

## Body-part Prefixes (and Noun Incorporation) in Panoan and Takanan

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### Verbatim excerpt from Loos 2005, pp. 43-44:

#### 5. PREFIJACIÓN QUE REPRESENTA UN CASO OBLICUO

La mayoría de las lenguas panos poseen un juego productivo de prefijos. Algunos idiomas, como el cashibo, han perdido el empleo de los prefijos de manera que solamente se encuentran vestigios de ellos. **El prefijo sirve para incorporar una forma abreviada de un sustantivo a un verbo** (11).

- (11) Capanahua  
[poríškikj] de *poyan-riški-kin* brazo-golpear-pres 'golpear a alguien *en el brazo*'

Puede añadirse un prefijo tanto a un verbo transitivo como intransitivo o a un adjetivo, y no cambia la transitividad. La prefijación produce formas largas que luego son acortadas por las reglas que reducen los sustantivos trisilábicos, que mencionamos en la sección anterior.

**En las lenguas de la familia tacana también se encuentran vestigios del mismo sistema de prefijación.** Por ejemplo, compárense los prefijos panos *bi-* 'cara' y *mi-* 'mano' en (12) (*bu-*), (13) (*me-*) y (14) (*bo-/ba-*).

- |   |   |          |                           |
|---|---|----------|---------------------------|
| (12) Tacana (de Ottaviano y Ottaviano 1989) | (13) Cavineña (de Camp y Liccardi 1989) |          |                           |
| bu-beta                                     | de dos caras                            | emetucu  | mano                      |
| bu-dhi                                      | besar en la cara                        | emeiyuca | dedo grande de la mano    |
| bu-dhi                                      | grano en la cara?                       | meduya   | meter la mano en un hueco |
| bupad'a                                     | golpear en la cara                      | mepeya   | recoger                   |
| bu-tse su                                   | al frente                               | metara   | anillo del dedo           |
| ebu   | cara                                    | emeshuru | cortarse las unas         |
| ja-bu-ba-ti                                 | mirarse la cara                         |          |                           |

- (14) Araona (de Pitman 1981)
- |                |   |
|----------------|---|
| e-bo           | cara  |
| bo-tsabi       | golpear en la cara                            |
| pa-ba-tatso-ti | refl-cara-golpear-refl 'golpearse en la cara' |

#### Notes:

- 1) According to Girard (1971:159) proto-Panoan *i* = proto-Takanan *e*. So *me-* is potentially proto-Pano-Takanan, but *bu-/bo-/ba-* would be borrowings if they are not mere coincidence.
- 2) *e-* is a segmentable morpheme, so *bu-/bo-* would not be a reduced form of a body-part noun.
- 3) Incorporation and compounding of body-part nouns (and few other nouns) are common in Takanan (see page 7) so the forms in (12) and (14) appears to simply be productive or lexicalized compounds or cases of nouns incorporation.
- 4) In Cavineña, *me-* 'hand' is the only form that has a corresponding poly-syllabic root, but *metuku* is not the proto-Takanan form, while in most if not all Takanan languages the noun for hand is *me* (see Girard 1971:101).
- 5) According to Guillaume (2004:143), the form *mētuku* instead of *me* can sometimes be incorporated before verbs.
- 6) **Conclusion: there is no productive or historical system of prefixation in Takanan languages.** Only *me* in Cavineña could possibly be called a vestigial prefix, but more likely, the complex roots containing *me* are old incorporated verbs or compounded nouns.
- 7) Relevance to the purported Panoan-Takanan relation: Panoan prefixation **may** have evolved from noun incorporation and compounding.

**Panoan languages do not have noun incorporation:**

**Table 1: Comparison of the prefixes (*h*)*an-* and *bë-* in 3 Panoan languages.**

**Table 1a:** Shipibo (data collected by me, often guided by consultation of published materials).

Prefix	Gloss of prefix	Corresponding root
<i>han-</i>	oral cavity, tongue	<i>hana</i>
<i>bë-</i>	face	<i>bëmanan</i>
	forehead	<i>bëtunku</i>
	eye	<i>bëru</i>
	eyebrow	<i>bëshni, bëru karani</i>
	tear	<i>bëun</i>
	surface	<i>bëbi</i>

**Table 1b:** Kashibo (data from Fleck and Zariquiey in press, mostly collected by R. Zariquiey)

Prefix	Gloss of prefix	Corresponding root
<i>an-</i>	oral cavity, tongue	<i>ana</i>
	palate	<i>manshanta</i>
	cavity, concave surface	<i>namë</i>
	elongated hole	<i>kini</i>
<i>bë-</i>	face, forehead, front	<i>bëmanan</i>
	eye	<i>bëru</i>
	eyebrow	<i>bëshku</i>
	tear	<i>bëun</i>
	rheum (sleep of eye)	<i>bësha</i>
	in front of	<i>bëbun</i> (postpositon)

