t̃ji	Tat-baxó	
rain	'e.ma	emá	éma	éma	em	?iam	
wind	ha.'wi.bo	Howí-bo	howí:-bo	hóibo	huíp	hóewa; wik	
sun	'hu.a.me.ta	ékotia; huáme-to	Huáme-to; í:kotia	Xomé-to	kóti jonóhe	Huím-t matkói píh-in	
moon	'hu.a.me.ta	Húame-to	Húame-to	Homo-kóit̃ja-to	homét	Huím-t madói píh-in	
star	pi.'ta.hi.ta	Ípitahí-to	Tulúpu-to; íwinai	Opitéi-to	harwát	?it-táeh-t	

day	ma.ta.'ka.bi	metakábi	mátakabi	mátakabi	matkái	matkói	
night	pa.'pe; me.'da.wi	meréwi	meráwi	médawi; médiwi	merío	madói	Respectively: usual term; old term
thunder	hu.du.hu.'du.hi	Húru-húru-hái	já:maxi	jámixi (busi)	kikirre; juwáo	ʔíam nahúw	
lightning	'tan.hwɛn; 'ja.mw.xw	jámáxi	já:maxi	jámixi	ninínpeha	tʃamx	
rainbow	ja.wa.di.'wa.di	Hóniwá-bo	Arawáli-bo	koinwáwa	álawal	ʔarwáera	
earth, soil	'i.da; 'a.tsa	irá; atʃá-to	íra; átsa	íra	as	sat; as	
stone	i.'bo.ta	lbó-to	lbó-to	lbó-to	ibót	ʔia-t	
sand	te.'ta.ha.wa	Tehetó-wa	Tahéta-atsa	Táeto-wa	tétap	Táeh-t	
house	'bo	Bó-maxi	bó:	bó; bómixi	mámki	ba	
roof	'bo.hu.ma	Bó-baxu	bó	bo pe-jénapa	Pe-jakátarabia	Ba-bit	
door	pe.u.'pa; bou.'pa	Pe-búbara	Báu-pa:	Pe-bóupa	wipa	Ba-φφά; ba-φoká?	
seat, stool	pe.e.'ke.ha.wa	Pe-eké-wa	tá:pi; náe-epa-to	Pe-ekáe-wa	hálne	Tia-ék-ax	
mat	ta.'ba.da	Pe-kúe-wa; wénto	túlima	wéin	hóbit	tʃiabi?	
hammock	'bu	bu	bu:	bu	bujo	bu	
bed	'ka.ma	káma			kaníbirat		

cooking pot	'wa.xi	Pe-námtsa-sétji-wa	wáxi; kanáli-to	waxi; koró-to	pelór	Márma-t	
cultivated clearing	'pa.bi	pábi	pá:bi	pabi	pábi	lul	
village	ta.'ma.da	Bo-máxi nawíta	tómara	tómara	simámki	tiahni	
path, trail	'nam.ta	anáta pe-poné-wa	Námu-to	námto, náunto	namút	Niam-t	
fish net	pe.ja.keu.'ba.ha.bi.ha.wa	atarraja (SP)	Takána-to	Pe-jamonáewa		Takianwa-t	Other types: pe.ja.du.bi.ha.wa; pe.ja.xun.ke.'mau.ta; ja.'dub.san
fish hook	'xud.pa.bo; pe.ja.kau.ke.'bu	Pe-toxóroroké-bo	Kulúpa-bo	Kurupó-bo	ansuél; asuél (SP)	?ésa	
axe	si.'pa.di	sipárarí	sipá:li	sípari; sipári	tʃipál	tʃipáer; tʃapáer	
knife	'ku.si	kusí (SP)	Kusiú-pa: (SP)	kúsi (SP)	koʃʃipa (SP)	síera	
canoe	'he.da	héra	hé:ra	héra	kaná (Carib)	kanáw	
paddle	te.na.'pa	Téna-pa	té:na-pa:	katéna	témpa	kanáeφ	
club	wa.'ka.pa	wakapá	i:-wa:-to; wakápa	lwá-to	wakáp	?i-wá-t; wákpa-t	
spear	'kued.da.bu	Kuére-re-bo	Kuére-re-bo	kuéрабо; dehóna	lats (SP)	baóin	

bow	bi.'t̥sa.bi	bitsábi	bitsábi	bít̥jéibi	pitsáne	φadói-t	
arrow	xu.'a.ta.bu	Wúata-bo	Xuáta-bo	kuijéne; pépa-bo	orék	búja (SP puja)	
blowgun	-	-	si:ripí:bo	Sirupubó-to	t̥jirpú	φumói-t	
tapir	me.'t̥sa.ha	métsaha	mé:tsaha	métsa	métsa	mésa	
jaguar	'new.t̥hu	newiti; nigufti	newit̥hi	neit̥hi	newit; newito	nud	
puma	pe.'t̥so.bian	león (SP)	eníanali	neithi pe-tsóbia-n	lión (SP)	t̥jiar	
armadillo	tu.'hu.bu	tuhúbu	tuhúbi	túbu	bonén	túha	
dog	a.'wi.di	awíri	awíri	áudi; áuri	awíl	wir	
deer	a.'we.bi	owébi	owé:bi	owéibi	owéibi	?awói	
bat	ha.wa.'t̥sid.ta	hawat̥jir-to	Hawasíri-to	Hawatsí-to; hautsí-to	hawát	Hiawa-t	
otter	bo.'ho.na.wi	bohónawi	bohónawi	bonówi	bóni	bohléw; t̥jarmá?	
cebus monke y	pa.'pa.bu	papábu	papábi	papóbi	itini	φóφa	
howler monke y	'nw.hu	nihí; nihí	nihí	nihí		?árow-at	

