

# The dynamics of linguistic diversity: Language contact and language maintenance in Amazonia

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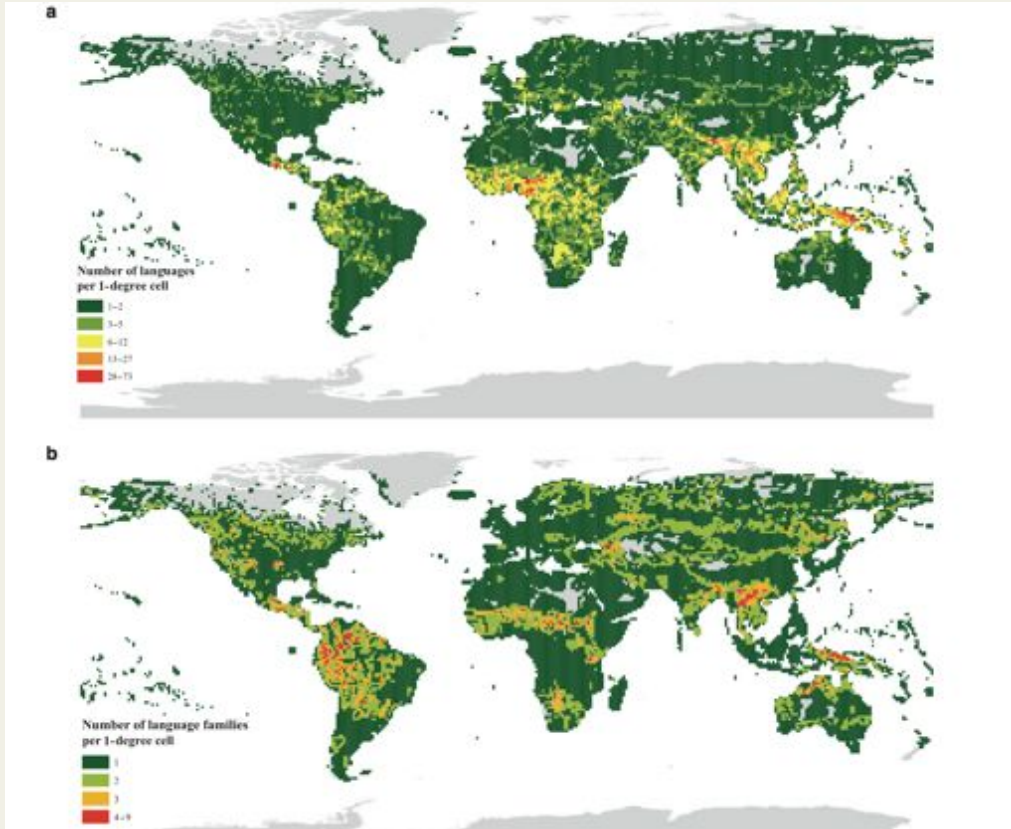
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**Diversity Linguistics Conference**

**Max Planck Institute for Evolutionary Anthropology**

**May 3, 2015**

# Introduction: Variable linguistic diversity



1) Diversity of languages  
-> Cladogenesis (splitting),  
with or without maintenance  
over time.

2) Diversity of 'genetic' units  
-> Maintenance over time,  
with or without subsequent  
cladogenesis.

(Gavin et al. 2013:525)

**MOST ATTENTION HAS FOCUSED ON (1):**

Correlations many and complex; see e.g. Nichols 1992, Nettle 1999, Collard & Foley 2002, Currie & Mace 2009, Gorenflo et al. 2012, Gavin et al. 2013, Gavin & Stepp 2014.

# Introduction: Lowland South America

- Unusually high diversity of 'genetic' units:
  - Over 50 distinct language families/isolates
  - Among the highest in the world
- Prevalence of small families
  - Most have < 5 members
  - High number of isolates – SA has 34% of world total
  - Large families tend to be non-contiguous



# Introduction:

## Lowland South America

Why does lowland S. America have such high genetic/genealogical diversity, with so many small families?



# Introduction:

## Variable linguistic diversity

- Common assumption that linguistic diversity is an outcome of isolation among populations.
- Geographic  $\neq$  genetic  $\neq$  social *relative* isolation.
- Isolation may be *sufficient* to generate and maintain diversity, but how *necessary* is it, and on what levels?

“Scholars have consistently underestimated the regional scale and supra-ethnic character of precolonial Amerindian social organisation.”