**Table 1c:** Matses (data from Fleck 2006 or my database).

Prefix	Gloss of prefix	Corresponding root
<i>an-</i>	mouth, tongue, palm (of hand), sole (of foot), (arm)pit	<i>ana</i>
	gill slits (of fish)	<i>anmaësh</i>
	swampy depression in the ground	<i>anshantuk</i>
	cavity, concave surface, interior, underside	—
	center (of path or stream)	—
<i>bë-</i>	face, forehead	<i>bëtantete, bësbed</i>
	eye	<i>ëshë</i>
	eyebrow	<i>bëshni</i>
	tear	<i>bëun</i>
	rheum	<i>bëku</i>
	front, surface	—

Non-IPA symbols in my practical Panoan orthography: ë = i, sh = ʃ, sh = ʂ, ch = tʃ, çh = tʂ, y = j, f = b, β, or φ (depending on the language), ‘ = ʔ. Stress will be ignored here.

Marubo does not have noun incorporation or prefixation, but it has vestiges of prefixes (see Appendix B).

## Grammatical properties of prefixation

### Prefixation of nouns:

- (1) Shipibo:  
*ma-tunku*  
head-bump            ‘bump on the head’
- (2) Matses (example of productive prefixation)  
*[ʃhukkate pinchuk]*    **ʃha-ʃhubu-wa-aʃh**  
fan            palm.species    **crown-nest**-VERBALIZER:make-after:S/A>S(SAME SUBJECT)  
*[kapa piu]*    *uʃh-kid*  
squirrel red    sleep-HABITUAL  
‘After making a **nest in the crown** of a *ʃhukkate pinchuk* palm, the Amazon red squirrel sleeps.’ (lit. ‘After making a “crown-nest” in the *ʃhukkate pinchuk* palm...’)

### Prefixation of adjectives:

- (3) Kashibo:  
*bë-tunan uni*  
eye-black    man            ‘man with black eyes’/‘black-eyed man’
- (4) Matses:  
*tsisembo*  
*tsi-ise-mbo*  
butt-smooth-ABSOLUTE    ‘smooth-butted (could refer to gun stock or machete handle)’

### Prefixation of verbs:

- (5) Matses (example of lack of valence reduction)
- a. *debi-n*                            *daskute-Ø*                            *pan-e-k*  
Davy-ERGATIVE    clothing-ABSOLUTE    wash-NONPAST-INDICATIVE  
‘Davy is washing clothes.’
- b. *debi-n*                            *Ø*                            *më-pan-e-k*  
Davy-ERGATIVE    3ABSOLUTE    **hand**-wash-NONPAST-INDICATIVE  
‘Davy<sub>i</sub> is washing his<sub>j</sub> hands.’
- c. *debi-Ø*                            (*aton*            *mëdante*) *më-pan-ad-e-k*  
Davy-ABSOLUTE    (3GENITIVE    hand)    **hand**-wash-REFLEXIVE-NONPAST-INDICATIVE  
‘Davy<sub>i</sub> is washing his<sub>i</sub> hands.’
- (6) Kashibo (example of “extra participant”)
- David-tan*            *ka*                            *Dunú-Ø*                            *Roberto*    *të-tsoon-a-ʃh-a*  
David-ERGATIVE    INDICATIVE.3    Dunú-ABSOLUTE    Roberto    **neck**-seat-PAST-3-  
NONPROXIMATE  
‘David sat Dunu **on Roberto**’s **neck**’ (lit., ‘David neck-sat Dunu on Roberto.’)

Having shown that this is not noun incorporation, let us next consider the origin of Panoan prefixes.