black monkey		-	kuwé:ri; kuwáiri	-	-	t̂joka	
capybara	ho.mo.'ko.bi	homókobi	hómokobi	homokóbi	homkói	Homóe-t; humbóe-t	
anteater	t̂so.'naw	netsónti; tsoni	Tsó-ni:	tsón	sonú	Mesabéhen; t̂joél	Other types: no.'naw (from the forest), 'to.p ^h e (from the savanna).
spotted cavy	o.'p ^h e.bw	oφébi	oφáebi	oφáebi	opép	?αφia	
cayman	ma.xw.'ne.he	maxinehe	maxinehe	maxine	makné; maknéh		
iguana	ma.'ti.wi	matíwi	matíwi	matsíwi	matí	matíw	
tortoise	ha.'ja.ka	hajáka	hajáka; í:kuli	hájaka	haják	hát̂jk	
river turtle	'ha.da	hará	há:ra	hára; tsapéindu	har	ha?	Other types: a.tsa.'pa.ni 'turtle', ki.'da.ju 'galápaga'
collared peccary	t̂sa.t̂so.do	t̂jamúri	tsamúli	tsamúri	tsamúl	t̂jáma	

white-lipped peccary	me.'na.ni; 'hab.ʔsa		ha:bi:tsa	hábtsa	aʔip	ʔatí-t	
agouti	ʔsa.'mu.di	ʔjamúri	tsamúli	tsamúri	tsamúl	ʔjáma	
rat	'jo.di.wa	olító warabéni	í:ri	híri; jóri	olít		
cat	'mi.si	misimísi	mí:tsi	misimísi	míʔfik	míʔfik	
mouse	'i.di	Orító-jo	í:ri; óli-to	panito	ir	Tadí-t	
tail	pe.bo.'so.ta	Pe-bosó-to	Pe-bosó:-to	Pe-bosó-to	Pe-psót	peh toʔtí-t	
snake	'ho.mo	homó	hómo	hómo	hom	hom	
anaconda, water boa	ho.mo.'wa.bi; ka.sa.'du.du	homowábi	homowá:bi	homowábi	homoéj	hombói	Respectively: aquatic, terrestrial
rattle snake	ja.ʔsi.ta	ja-ʔjí-to	ja:sí:-to	jasíto	jaʔfít	casadora negra	
coral snake	wa.da.wa.'ho.mo	jámaxi homó	akáwai		tikrít	Biaʔasríama	
toad	'bu.su	busú	Busú-to	búsu	bus	bus	
bird	bo.da.ʔsi.ta	boro-ʔjí-to	Bara-tsuí-to	Pe-ja-pupúnae-in	uʔúto	Mia-n	
hummingbird	si.si.'baw.ta	ʃi-ʃi-bári-to	Si-si-bári-to; sí:pi	Sisibái-to	ʔfítʃibir	Sisíʔw-it; sasíʔw-it	

macaw	'ma.ha	máha	má:ha	máha	máha	máha	
toucan	tu.kue.'kue; ti.'o.do	sioen	tikuéku; tikuékue	tukuékue	tukúeko; tiaj	tʃahia	
parrot	'pʰu.da	xúra	xú:ra; óno	óna	ón	xuʔ; ʔól	
parakeet	t̃se.de.ta	t̃feré-to	Tsére-to	tsére	kikír	Sé-ʔ; liklík	
buzzard	'ke.ke.de; 'wa.ju.di	kékere; kekeré	ké:kere; wá:juli	kékere; wajúri	kékar	tida	Slightly different species
curassow	'hi.ti	it̃ibiri	it̃hibiri; kawipi	it̃hibiri	pabo (SP)	Kuis-tiʔba; kuis	
owl	ta.ma.da.ku.'ku.ta; ho.do.'do.to	Tumúrukukú-to	hororó:-to	sukuém; párato	hórto	t̃jahoʔo-wat	Slightly different species
guan	wa.t̃sa.'da.ka	pavo (SP)	márai; kújuwi	kujúwi	malir	maráew; kótʃo	
hen	wa.ka.'da	wakará	wakára:	wákara	takrá	kawáema	
fish	'bo.pi	bopí	dúhuai	duwéi; báxu	bópi	baxí	
piranha	'wa.ka.di	Wákar-to	Kowára-bo	kówarabo	kuwár	leʔ	
bee	ba.'na.ta	Bana-mi-to	Bana-mani-to	Ban-to-mán-to	toniát	Hia-t; ban-t	
fly	'dai.na.ta	Dáina-to	Dáina-to	Déina-to	rin	dáetʃn-it	
flea	'ta.du; 'tad.ta	-	Mánepa-to	petári	maník	Taʔíʔ-t	
louse	'ta.du; 'tad.ta	Tari-to	Tari-to	tári	taarát	Tiaʔ-an	
mosquito	'we.sa	Wése-to	Wáeso-to; wáese-to	wáeso; oróso	wésap	waes	

