## Phonological evidence to treat the /ɯ/ and /u/ vowels as a natural class in Yamalero

The issue of whether the third high vowel (besides /i/ and /u/) in Guahiban languages should be described as /i/ or /u/, that is, central or back, has been a topic for discussion in the literature. The preferred characterization is probably /u/, found in Sikuani (Queixalós [1985], [forthcoming]), Wamone Cuiba (Kerr [1995]) and Hitnü (Lobo-Guerrero & Herrera [2000]), but, for Cuiba Maibén (Merchán [2000]), Capanaparo Cuiba (Machal [2000]) and Guayabero it has been described as /i/. In publications of wider scope, it is most often described as /i/ (Aikhenvald & Dixon [1999: 371], Storto and Demolin [2012: 335]).

In this presentation, I will address this issue with first-hand data from Yamalero, and I will provide phonological arguments in favor of considering the /u/ vowel a high back vowel, together with /u/. Yamalero is a Guahiban language spoken in the Colombian Eastern Plains by some 300 people, with high rates of intergenerational transmission. The data that I will present has been collected between 2022 and 2024, after seven months of ethnographic fieldwork in one of the three Yamalero-speaking communities.

I will begin by showing a chart from an acoustic analysis that plots Yamalero's vowels according to their F1 and F2 (/i, e, a, o, u, u/). In this chart we will see that /u/ can also be phonetically realized as [i], depending on the speaker and the vowel context. Spectrograms and audio files will also be used to show some illustrative cases.

I will continue by showing two phonological processes that treat the /u/ and /u/ vowels as a natural class. The first one is a velar secondary articulation that takes place after the /au/ and /au/ diphtongs, but not after /ai/. When these diphtongs are followed by an (aspirated) voiceless alveolar plosive (/t/ or /t<sup>h</sup>/), they are realized as /au<sup>x</sup>/ and /au<sup>x</sup>/ (1-2). In contrast, in the same context, /ai/ shows no velarization (3).

(1) /daɯtʰu/	[ˈdɤɯˠ.tʰu]	'sweet potato'
(2) /nautapuna/	['nou <sup>y</sup> .ta.pu.na]	'stand up'
(3) /haita/	['hei.ta]	'hunt'

The second one is a process of height assimilation triggered by high vowels that can already be observed in the previous examples. This process shows how the low vowel /a/ becomes a mid-closed vowel ([e], [o] or [ $\mathbf{r}$ ]) when it preceeds a high vowel (4-6). The fact that, before /ɯ/, /a/ becomes [ $\mathbf{r}$ ], and not [e], indicates that this assimilation must be triggered by a back vowel.

(4) /dainata/	['dei.na.ta]	ʻfly'
(5) /kaukude/	[kou.'ku.re]	'pour!'
(6) /t͡sonaɯ/	[t͡so.ˈnɤɯ]	'anteater'

Finally, from an areal perspective, I will show that, although the /i/ vowel is very common in Greater Amazonia (Aikhenvald 2012), there are at least 13 language families that have a /u/ vowel. Moreover, in a number of these languages the /i/ vowel has been reinterpreted as /u/ in recent analysis, while in others it is described as /u/, but still represented like /i/. Therefore, it is possible that the /u/ vowel described for Yamalero is found in more and more languages.

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