**Table 2.** Inventory of Matses, Kashibo, and Shipibo Prefixes.

Matses	Kashibo	Shipibo	(Basic) Gloss <sup>a</sup>
<i>an-</i>	<i>an-</i> <i>ban-</i>	<i>han-</i>	mouth elbow
<i>bë-</i>	<i>bë-</i> <i>bu-</i>	<i>ba-</i> <i>bë-</i> <i>bu-</i>	armpit eye, face head
<i>da-</i> <i>dan-</i>	<i>ra-</i> <i>ran-</i>	<i>ra-</i> <i>ran-</i>	torso knee
<i>dë-</i> <i>ëk-</i> <i>in-</i>	<i>rë-</i> <i>kwë-</i> <i>in-</i>	<i>rë-</i> <i>kë-</i> <i>hin-</i> <i>in-</i>	nose lips, jaw (cf. Matses <i>kwi-</i> ) tail, penis temple (cf. Matses <i>pan-</i> )
<i>ka-</i> <i>kui-</i> <i>kuis-</i> <i>ma-</i> <i>më-</i>	<i>ka-</i>  <i>ki-</i> <i>ma-</i> <i>më-</i>	<i>ka-</i> <i>ku-</i> <i>ki-</i> <i>ma-</i> <i>më-</i> <i>mi-</i>	back jaw thigh (upper leg) head hand small ball
<i>nak-</i> <i>në-</i>	<i>na-</i> <i>në-</i> <i>nu-</i>	<i>na-</i> <i>në-</i> <i>nu-</i>	abdômen, center liquid belly, navel navel
<i>nik-</i> <i>pa-</i> <i>pan-</i>	<i>pa-</i>	<i>pa-</i>	ear temple
<i>pë-</i>	<i>pë-</i> <i>pën-</i> <i>pi-</i>	<i>pë-</i> <i>pun-</i> <i>pi-</i>	shoulder, wing arm, wing rib
<i>po-</i> <i>sha-</i>	<i>sha-</i> <i>shan-</i>	<i>shan-</i>	abdomen crotch, unopened frond unopened frond
<i>shëk-</i> <i>shik-</i>	<i>shë-</i> <i>shi-</i> <i>shu-</i>	<i>shë-</i>  <i>shu-</i>	tooth chest breast
<i>ta-</i> <i>tak-</i> <i>tan-</i>	<i>ta-</i>  <i>tan-</i>	<i>ta-</i>  <i>tan-</i>	foot underside cheek
<i>të-</i> <i>tsi-/chi-</i>	<i>të-</i> <i>tsi-/chi-</i> <i>u-</i>	<i>të-</i> <i>tsi-/chi-</i> <i>hun-</i>	neck butt testicle
<i>wi-</i>	<i>i-</i>	<i>wi-</i>	shank (lower leg)

<sup>a</sup> Note: the “Basic gloss” is not always completely accurate for all three languages, since the semantics of the prefixes sometimes varies among languages; the particularly problematic cases are the prefixes *kwë-*, *kui-*, *ku-*; *pë-*, *pën-*, *pun-*; and *sha-*, *shan-*.

**Table 3. Comparison of corresponding roots**

Table 3a. Ten (of about 28) Mayoruna body-part prefixes, including formally similar full nouns.

Prefix	Gloss of prefix	Full nouns <sup>a</sup>			
		Chankueshbo	Kulina	Matses	Matis
<i>an-</i>	mouth, inside, underside, concave surface	<i>ana</i>	<i>ana</i>	<i>ana</i>	<i>ana</i>
<i>dě-</i>	nose, front, tip, prow, beak, bill	<i>děshan</i>	<i>děshan</i>	<i>děbiate</i>	<i>děshan</i>
<i>ěk-</i>	lips, labia, edge of round thing or opening	<i>ěkbid</i>	<i>ěkshan</i>	<i>ěkbid</i>	<i>ěkshak</i>
<i>in-</i>	tail, penis	<i>inkuente</i>	<i>ina</i>	<i>inkuente</i>	<i>ina</i>
<i>ma-</i>	head, fruit, top, etc.	<i>maşho</i>	<i>maşho</i>	<i>mapi</i>	<i>maşho</i>
<i>mě-</i>	hand, forearm, branch	<i>mědante</i>	<i>měçhate</i>	<i>mědante</i>	<i>měkěn</i>
<i>pa-</i>	ear, antler, edge of swidden, pot handle	<i>paběshan</i>	<i>paběshan</i>	<i>pabiate</i>	<i>paběshan</i>
<i>şhě-</i>	tooth, arrowhead, crab pincer	<i>şhěta</i>	<i>şhěta</i>	<i>şhěta</i>	<i>şhěta</i>
<i>tě-</i>	neck, foreshaft, leaf sheath, peduncle	<i>těşho</i>	<i>tětun</i>	<i>těnidte</i>	<i>tětun</i>
<i>tsi-</i>	butt, arrow notch, end, stern, vulva	<i>tsiben</i>	<i>tsiben</i>	<i>tsitsu</i>	<i>tsitsu</i>

<sup>a</sup> Nouns correspond to the first word in the prefix definition and usually not to the rest. Chankueshbo and Kulina of the Curuçá River data were collected by the Fleck. Matis data were collected by Fleck with the help of R. Ferreira.

Table 3b. Ten Mainline body-part prefixes, including formally similar full nouns.