termite	o.'pho.ta	Οφό-to	Οφό-to; etc.	Όρφο-to	opát	ʔόφ-t	
ant	'neb.ta	Nebi-to; jarihí-to	Amái-to; pibi-to	piwi; nebi; jáiwato	ihnít	φαόε-t	
spider	ho.'mop.ta	Homób-to	Hómo-bi-to	Hamóu-to	habút	ʔamia	
jigger flea	tʰw.'tʰw.bi	nígua (SP)	Amuá-to; tsuhui-to	tʰuthúbi; áraká-to	níwat (SP)	tʃoʔhóen-t	
bush, jungle	'u.nu	unú	únu	únu	ún	ʔul	
open grassl and	'wai.pho	wajaφó	wajáφo	wékʰua	ponáp	jo	
hill	'dai.ma.xu	ira jáika	Ibo-tsú:-to	Pe-tsú-to	tserít	miax	
tree	'ne	né; né-hewa	-nae; náe-jhawa	náe; náewa	nehá	nae; ne	
leaf	pe.'ko.na	Pe-báxi-to	Pe-báxu-to	Noxú-to; pe-toáxu	nópat	Niaφi-t	
tree leaf	'ne.ko.na	Né-kuana: pe-kúana	Náe-baxu-to	Noxú-to	Nópat-ne	Né-φit	
flower	pe.mo.'ton.ta	Pe-mátonó-to	Pe-matóno-to	Pe-ntón-to	Pe-mátan	patál; ne-tál	
fruit	pe.'kuai	Ne-kúibi	Pe-kuái-to	Pe-tʰéi-to; pe-kuéi-to	Pe-bi; pe-pútan	Nae-báetʃ	
sao	pe.'na.ni	Pe-náni-to; pe-nán-to	Pe-náni	Pe-nain; náe náin		Pa-nél; ne-nél	

root	pe.tab.ba.'ka	Pe-tábu-kobén-to	Pe-tábu-topa:	Pe-tab-opí-na	Pe-takomét	Tatín-t; ne-tatín-t	
seed	pe.'xu.ta	Pe-xú-to	Pe-xú:-to	Pe-xú-to	puwenáp	-tit; hes-φú-t	Other types: pe.mad.'kai; ba.wa.'si.ta
stick	ne.'he.wa; 'nebo	Né-hewa	Náe-hawa; náe-bo	Náe-to	nehá	ne; nae	Respectively: large, short
grass	pa.na.'ha.wa	Poná-wa	pó:na:	Naepanáe-wa	ponáp	polá	
corn, maize	'he.ṭsa	hétsa	hétsa	hétsa	hetsá	hes	
manioc	'ba.wa	Nebihi xáika	bá:wa; newáhi	báwa; newi	báuha; nehaha	baw; halwiah	
manioc four	ma.ṭsu.ka	Newixi-bená	matsú:ka	matsúkua	petmetá	báenal	
tobacco	ta.'ba.ko; ṭse.ma	Tabáko-baxú-to (SP)	tsé:ma	tséma	kohá	xo	Respectively: usual term; old term
cotton	pe.'pu.ta	Pe-púto-to	Papai-nae	Papóu-to; papúnae	Mol-putát	papúd; papúd-ne	
gourd	ṭso.do.'pa	ṭjoró-bi	Dére-bi:	Dére-bi; tsóropa	rerbi	Ha?-t	
yam	'no	Nó-bi	no:; nó:-bi:	no; nó-bi	nohá	na; na-t	
sweet potato	daw.thw	Dáiti-bi nawíta	dáithi	dithi	rita	diad	

achiote	'ho.tsi	hotʃi-wa	hótsi	hótsi; kajári	hotʃiha	Hoes-t	
chili pepper	no.'no.hi	Pe-atʰiʰi-bi	nonohí:-to	nónei	nohníha	Nol-t	
coca	-	-	-	-	kókat (SP)	-	
hallucino genic vine	'xui.pa	xuípa; tawanapíwa	xuípa	xuípa	tuípa	tuip	
plantain	ka.'tʃa.wa.du	Balatúna-kúito (SP)	balá:tuna (SP)	baratsúna (SP)	mantsana (SP)	parátna (SP)	
chonta palm	'pʰe.bo.ko.bo.ta; ma.na.'kai.bo.ta	-	Mísi-boto	Miji-bó-to	Kuér-bot	Wibúx-tot	Respectively: 'araco'; 'maporilla'.
cane	'hu.o.ta; di.wa.'waw	Musulí-bo-to	mú:sulí-boto	Musoi-bó-to	-	Makleh-ád-t	Respectively: domestic; wild
salt	sa.'da.be.na	Salé-wa (SP)	já:ho	sáre (SP)	joha	dom	
chicha	ja.'da.ki	kutí	jaláki	amenetsáxa	mawán	sáxa	
one	ke-; 'ke.xe.wa; umpan	Ompá-wa	káe-; káe-hawa	káe; káe-wa	keni	káe-; káe-jax	Respectively: determiner; pronoun; human pronoun.
two	a.na.hua.'be.he	Nahúa-wa-behe	aniha-	Ainjá-wa-be	penakuétʃabe	Koʔlé-n-he	