(Alexiades 2009:8, citing Whitehead 1994; see also Hornborg & Hill 2011)

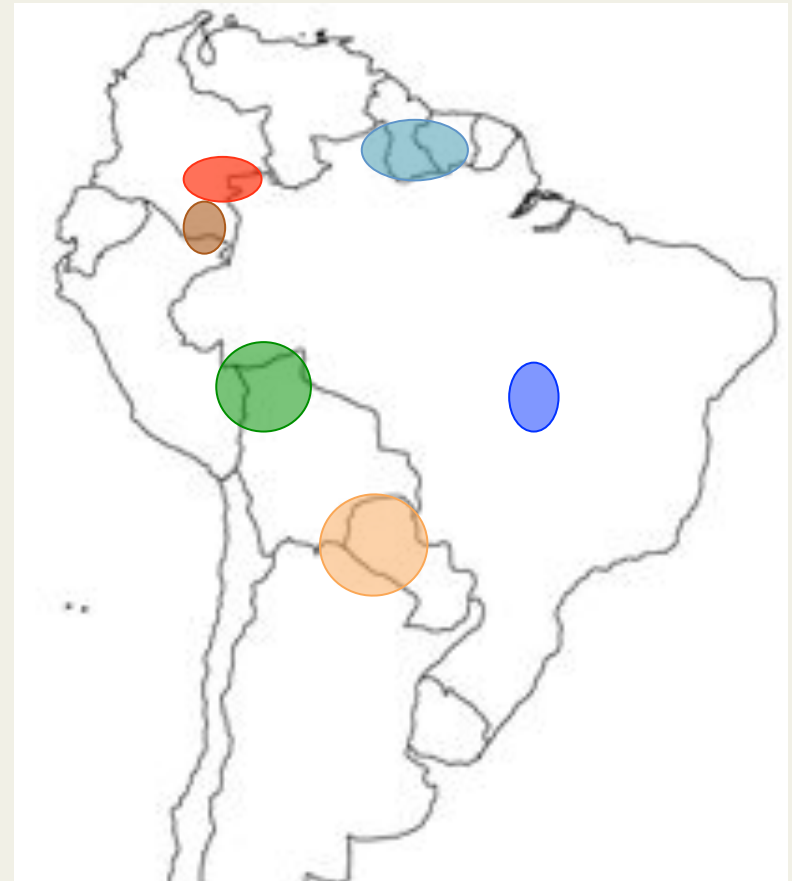
# Goals of this talk

To investigate the relationship between linguistic diversity and language contact in Amazonia.

1. Recent/synchronic perspective informed by ethnographic and sociolinguistic record (cf. Epps forthcoming).
2. Diachronic perspective informed by
  - Lexical evidence: loanwords and Wanderwörter
  - Grammatical evidence

# The dynamics of contact + diversity? Lowland SA 'regional systems'

- Upper Rio Negro
- Upper Xingu
- Southern Guianas
- Caquetá-Putumayo ('People of the Center')
- Guaporé-Mamoré
- Gran Chaco







# Generalizations *across* SA regional systems

- Localized linguistic diversity
- Frequent interaction, incl. trade specializations and joint ritual activities
- Practice of linguistic exogamy (Rio Negro, Xingu, Gran Chaco)
- Relative cultural homogeneity ('culture areas')
- Language as an important emblem of difference
- Multilingualism common, especially in ritual contexts; frequent passive multilingualism + active monolingualism

e.g. In Mision La Paz, Gran Chaco:

“Individuals identify with one language, speak it to all others, and claim only to understand but not to speak the other languages spoken to them” (Campbell & Grondona 2010:617).

# Regional systems: Linguistic outcomes

- Upper Rio Negro:

## Very limited lexical borrowing

(see e.g. Aikhenvald 2001, 2002 for Tariana; Epps 2009 for Hup)

## Heavy diffusion in grammatical structures and categories;

lexical/phrasal calquing (see e.g. Aikhenvald 2002; Gomez-Imbert 1996; Stenzel 2013; Epps 2007; etc.)

(1) Tariana (Arawak)

nese pa:ma                      di-na  
then one+NUM.CL.ANIMATE.FEM    3sgnf-OBJ  
du-yana-sita-pidana  
3sgf-cook-ALREADY-REM.PAST.REP  
'She had reportedly cooked him already.'

(2) Tukano (East Tukanoan)

tiita ni'kó                      kĩ-re  
then one+NUM.CL.ANIMATE.FEM    he-OBJ  
do'á-toha-po'  
COOK-ALREADY-REM.PAST.REP.3sg.fem  
'She had reportedly cooked him already.'

(3) Hup (Nadahup)

vit      vúp=ʔáy      tih-ǎn      ciw-viʔ-ciwíy=mah      j'ám  
then      that=FEM      3sg-OBJ      cook-TEL-ALREADY=REP      DST.PAST  
'Then she had reportedly cooked him already.'

