## Non-nasal Nasals: Cues to hidden nasalisation in Shiwiar

Shiwiar is a so far undocumented Jivaroan language spoken by around 1,000 people in Ecuadorean Amazon. Description and documentation of Shiwiar was begun by the author in 2011, and since then a corpus of almost 10 hours of spoken discourse has been collected. Shiwiar has 13 consonants in its phoneme inventory, as well as the 12 vowel phonemes shown in Table 1 below. There are four contrastive vowel qualities which each have three contrastive variants: voiced oral, voiced nasal, and voiceless.

	Front			Central			Back		
High	i	ĩ	į	i	ĩ	10	u	ũ	ų
Low				a	ã	ą			

Table 1	Shiwiar	Vowels
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In addition to being contrastive, nasalisation in Shiwiar carries a high functional load: certain grammatical operations are conveyed purely by nasalisation. As can be seen from examples (1) and (2), third person possession is expressed by a floating nasal morpheme.

(1) naw <del>í</del>	(2) nawź		
foot	foot.3sg.pos		
'foot'	'his foot'		

Suprisingly however, despite the high functional load of nasalisation, some speakers of Shiwiar do not nasalise vowels consistently in canonically nasal environments, and some do not nasalise vowels at all. Nevertheless, the fact that listeners have no trouble in understanding these speakers implies that phonetic nasalisation is not the only cue to phonemic nasalisation in Shiwiar vowels.

This talk will explore other phonetic cues, such as vowel length and vowel quality, which are being exploited by some Shiwiar speakers to convey vowel nasalisation.