three	pe.na.jo.'no.tsi.ha.w a	penajánat̃jĩ-wa	akúejabi	akóibi	hóbehe	Pamópa-x-he	
four	a.'ja.ha.wa	Náhua-mátaxijó-b ehe	penajánatsi	Nakuéta-be	ánabe	Nat̃jála-x-he	
five	'ke.ka.be	Pihinía-wa	Káe-kobe:		Itsa-hokéha	Kae-keʔé	
ten	a.na.ha.wa.ka.be.'b e.he	Díe-behe (SP)	Aniha-kobé:-beh e	-	atbó	-	
first	ko.'pie.tha	Kopí-ta	Kopía-ja; kopía-ta	xuá kopíja	namát kahnít	matxóel pát-on	
last	ka.ta.'ke.wa; ka.ta.'keu.ja	Káta-ké-wa	Koto-káe-wi	xuá tabi-dúkua	tap kahnít	wat̃jálak pát-on	
rattle snake	t̃si.'t̃si.ta	t̃jĩ-t̃jĩ-to	t̃si:-t̃si:-to	Tsít̃si-bi; tsít̃jibi	t̃jít̃jít	hawét̃j	
drum	-	pe-kóto-kuant̃jĩ-wa	-	-	-	-	
cushma	pe.hu.ma.'na.wa	-	ná:wa	Doróu-to	-	ʔiaoφ	
ear ornam ent	pe.na.mu.xie.da.'pa t̃si.ha.wa	Pe-múxu-hiné-wa; pe-muxu-joro-t o-ta; pe-rut̃jĩ-wa	penamuxutat̃si hawa	Pe-na-múxu-wara wa-tsí-wa	-	net̃jóʔ hahóe	Lit: thing to put on your ear
mask	pe.nai.ta.'ba.da.'ka.t̃ si.ha.wa	-	-	-	-	-	Lit: thing to put on your face

healer, shaman	xui.pa.'xen	Pe-wéjetʃi-ni	Pe-hórobi-ni:	Xuipa-xáe-in	-	Pinhóʔ-in	
chief	pe.ma.ta.ka.pan.pa. 'nen	Pe-bári-pon-paná e-ni; pe-jawara-xain ái-ni	Pe-na-mata-ka-it órobi-ni	Pe-nta-ká-ponae-i n	-	Pakló-n	
I, me, my	'xan	xáni	xáni	xan	kan	xan	
you singular	'xam	xami	xami	xam	kam	xam	
he	ba.'ha.pan	Báhara-pó-ni	póni:	Ba-pó-n	punú	Ha-pón; -pon	
she	ba.ha.pa.'wa	Báhara-po-wá	Pó-wa:	Pó-wa; ba-pó-wa	punú	Ha-pów; -pow	
it		xua	xua	Bá-ra-xua; bá-xua	-	Ha-póx	
we	wa.'xan; pa.'xan	Waxán-móne	wa:xái-tsi	Wa-xáin-tʃi; wa-xán	kemikát	-s; xatís	Respectively: inclusive; exclusive
you plural	pa.'xam	Pa-xami	Pa-xámi	Pa-xám	páin ?	xámal	
they	ba.ha.pa.'mo.ne	Bahará-po-móne	Po-mó:nae	Ba-ra-po-mónae	isni	Ha-pí	
my hand	ta.'ka.be	táhakobé	Ta-kóbe:	tákobe	Ta-kó	tah keʔé	
your (sg.) hand	nie.'ka.be	Nea-kobé	Ne-kóbe:	né:kobe; hínja kóbe	Ne-kó	neh keʔé	

his hand	pie.'ka.be	φία-kobe	Pe-kóbe:	Pé-kobe	Pe-kó	peh keʔé	
our hands	wa.'ka.be; pa.ta.'ka.be	Waha-kobé-ni	waha-kóbe:	Wa-kobe; páta-kóbe	kemikát ta-kbé-han	wah keʔé-tʃan	Respectively: inclusive; exclusive
your (pl.) hands	pa.nie.'ka.be	Pa-nia-kobé-ni	Pa-ne-kóbe:	Páinja kobe	Pa-kám ne-kó-be	néh keʔé-tʃan	
their hands	pie.'ka.be	φία-kobé-ni	Pe-kóbe:	Pé-kobe-in	isni pe-kó-be	péh keʔé-tʃan	
my bow	ta.ha.bi.'tʃa.bi	Tahá-bitsábi	Tahá-bisábi	Tá-náe	Ta-pitsáne	táh φadói-t	
your bow	nie.ha.bi.'tʃa.bi	xami nía-bitsábi	Niha-bitʃábi	hínja náe	Ne-pitsáne	neh φadói-t	
his bow	pie.ha.bi.'tʃa.bi	φία-bitsábi	Piha-bitsábi	pía náe	pe-pitsáne	peh φadói-t	
our bow	wa.ha.bi.'tʃa.bi; pa.ta.ha.bi.'tʃa.bi	Wáx-nai wáha-bitʃábi	Waha-bitsábi	Wá-náe; páta náe	Kemikát ta-pitsáne	wah φadói	Respectively: inclusive; exclusive
your (plur.) bow	pa.nie.ha.bi.'tʃa.bi	Pa-nía-bitʃábi	Pa-niha-bitsábi	hínja náe	Pa-táhan pitsáne	neh φadói	
their bow	pie.ha.bi.'tʃa.bi	φία-bitʃábi	piha-bitʃábi	pía náe	Pe-pitsáne isni	peh φadói	
big	'wa.da.be.ha.wa; pi.'ni.ha.wa	Warabé-wa	Ajái-hawa	Pín-jo; pín-wa	pekná	Pinhix-ja	For different types of qualification
small, little	'kuin.xua.ja	Pihitá-wa-jo	Tsikíri-jo	Tsikí-jo; tsiwí-jo	Chír-to-jo	tʃaʔél-ax	