(4) Baniwa (Arawak)

hnete-pida      apa:ma                      zu-dzana-ni                      zu-taita  
then-REP      one+CL.FEM      3sgf-cook-3sgnfO/So      3sgf-finish  
'Then she had reportedly finished cooking him.'

# Regional systems: Linguistic outcomes

- **Upper Xingu:** Little lexical borrowing; “incipient” grammatical convergence (Seki 1999, 2011; cf. Michael et al. forthcoming).
- **Southern Guianas:** Carlin (1999:330) for Mawayana: “resistance to the transfer of actual morphological forms but not to the transfer of structural categories... in the lexicon there is only a negligible number of borrowings”.
- **Caquetá-Putumayo:** “Inhibition against lexical borrowing” but diffusion of grammatical structures and even bound morphological forms (Seifart 2011:88).
- **Guaporé-Mamoré:** “Languages diverge dramatically at the lexical level” but exhibit extensive structural similarities (Crevels & Van der Voort (2008:164ff).
- **Gran Chaco:** Little lexical borrowing; wide range of shared structural features (Campbell & Grondona 2010, 2012:657, Vidal & Nercesian 2009:1023)

# Some questions...

Are the sociolinguistic processes we see in these regions more general features of native Amazonia?

To what extent have linguistic diversity and interaction been associated over space and time?

To what extent has interaction been organic and localized, and/or mediated by the dispersal of a few large language families?

# Wider networks of interaction?

Arawak topographic record in ritual discourse  
(Vidal 2000:646)



Indigenous trade routes of northern Amazonia (Hornborg & Eriksen 2011:141; based on archaeological and historical evidence; see also Alexiades 2009 and references therein)

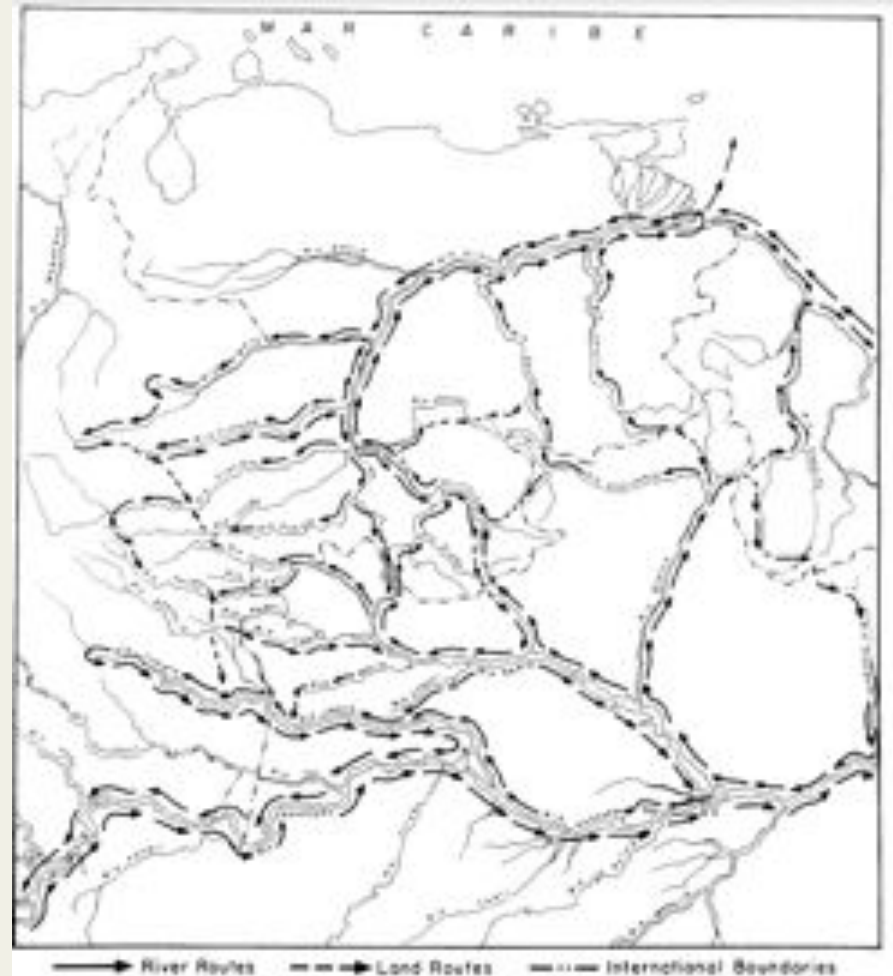


Figure 3. Map of Sacred and Secular Places Related to Kawai Routes. Source: Vidal 1987, 1995.

# Loanwords in northern Amazonia

Most assessments of loanwords in South American languages do not indicate the number of meanings or the semantic domains considered – little basis for systematic comparison.