Prefix	Gloss	Full nouns <sup>a</sup>						
		Kashibo	Chakobo	Shipibo	Kapanawa	Kashinawa	Yaminawa	Amawaka
<i>(h)a(n)-</i> 'tongue'	mouth	<i>ana</i>	<i>hana</i>	<i>hana</i>	<i>hana</i>	<i>hana</i>	<i>aşhban</i>	<i>hana</i>
<i>rě-/dě-</i>	nose	<i>rěkin</i>	<i>rěkini</i>	<i>rěkin</i>	<i>rěkin</i>	<i>děkin</i>	<i>rěchuku</i>	<i>rěkin</i>
<i>k(w)ě-</i>	lips	<i>kwěbi</i>	<i>kěbichi</i>	<i>kěşha</i>	<i>kěşha</i>	<i>kěbichi</i>	<i>kěşhan</i>	<i>kěşhaa</i>
<i>(h)i(n)-</i>	tail	<i>ina</i>	<i>hina</i>	<i>hina</i>	<i>hina</i>	<i>(hina)</i>	<i>tsispa</i>	<i>(hina)</i>
<i>ma-</i>	head	<i>mapě</i>	<i>mapu</i>	<i>mapu</i>	<i>mapu</i>	<i>mapu</i>	<i>mapu</i>	<i>mapu</i>
<i>mě-</i>	hand	<i>měkěn</i>	<i>měkěně</i>	<i>měkěn</i>	<i>měkěn</i>	<i>měkěn</i>	<i>měkěn</i>	<i>měkěn</i>
<i>pa-</i>	ear	<i>pabi</i>	<i>pa'uki</i>	<i>pabiki</i>	<i>pabinki</i>	<i>pabinki</i>	<i>pachu</i>	<i>(pabinki)</i>
<i>şhě-</i>	tooth	<i>şhěta</i>	<i>şhěta</i>	<i>şhěta</i>	<i>şhěta</i>	<i>(şhěta)</i>	<i>(piti)</i>	<i>(şhěta)</i>
<i>tě-</i>	neck	<i>těxa</i>	<i>tětü</i>	<i>těşhu</i>	<i>těşhu</i>	<i>těşhu</i>	<i>těşhu</i>	<i>těşhu</i>
<i>tsi-/chi-</i>	butt	<i>chişhu</i>	<i>chikaşha</i>	<i>chishu</i>	<i>chishki</i>	<i>(chişhu)</i>	<i>chipa</i>	<i>chinkan</i>

<sup>a</sup> Entries in parentheses in the Kashinawa, Yaminawa, and Amawaka columns represent a lack of data in lists of prefixes, i.e., the nouns can be looked up in dictionaries, but the published material does not specify that these prefixes exist in these languages (though they probably do). Sources of data: Chakobo: Zingg (1998); Kapanawa: Hall de Loos and Loos (1973), Loos and Loos (1998); Kashinawa: Eakin (1991); Yaminawa: Faust and Loos (2002), Amawaka: Hyde (1980).

**Some preliminary conclusions:** Most prefixes can be reconstructed to Proto-Panoan. Only a few of the corresponding body-part nouns can be reconstructed to Proto-Panoan, but, interestingly, the first syllables of the nouns hardly vary.

**Table 4.** A selection Matses prefixes, illustrating analyzable corresponding nouns (check out the ones that are footnoted).

Prefix	Gloss of prefix	Corresponding noun
<i>dan-</i>	knee	<i>dannësh</i>
	back of leg opposite the knee	<i>dantuante</i>
	kneecap	<i>dantuku,</i> <sup>a</sup> <i>piuëshëmpi</i>
<i>dë-</i>	nose, tip, prow, beak, bill	<i>dëbiate</i>
	(nose) septum	<i>dëpun</i>
	nose cartilage	<i>dëshhu</i>
<i>ëk-</i>	(house) gable	<i>dëchin</i>
	lips, labia (of vulva), edge of round thing or opening	<i>ëkbid</i> <sup>b</sup>
<i>më-</i>	mustache	<i>ëkchish</i> <sup>c</sup>
	hand, (tobacco pulverizing) mortar	<i>mëdante</i>
	forearm	<i>mëpu</i>
	wrist	<i>mëtete</i> <sup>d</sup>
	projecting carpal bones	<i>mësh</i> <sup>e</sup>
	elbow	<i>mëntsimpis</i>
	finger	<i>dëshbi</i> ‘finger, toe’
	knuckles	<i>mëbuduësh</i>
	fingernail	<i>mëntsis</i>
	branch	<i>kuidi</i>
	<i>pan-</i>	temple
part of cheek near sideburns		<i>pampada</i> <sup>f</sup>
<i>shik-/sik-</i>	chest	<i>shikdiadkid</i>
	ribs, house rafters	<i>shiktodo</i>
	keel (of bird or some fish)	<i>shiktun</i>
	sternum (central front part of rib cage)	<i>shikçhoëshkon</i>
	breast	<i>ëshuma</i>
	cleavage	<i>shikëshodo</i> <sup>g</sup>
<i>wi-</i>	shank (lower leg)	—
	shin	<i>wipu</i>
	shin bone	<i>wispo</i>
	calf	<i>wishuku</i> <sup>h</sup>
	buttress root	<i>wibën</i>
	base of tree trunk	—