cold	a.'ke	Pé-aké-wa	A-ké:	Á-ke	Pi-akáinehe	bokóela	
hot	a.'to.hu	A-táhu	A-táhu	Á-tsa; á-tou	atú	Tiah-nik	
good	xa.'ne.pa.na	wahiné	xánepana	winae; xáne-pana	wine	Pa-tjém	
bad	a.'be.he	A-béhe	A-béhe	Á-be	abé	Pa-béh	
white	pe.'ma.ɲa.ha.wa; ma.'nie.pa.na; pe.'nie.hi.ha.wa	Pe-manía-wa	niozona	Ínja-pana	Pe-pobíha	Pa-póe-jax	Respectively: for animals for clothes; for food
black	pe.tse.'bia.ha.wa	Pe-tsebía-wa	Tsáe-bia	tsáebia	tsebí	Pa-pφói	
go!	'pa.na.de	Poná-re; nawí-ré	Póna-re; nawíá-re	Pón-de; nawía-re	nawíár	tjhiá-m-de	
come!	'bed.na.mu.de	Poná-rí-m-na	naxáentsia	Déna-nde	awéman	xabiat	
eat!	'xe.ma	xámi xé-ma	Xáe-ma	Xáe-ma	kém	Xáe-m	
drink!	a.pe.'he.ma	Apé-ma	Apáe-ma	Ápa-re	apár	Min-φé-m	
sleep!	ma.'hi.tad.kua.de	Mihita-rukú-re	Mahí-re	Mait-éka-re	mítrikar	Móih-de	
crown of head	pe.ma.ta.to.'pi.ta	Pe-máta-topíwárik a	Pe-mata-tsére-p a:	Pe-nta-tútu	-	matlúa?	
front teeth, incisor s	pe.ma.ta.'pi.hi.ha.w a	Pe-wána-ipi-wa	Pe-wóno-kopia	Pe-wáno-ópi-n	Pe-wán	peh bia?	

tongue tip	pe.'eb.ta.'u.pi	Pe-é-bor-to-ipí-wa	Pe-e:-bári-to-kopi a	Pe-éba-to-ópi	P-ébrat opit	peh katʃ-ʔie-ʔiaφ	
long hair	ma.ta.na.a.'pia	Pe-matá-na a-piá	A-mata-ná:-pia	Á-nta-na-pía	Mat-ná apiá	peh la kás-nik	
the neck region	pe.wi.'si.ta; pe.kai.ba.ma.'ta. ka	Pe-wi-tʃi-to	Pe-wi:-sí:-to	Pe-usí-to	Pe-wú-tʃit	peh katʃa-ríama	Respectively: neck and throat
Adam's apple	pe.kai.ba.ma.ta.ke.' da.ta	φía-kibotó-to	Pe-kuai-bo-kará-t o	Pe-kóibo-norokó-t o	Kiblo-kitohonáni	peh katʃa-ríamati -t	
upper back	pe.'hu.ma	Pe-húm	Pi-húma: pe-húma	Pé-ima	-	peh matwiah-t	
forearm	pe.ma.xu.'thauk.ta	Pe-máxi	Pe-maxi-kopia	Me-maxi-sipa	-	peh miax	
wrist	pe.ka.me.'ta.mu	Pe-kobé-támi	Pe-kobe-ja-wére- to	Pé-kobe-jaxíri-to	Pe-kó-matker	peh miax-wasí-t	
lower leg	pe.'si.ta	Pe-tʃi-to	Pe-sí:-to	Pe-sí-to	ta-tʃípa	peh ʔoφnáeja	
body hair	pe.'na	Itsá-ni máxi-mina-ná-t o	Pe-ná:-to	Pé-na	Pe-nát	peh la	
stomach	pe.ko.'tso.do	Pe-kótsoro	pekotsóroto	Pe-kotsóro	Pe-kuéter	peh weh-t	
intestines	pe.'u.nw	Pe-ini	P-i:ni	P-ini	Pe-kuíti	peh ʔil	

old woman	pe.a.ti.'din; pe.du.'a.ja	Perúhu-jo	Perúhu-wa:	Peru-wá-jo	warapéni pertíni	Patí-ʔow	Respectively: formal; informal
clouds at rest	pei.ta.'po.hu.bo	Pahubó-wa bája dúka	Ita-riri-bo	Tsakinaebó-wa	mitě	ʔitlóhen	
storm clouds	pei.ta.'po.hu.bo	Ita-pábi tǰébia	Ita-riri-bo; páhu-bo	ítabóko tsáebia	mitě tsebí	ʔitlóhen paφói	
cultivated clearing	he.ʔsa.'pa.bi	Hétsa-pábi	Hetsa-baká:-bo	hétsa baká-bo	pábi hetsá	Hes-lúl; hes-baká	
stream	pe.na.'ha.ta	Pe-náha-to	Pe-náha-to	Pe-náti-jo; pe-náto	pemnát	min lah-t	
pebbles	i.bo.mi.'hi.ta	P-ita-ibó-wa-jo nawíta	Ibó-to-xi	Ibó-ti-xi	tǰír-to-jo ibót	ʔiaʔ-x	
huge rocks	i.bo.mi.'hi.ta	Pe-mata-rahíhiké- wa warabé-wa; ware-ibóto nawíta	Pinihi-íbo	Ibó-wa-n	ibót pekná	ʔiaʔ	
path, trail	'nam.ta	námto	námuto	námto; náunto	namút	Niam-t	
shelter	'bo	Bób-to pe-mihita-ruké- wa	bo:-biri-to	Bóu-to	-	Biaʔa-t	
this	'xua.he	Pohó-wa	ma:-xúa-he; xúa	Mé-he; xuá-he	hóhe	ʔam-póx	

that	'ba.xua	Báhara-pohó-wa	Bahará-xua	Bá-ra-xua; dá-xua	hóhe	Ha-póx	
who	ṭsa.'pan	dahatṭ-in	hipatsá: ipatsá:	híntam	nekéni: ba-nekéni	ʔatṭá-n	
what	ṭsa.'xua	Dáxatsá-wa	dé:tša: xúa	É-ta xúa; xúa; é-xua	háí	ʔatṭá-x	
not	'ba.ha.da	bahára	ápo-; hú:me:	bára, húme	ahí; jahí	dóʔdoʔ	
all	da.'xi.ta	umóta	daxíta	daxíta	ánibe	púexa	
many	a.'ja.ha.wa	nawíta	Ajáí-hawa	Ainjá-wa; nawíta	atbó	maenk; piníet	
long hair	pia.'pia.ha.wa	tsokónio apía	A-pía	A-píja; apía	apiá	paṭṭjó-wax	
bark	pe.bo.'ko.ta	Pe-bóko-to	Pe-boko-to	Pe-tse-bóko-to	bokát	Pa-bók-t; ne-bók-t	
flesh	pe.'wi; pe.'wi.ta	Pe-wí-to	Pe-wí:-to	Pe-wí-to	Pe-wít	Pa-wí-t	
grease, animal fat	pe.'na.si	Baká-nasísi-to	Pe-nasí:tsi-to	Pe-nasí-wa	penítsa	pasí	
egg	pe.'ta.bu	Pe-táb-to	Pe-tobi:-to	Pe-tóu-to	Pe-bit	peh tabi-t	
horn	pe.'pi.hi.bo	Pe-mátʔ-té-to ?	Pe-mata-é:-to	Pe-nt-ét-o	Mat-íet	peh maté-t	
feather	pe.'ba.xu	Pe-báxu-to	Pe-kóro-ṭe-to	Pe-axú-to	Pe-korṭṭíta	Pa-lá-t	
claw, nail	pe.ko.pi.'bo.ko	Pe-kópi-bokó-to	Pe-kopía-boko-to	Pe-kotsí-to	Pe-kuíbat	peh ki-bok-t	

belly	pe.ko.'tso.do	Pe-kótsoro	Pe-kóto-to	Pe-kotéri	Pe-kuéter	peh wéh-t	
liver	pe.'ha.pa.ta	Pi-hápa-to	Pi-hápa-to	Pe-hápa-to	Pí-ápat	Pa-háp-t; peh hap-t	
drink	a.'pa.ne	apáne	ápa	ápa	áp	ʔáφ	
eat	'xa.ne	xáne	xáne	xáne	ken	xael	
bite	'si.ni	síni	sí:ne	síne	nikát	líkal	
see	wun.'ko.tan; 'ta.ne	táne	táne	táne; nekóta	ten	tén	Respectively: 'to see'; 'to look'
hear	hu.me.'ta.ne	Hume-táne	Húme-tane	Hume-táne	nakuét	Hum-tén; naewét	
know	ja.pu.'ta.ne	Japi-táne	Japi:-táne	Ja-pu-táne	kópkuaj; kópkuatʃ	matabíht	
sleep	ma.'hi.'tad.kua	Mihíta-rukú	mahíta	Mait-éca	mítrik	moiht	
die	'tuw.pa	tipa	tí:pa	tipa	tip	tip	
kill	'be.ho.ba	Beja-xúina	be:ja-xúaba	bexúba	upíá	pa	
swim (not bathe)	xue.jo.'ho.pa	Na-ko-weta	húa	xuéiba; xuá	Niát ?	how	
fly	na.pʰa.'ta.ba	naφátaba	pú:na	pupúna	japúnra	Pa-pún	
walk	ne.'he.tad.kua; 'pa.na	Pe-táxu-te ékuana	Póna-pona	póna	Nir ?	léha	Respectively: 'to walk'; 'to go'

come!	ba.ha.'wed.na; po.to.'ho.pa	táhi we-poná-rina	páta; pata-hó:pa	páta; wé-rena	nít	φaláen	Respectively: 'to come'; 'to arrive'
lie down	'du.ka; 'bo.ka	bóbena; boka	bó:bena; bóka:	bobéna; bóka	bók	ʔóel; ʔok	Respectively: in the hammock; on the ground
sit down	'e.ka	éka	é:ka	éka	ék	ʔék	
stand	'nauk.ta.pu.na	Ati-bijo únka	nú:ka	únkua	nuk	nuk	
give	'ka.ta	káta	ráhuta	dóuta; káta; hehépa	Rút-i	tʃaxdút	
say	t̃si.'pe.ba	na-t̃ji-péba	humáitsi	humít̃ji; páeba	t̃jipép	Hum-ʔáet̃j̃	
burn	'to.hw.ta	Sá-wa; tahúita	sá:hawa; tahúa	táuta; táxua	títpa	wiaht; fórhaw; taet	
mountain	'u.nu	-	lbo-tsú:-to	demaxúwa	tserít	ʔiabót	
red	pe.'tso.'bie.ha.wa	pe.tsobía-wa	tsó:bia	tsóbia	tsóbí	Pa-sói-jax	
green	pe.daw.'ne.he.wa	ráiina; perainé-wa	ráiina	sihei	Pe-jajuéne	Pa-tói-jax	
yellow	pe.we.ja.'ne.he.wa	Pe-wat ^h -obí-wa-t̃ji	wajána	dáena	tsitsiká	Pa-wáerla-x	
full	'un.ka	U-núka	wi:-ni:ka	winka	winúk	wilik	
new	pe.'he.na.ha.wa	Pehená-wa	pe:hana-	Pe-ná-wa	pehená	Pa-hél-ax	