<sup>a</sup> *tuku* is a synchronic but obligatorily prefixed root meaning ‘round lump.’

<sup>b</sup> *bid* is a synchronic but obligatorily prefixed root meaning ‘skin’ or ‘skin + adjacent flesh.’

<sup>c</sup> *chish* is a synchronic but obligatorily prefixed root meaning ‘hair, fin or other projection.’

<sup>d</sup> *tete* is a synchronic but obligatorily prefixed root meaning ‘joint (of a limb).’

<sup>e</sup> *ësh* is a synchronic but obligatorily prefixed root meaning ‘lump, tumor or swelling.’

<sup>f</sup> *pada* is free noun root meaning ‘flatness.’

<sup>g</sup> *ëshodo* is a free noun root meaning ‘deepness.’

<sup>h</sup> *shuku* is a synchronic but obligatorily prefixed noun root meaning ‘round muscle.’

**Further conclusions:** Modern body-part terms appear to be composite forms, most of which appear to have arisen after the proto-Panoans dispersed. This suggests that there existed monosyllabic body-part morphemes in proto Panoan (or before). But what is still unknown is if the reconstructable monosyllabic body-part morphemes were prefixes or roots, and whether “basic” body-part terms created by prefixation or compounding.

**Back to the purported genetic relation between the Panoan and Takanan families.**

**Table 5.** Takanan monosyllabic body-part and other incorporable nouns.

Cavineña noun root	Proto-Takanan form	Corresponding Panoan prefix
aa ‘branch’		pë ‘upper arm, branch’
bawa ‘face’	bu ‘face’	<b>bë-</b> ‘eye, face, forehead’
bi ‘arm’		pë ‘upper arm, branch’
metuku ‘hand’	<b>më</b> ‘hand’	<b>më-</b> ‘hand’
na ‘water’	na ‘water’	<b>në-</b> ‘water/fire’
	<b>ta</b> ‘leg’(only Takana)	<b>ta-</b> ‘foot’; wi- ‘shank’; kuis ‘thigh’
tse ‘tooth’	tse ‘tooth’	<b>shë-</b> ‘tooth’
wi ‘beak’		dë-/rë- ‘nose, beak, tip’

Payne (1990:218) wrote “In at least Arawakan, Harakmbet, Panoan, Cayuga, and Tupí-Guaraní languages, noun roots may be compounded, or incorporated, with verb roots.”

**Table 6.** Comparison of morpho-syntactic characteristics of Panoan prefixation of verbs and Takanan noun incorporation.

Panoan	Takanan
mostly body-parts	mostly body-parts.
prefix directly before the verb root	noun directly before the verb
transitivity class unchanged (extra participant added)	valency unchanged
transitive or intransitive verb roots	mostly transitive verb roots
adjectives can be prefixed	a parallel process occurs with adjectives

Panoan data based on Matses, Kashibo, and Shipibo; Takanan data based on Cavineña (Guillaume 2004:143-46, 389-393) and Maropo/Reyesaño (Guillaume in press), where these languages are explicitly said to have productive noun incorporation and possess these properties. Entries in Araona and Takana dictionaries (Ottaviano y Ottaviano 1989 ; Pitman 1981) appear to be products of noun incorporation (see Loos’ examples on page 1 of this handout), but it is not certain if this is a productive process in these languages. I have not looked at all the published grammatical descriptions of Takanan languages yet.

Aikhenvald (ms.) provided the following insights on noun incorporation based on new data from South American Languages:

**body parts** and/or all inalienably (obligatorily) possessed nouns are the ones most likely to be incorporated. This is the case in many Tacana and Arawak languages (also Nadëb). A kind of incorporation in Yine (Piro) **does not affect valency**.

**Conclusions:**

- 1) Takanan languages evidently did not have prefixes, but they have noun incorporation.
- 2) The Panoan languages that have been studied carefully do not have noun incorporation.
- 3) Modern body-part terms most likely arise from compounding; “non-basic” body-part terms certainly seem to have arisen from compounding (footnoted elements of Table 5 are mostly semantically nominals, but there is no evidence yet that Panoan prefixation of verbs was preceded by noun incorporation.