round	pe.to.jo.do.'do.ke.h e.wa	Pe-máta-rahíhiké- wa	Pe-matá-tojororo :káe-hawa	Dedé-reka	katutúhe	Hahéra-x	
dry	t̃se.wa	Pe-síané-wa	tsé:wa	tséwa	pirre	siow	
name	pe.'un	φia-wini	Pe-wini	Pé-win	win	peh wil	
how	t̃sa.xua	dahaŋiwa	Pa-kuénia	éta bíŋi	banekía	ma-; maát̃	
when	t̃sa.po.ko.'ne.he	ínŋja honéta	Pa-kúhinae	É-ta poxónae	ipokén	Mas-wit	
where	t̃sa.'ha.ta	ínŋja-hóta dojá	Itsa-hóta	É-ta xóta; e-xóta	ipohát	Am-xót	
here	'xoi.ta	hóta	ma:-hó:ta-he	xóte; xóta	hót	Am-xót	
there	'ha.ta.t̃sa	Hóta-reka	Bahara-hó:ta	Xotí-je; xotí-ja	horréhe	Ha-xót-de	
other	i.t̃sa.ha.wa	Itsá-ni	Ítsa-hawa	ít̃já-wa	isá; is- itsá	Ása-x	
few	'kuin.xua.ja	biáxaja	Tsikiri-háwa-jo:	Tsiwí-jo; pe-jawí-jo	t̃fir-ha-jo	káeja-xat̃	
fog	no.'ho.bo	Nohó-bo	Nohó-bo	nóbo	nóp ?	nasixan	
flower	na.'wo.ta	Nawóta-rúka	nawó:ta	méne píŋipa	-	min φol	
sea	'mi.ni	Waré-mini-boxó-b o	Manúa-mene	piméne	-	-	
wet	a.t̃sa.t̃sai.ka	at̃ŋiŋika	Sukué-na; tsúnuna	A-tatsíka; tsutsúna	at̃ŋik	páet̃ŋ- nik	
wash	'kie.ta	Ita-φarába	kiáta	kíeta; kíata	t̃fikáp	kíet	

worm	to.'pʰi.na.ta	Towína-bo-to	Towína-bo	Tóina-bo; óro	topín	téwin	
wing	pe.'ko.pʰe	Pe-kóro-φé-to	Pe-kóro-φe-to	pekuáraφe	Pe-korŋʃit	Pa-ba; peh baʔ	
fur	pe.mie.na.'na	táina húwa	Pe-ná:	anáko; pe-ná	Peri-nat atbó	biʔ la dáʔ-nik	
navel	pe.ta.mu.ko.'tso.'ts o.di	Pe-kotsóro-búmbo	Pe-kótsotsó:li-to	Pe-tompakué-to	Pe-komir	peh watáe-t	
saliva	pe.'o.ni	Pe-óne	P-ióne; pe-ióne	Pe-óne	-	peh ʔalmín ?	
milk	pe.'mi	Pe-mí-pu	Pe-mi:-bari-mene	Pe-mí-pi	mit	peh mitʔúφ	
with	-tʰa; -tʰa	-ta	-ta; ja:-hawa; bari	-tʰá; bári; jáwa	-	-sapátʃ; bi-	Respectively: instrumental; comitative
in	-tʰa	-ta	-ta; tua-túahi-ta	-tʰá	-at; -t	-tat; tutat	
at	-tʰa	-ta	-ta	-tʰá	hót	-tat; xot	
if	'i.tsa	íntʃa	ítsa	ítʃa	bára	wit	
ice	-	-	-	Á-ke pépa-to	-	-	
snow	-	-	-	-	-	-	
freeze	-	-	-	-	-	-	
child	'xuín.ja	Pihítán-jo	Tsikiri-híwi-jo:	Pe-xúj-o	sútio	jimxi-tʃ	
dark	hi.ta.'ki.di	marábo; kirí-hai	Á-ita-kiri; á-ita-katu	kiréi	manán	ltkát-nik	