## References:

- Aikhenvald, Alexandra. ms. "Some ideas about new insights into noun incorporation: A view from South America."
- Eakin, Lucille. 1991. *Lecciones Para el Aprendizaje del Idioma Yaminahua*. Documento de Trabajo No. 22. Yarinacocha, Peru: Instituto Lingüístico de Verano.
- Faust, Norma and Eugene E. Loos. 2002. *Gramática del Idioma Yaminahua*. Serie Lingüística Peruana No. 51. Lima, Peru: Instituto Lingüístico de Verano.
- Fleck, David W. 2006. "Body-part prefixes in Matses: Derivation or noun incorporation?" *International Journal of American Linguistics*, 72: 59-96.
- Fleck, David W. 2007. "Did the Kulinás become the Marubos?: A linguistic and ethnohistorical investigation." *Tipiti, Journal of The Society for the Anthropology of Lowland South America*, 5:137-207.
- Fleck, David W. in progress "Panoan languages and linguistics."
- Girard, Victor. 1971. *Proto-Takanan Phonology*. Berkeley: University of California Press.
- Guillaume, Antoine. 2004. A Grammar of Cavineña, an Amazonian Language of Northern Bolivia. Ph.D. dissertation, La Trobe University, Bundoora, Australia.
- Guillaume, Antoine. in press. "Maropa (reyesano)." In *Lenguas de Bolivia*.
- Hall de Loos, Betty and Eugene Loos. 1973. La estructura semántica y fonológica de los prefijos verbales en capanahua. *Estudios Panos I*, ed. E. Loos, pp. 63-132. Serie Lingüística Peruana No. 10. Yarinacocha, Peru: Instituto Lingüístico de Verano.
- Hyde, Sylvia. 1980. *Diccionario Amahuaca (Edición Preliminar)*. Serie Lingüística Peruana No. 7. Yarinacocha, Peru: Instituto Lingüístico de Verano.
- Loos, Eugene E. and Betty Loos. 1998. *Diccionario Capanahua-Castellano*. Yarinacocha, Peru: Instituto Lingüístico de Verano.
- Ottaviano, Ida and John Ottaviano. 1989. *Diccionario Tacana-Castellano, Castellano-Takana*. Summer Institute of Linguistics, Dallas.
- Payne, Doris L. 1990. "Morphological characteristics of lowland South American languages." In *Amazonian Linguistics: Studies in Lowland South American Languages*, ed. Doris L. Payne, pp. 213-241. Austin: University of Texas Press.
- Pitman, Mary de. 1981. *Diccionario Araona y Castellano*. Instituto Lingüístico de Verano, Riberalta, Bolivia.
- Zariquiey Biondi, Roberto & David W. Fleck. in press. "Prefixation in Kashibo-Kakataibo: Synchronic or diachronic derivation." *International Journal of American Linguistics*, 78(3).
- Zingg, Philipp. 1998. *Diccionario Chácobo-Castellano Castellano-Chácobo con Bosquejo de la Gramática Chacobo y con Apuntes Culturales*. La Paz, Bolivia: Ministerio de Desarrollo Sostenible y Planificación Viceministro de Asuntos Indígenas y Pueblos Originarios.

## Appendix A. Panoan classification by Fleck (2007, in progress) based on lexical and other similarities.

Tally: about 19 extant languages, and about 13 documented extinct languages = 32.

Languages in **bold**; dialects in *italics*; † = extinct; \* = obsolescent (i.e., no longer spoken as an every-day language, but a few speakers remember it). Dialects with minor differences are listed on the same line.

### I. Mayoruna branch (4 extant and 4 documented extinct languages)

#### A. Mayo group

##### i. Matses subgroup

###### a. **Matses** (3 dialects):

*Peruvian Matses; Brazilian Matses*

†*Paud Usunkid*

###### b. **Korubo** (2 dialects) (tentatively placed; may compose its own subgroup)

*Korubo*

\**Chankueshbo*

###### c. \***Kulina of the Curuçá River** (3 dialects):

\**Kapishtana; \*Mawi*

\**Chema*

###### d. †**Demushbo** (last speaker died in 2010)

##### ii. Matis subgroup (most similar to Mainline branch)

###### a. **Matis** (most divergent from other extant Mayoruna languages)

###### b. †**Mayoruna of the Jandiatuba River**

###### c. †**Mayoruna of the Amazon River** (2 dialects):

†*Settled Mayoruna of the Amazon River*

†*Wild Mayoruna of the Amazon River*

#### B. †**Mayoruna of Tabatinga** (phonologically most divergent Mayoruna unit)

### II. Mainline branch (about 14 extant and about 10 documented extinct languages)

#### A. **Kasharari** (most divergent Mainline language)

#### B. **Kashibo** (4 dialects; similar to Nawa group due to contact with Shipibo)

*Kashibo* (Tessmann's "Kaschinö"); *Rubo*

*Kakataibo*

*Nokaman* (formerly thought to be extinct)

#### C. Nawa group (subgroups ordered from most to least divergent)

##### i. Bolivian subgroup

###### a. **Chakobo/Pakawara** (2 dialects of 1 language)

###### b. †**Karipuna** (may be a dialect of Chakobo/Pakawara)

##### ii. Madre de Dios subgroup

###### a. †**Atsawaka/†Yamiaka** (2 dialects of 1 language)

###### b. †**Arazaire**

##### iii. †**Remo of the Blanco River**

##### iv. †**Kashinawa of the Tarauacá River**

##### v. Marubo subgroup

###### a. **Marubo (of the Javari Basin)**

###### b. **Katukina**

*Katukina of Olinda; Katukina of Sete Estrelas*

†*Kanamari*

###### c. †**Kulina of São Paulo de Olivença**

**Appendix A** continued.

“Central Panoan Assemblage” (subgroups vi-viii): evidently areal influence among neighbors has blurred the relations among these languages.

vi. Poyanawa subgroup

- a. **\*Poyanawa**
- b. **\*Iskonawa** (very close to Poyanawa, but also resembles Shipibo-Konibo-Kapanawa and Amawaka)
- c. **\*Nukini**
- d. **\*Nawa** (of the Môa River)
- e. †**Remo of the Jaquirana River**

vii. Chama subgroup

- a. **Shipibo-Konibo-Kapanawa** (3 dialects of 1 language)
  - Shipibo; Konibo* (currently fused)
  - \*Kapanawa of the Tapiche River*
- b. **\*Pano**
  - †*Pano*
  - \*Shetebo; \*Piskino*
- c. †**Sensi**.

viii. Headwaters subgroup

- a. **Kashinawa of the Ibuauçu River**
  - Brazilian Kashinawa*
  - Peruvian Kashinawa*
  - †*Kapanawa of the Juruá River*
  - †*Paranawa*
- b. **Yaminawa** (large dialect complex)
  - Brazilian Yaminawa*
  - Peruvian Yaminawa*
  - Chaninawa*
  - Chitonawa*
  - Mastanawa*
  - Parkenawa*
  - Shanenawa*
  - Sharanawa; \*Marinawa*
  - Shawanawa* (= Arara)
  - Yawanawa*
  - \*Yaminawa-arara* (not same as *Shawanawa/Arara*)
  - †*Nehanawa*
- c. **Amawaka**
  - Peruvian Amawaka* (intermediate between this subgroup and Chama subgroup, perhaps as a result of areal contact)
  - †*Nishinawa* (= Brazilian Amawaka)
  - †*Yumanawa* (also very similar to Kashinawa of the Ibuauçu R)
- d. †**Remo of the Môa River** (resembles Amawaka)
- e. †**Tuchiunawa** (resembles Yaminawa dialects)

## Appendix B. Vestigial prefixes in Marubo.

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### vestigial prefix: mē- ‘hand-forearm’

mēbi ‘hand’  
mēntsisi ‘(finger/toe)nail’  
mētunti ‘index finger’ (finger is mēbi rēbu)  
mēruṣhku ‘wrist’ or ‘knuckle’  
mētaṣhē ‘forearm’  
(iwi) mēan ‘(tree) branch’  
mēṣhuki ‘crawl’  
mēki ‘work’ (I might be pushing it here)  
mēshmiri ‘right (side)’  
mēkiri ‘left (side)’

### vestigial prefix ma- ‘head, hill, top’

mapu ‘head’  
matu ‘hill’  
machi ‘top (of hill, house, etc.)’  
machuti ‘crown of head’  
maṣhun ‘antler’  
maiti ‘headband’ (there may be a verb mai  
‘wear on head’)  
maṣhkuri ‘cut hair close to head’  
manē ‘fill to top’

### vestigial prefix pē- ‘upper arm

puyan ‘upper arm’  
pēṣhu ‘shoulder’  
pēi ‘wing, feather’  
mani pēi ‘(plant) leaf’

### vestigial prefix ta- ‘foot’

taē ‘foot’  
tapuṣhē ‘ankle’  
(iwi) tapun ‘(tree) root’  
tariti ‘shoe’ (there may be a verb tari ‘wear  
on/cover foot’)