cut	u.ku.'bie.xo.ba	ukubabáne	ukúta; nikáta	t'hába	ukápet	tasíapa	
wide	pe.de.'de.ka	Waretu-tú	Ajái-itabara	A-pipíja; peréka	Pekná-in	Pinja-tú	
narrow	a.'mi.mi	amimi	Tsikiri-háwa-jo:	Tsiwí-jo íja	t̃ji-rin-hajo	mamót̃j-ax	
far	'ta.hu	táhi	tá:hi	táhi	t̃inakua	?atiah	
near	i.mo.'xo.ja	Ké-hewa	imoxó:-jo:	imoxójo	kéwa	mox	
thick	i.ta.'jaw	Ita-hi	Á-ita-jai	Pín-wa; á-itij̃i	íti	Dá?-nik	
thin	i.ta.'p̃ha.p̃ha.na	Ita-φáφana	Ita-φá:-ka	hiopéka; natséna	totobá	híap	
short	dou.'dou.na	marerékike	Tojáe-ka	imoxoi-t̃jéka	totséko	Miramáta-x	
heavy	a.'p̃ha.hi; a.'de.we	A-rég-we	A-réwe	A-réwe	arré	Dém-nik	Synonyms, but ap̃hahi is the most used term.
dull	a.'wa.na.bi	A-wána-bi	A-wóno-bi	A-wanó-bi	Bir-ahí	bóel; bó?el	
sharp	'xie.hi	Híe-hai	Xíu-hai; tséke-hai	xíjoi; xuíjoi	Bir-óbini	pabia?	
dirty	a.'xui.da	A-xuíra	A-xuíra	tsórei; axuíra	t̃jibí	as dá?-nik	
rotten	t̃sa.'ba.na	tsabána	tsabána	tsábana	tutséop	xoep	
smooth	a.'hue	Biné-hai; a-húe	A-hué	Á-xue; dámei	huehuék	hahóek	
straight	pe.bo.'pie.ha.wa	Pe-bopíhi-wa	rówia	bopíja	bokíke	matnót̃j	

correct	xa.'ne.pa.na	-	Xanía-hai	béta; xáinjei	wine	dietʃpá?	
left	t̃sa.we.'na.di; ka.t̃sa.we.'na.ha. wa	tsawanáwa	Pe-tsawéno-	Pe-tsokóna	tsén	Soena-lél	
right	ma.ta.'pi.ha.wa	Pe-kohowá-wa	Pe-kúha-	Pe-kóxa	apiát	Pokla-lél	
old	pe.'du.ha.wa	Penakotin-i	Perúhu-hawa	Perú-wa	perríha	Patí-ʔin	
rub	ka.di.'di.ba	Na-máxi-dirita	lirába; ka-líraba	kariríba; ikíka	papát	hoen; hóela	
pull	do.'bo.ta	dobóta	robóta; robobóka	Dobo-réna	bropáp	dóʔa	
push	to.'do.ta	tortráha	toróta; toró:ba	totábija	tokétarap; tokétrap	tíkla	
throw	xu.'o.dia	Na-maxi-xua; xúa-lia	bixána	xúba; bébai	oták	foʔa; pelt	
hit	ku.'a.na	Néhewa-ta kúneta	bia; kónita	ba; matabóba	unkuír	ba	
split	ti.'ti.ka	titíka	wokóta	ukubóba	-	tíʔa	
pierce	ha.ta.'bo.xa.ta	hatabakúta	Ka-ixina	hórana; xixina	isnúpet	xiala	
dig	mw.tʰw.'kua.ne; mw.tʰw.'kue.ta	átʃa ka-húka	kua	kuá	ukuá	kow	Respectively: with an object; with your hands.
tie	'ku.ba	kiba	ki:ta; ki:ba	kita; kiba	kip	ki	

sew	ho.'do.ka; ka.tse.'ne.ba	horóka	horóka	hóroka; xixika	Hork-i	atów	Respectively: hard things (chairs); soft things (clothes)
fall	'ho.pa; 'ho.pan.ka	Ita-hópa	hó:pa; othópa	hópa; óthopa	bókuna	hop	Respectively: objects; people
swell	pu.'tu.na	putúna	jahína; putúna	putsúna; (putúna)	tsán	pidal	
think	na.ma.ta.buw.'xai.na	Na-matábi-xáina	Na-humatabi-xáina	nántana xeína	-	nehtʃahóel	
sing	na.'xu.a.na	Na-xiana	Na-xiana	naxína; nawéba	nahuép	hahúw	
smell	tu.'xu.ba	tuxúba; tuxéne	tuxúne; tuxúba (pl)	tuxúba	tuk	xatúxa	
vomit	ja.'ka.ba	nakába	ja:ká:ba	nakába	nakáp	tʃaká	
suck	tsu.'tsu.ba	Tsu-tsúba	Tsu-tsúne	tsutsúba	Pe-hobímpia	suw	
blow	u.'p ^h u.ba	uφude	uxúne; uxúba (pl)	op ^h úba	papápeha	φi; φil	
fear	hu.'na.wa; 'ku.hua.na.wa	hunáwa; ku-húnawa	Ku-húnawa	kunúa; hunúwa	huná	Peh-léw-la	
tighten, squeeze ze	ka.ta.'dud.to.xo.ba	φutsúka	Ka-taririta	júka	Pe-jútpiha	takikt; takika (pl)	
hold	de.'de.na	deréna	xáina	bóta; bábata	Pe-rrénhia	mamámta; haelt	

down	i.'da.bed.ka	Irá-bé-reka	Bé-reka	Bé-reka	berré; pentó berré	beʔk	
up	a.'tʰu.bia	Ati-be-tsa	Bé-tsia	A-síja; átʰa-be-íʃa	betʃí; betʃíhe	bésese	
ripe	pe.tso.bie.'ja.wa	Píhi-pe-kúí-to	tsó:bia	pípaē; tsóbia	Pe-ja-tsobí-ha	soi	
dust	a.ʃsa.'be.na	átsa tsiki-tsikin	Átsa-beno	íra múrei; átsa-béno	puwúmpeha	ʔas-bél-in	
alive	a.'saw	A-si	A-sai	á-si	A-tsi	Títial	
rope	pe.'maw.ta	pe-mú-to	Pe-máka; pe-mái-to	Bú-maka; pe-mi-to	tomit	Mia-t	
year	'wai	húameto pihinía-wa	wái	wéi	wí	waetʃ	