### vestigial prefix bē- ‘eye, face, forehead’

bēru ‘eye’  
bēmanē ‘face’  
bētunti ‘forehead’  
bēshpi rani ‘eyebrow’  
bēun ‘tear(s)’  
bēku ‘rheum (sleep of the eyes), eye pus’  
bēpan ‘bangs’  
bēisti ‘mirror’ (there may be a verb bēis ‘look at  
one’s reflection’)  
(yura) bēshuya ‘blind (person)’

### vestigial prefix kē- ‘lip, edge’

kēṣha ‘lip’  
kēni ‘beard, moustache’  
kēmu ‘saliva’  
(waka) kēsu ‘(river/stream)bank’  
kēnwan(-ka) ‘sharp’  
kēntu(-ka) ‘dull’

### vestigial prefix tē- ‘neck’

tēṣhu ‘neck’  
tēpun ‘front part of neck’  
tēnsan ‘throat’  
tēntu ‘Adam’s apple’

### vestigial prefix pu- ‘abdomen’

pustu ‘belly’  
pubi ‘abdomen flesh’  
puku ‘intestines’

### vestigial prefix rē- ‘nose, tip’

rēkin ‘nose’  
rebu ‘tip, headwaters’

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Notes:

1) I attempted to elicit productive prefixation of nouns, verbs, and adjectives by translation requests in Portuguese or Matses (the latter from bilingual Matses-Marubo informants). Nothing that looked like productive prefixation was given in the translations to Marubo. Generally the full noun was used, or else a vocabulary item that did not involve anything that looked like a body-part prefix was used.

2) Prefixation has not been described for Katukina in Katukina. Though it is possible that researchers may have missed it, but there is a good possibility that Katukina, being so similar to Marubo, also lacks prefixation. Significantly, Kashaari is unknown with respect to whether it has productive prefixes, as are the languages in my Poyonawa subgroup (Poyonawa, Iskonawa, Nukini, and Nawa (not to be confused with Parkenawa/Yora), all of which are obsolescent.

3) More such vestigial prefixes would surely be uncovered with a longer vocabulary list.

## Bonus:

Bora, según Thiesen 1996, pp. 56-57

Muchos de los verbos no solamente indican la acción o el efecto de la acción, sino también indican la manera o el instrumento usado para hacerla. Estos verbos llevan formas que aparecen como prefijos de la raíces. Se nota que

*do-* indica que la acción ha sido hecha con la mano,

*dɨ-* indica que la acción ha sido hecha con los dientes,

*ca-* indica que la acción ha sido hecha con algo puntiagudo,

*ki-* indica que la acción ha sido hecha con algún instrumento cortante,

*pi-* indica que la acción ha sido hecha con algún instrumento como un serrucho,

*ta-* indica que la acción ha sido hecha con el pie y

*wa-* indica que la acción ha sido hecha a golpes. Por ejemplo:

<i>dópújuhjáco</i>	romper algo frágil (con la mano)	<i>dóhdahíro</i>	quebrar algo en pedazos (con la mano)
<i>tápújuhjáco</i>	romper algo frágil (con el pie)	<i>táhdahíro</i>	quebrar algo (con el pie)
<i>wápújuhjáco</i>	romper algo frágil (a golpes)	<i>wáhdahíro</i>	cortar o trozar (a golpes con algún instrumento)
<i>cápújuhjáco</i>	romper algo frágil (con algo puntiagudo)		
<i>dɨpújuhjáco</i>	romper algo frágil (con los dientes)	<i>dɨhdahíro</i>	quebrar algo en pedazos (con los dientes)
		<i>kíhdyahíro</i>	trozar algo (con algún instrumento cortante)
		<i>píhdahíro</i>	trozar algo (con serrucho)

Notas de Fleck:

Solamente 3 de los 7 prefijos refieren a partes del cuerpo.

*ta-* es el prefijo para 'pie' en lenguas Panas. y (según Antoine) también en Reyesano y Araona.

Según Thiesen y Thiesen 1998, los sustantivos en Bora

para pie son túhaá y méjúhaá;

para mano son hójtsɨ́ y méhójtsɨ́;

y para diente son méhwájɨ́ y peenújtso (incisivo);

o sea, parece que los prefijos en Bora no son relacionados formalmente a sustantivos en Bora.

Frank Seifart (comunicación personal) dice que estos prefijos no son muy productivos y se pueden usar juntos con el sustantivo que denomina el instrumento; Thiesen y Thiesen (1998) no incluyen estos prefijos en sus listas de afijos o como lexemas.