(WOLD is an exception, but contains only two Amazonian languages)

This study:

Controlled comparison across standard lists of

- 182 basic vocab items
- 96 flora-fauna terms
- 58 culture terms

(Building on Bower et al. 2011, 2014;

Database forthcoming: <https://huntergatherer.la.utexas.edu>)

# Investigating loanwords



139 languages  
from 47 families

All languages  
well represented  
for basic  
vocabulary.

Northern  
languages well  
represented for  
Flora-fauna &  
Culture terms.

# Investigating loanwords: Northern languages





# Investigating loanwords: Northern languages



# Investigating loanwords: Methods

For each meaning, each term evaluated against all others in database with same or related meaning;

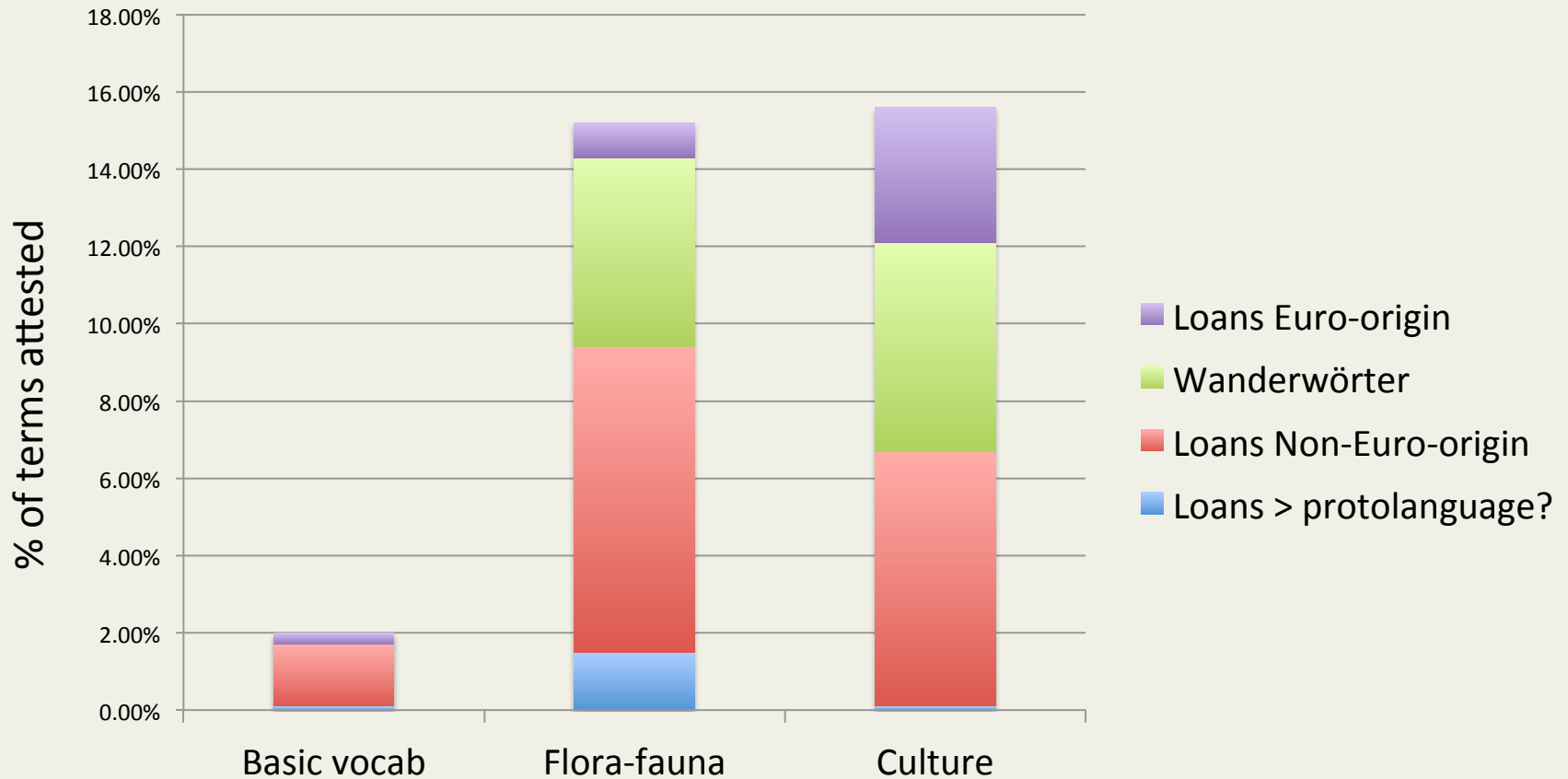
Each term judged as probable:

- inheritance/semantic shift/unique/unknown
- loan (direction unknown/doubtful/Wanderwort/into protolanguage?)

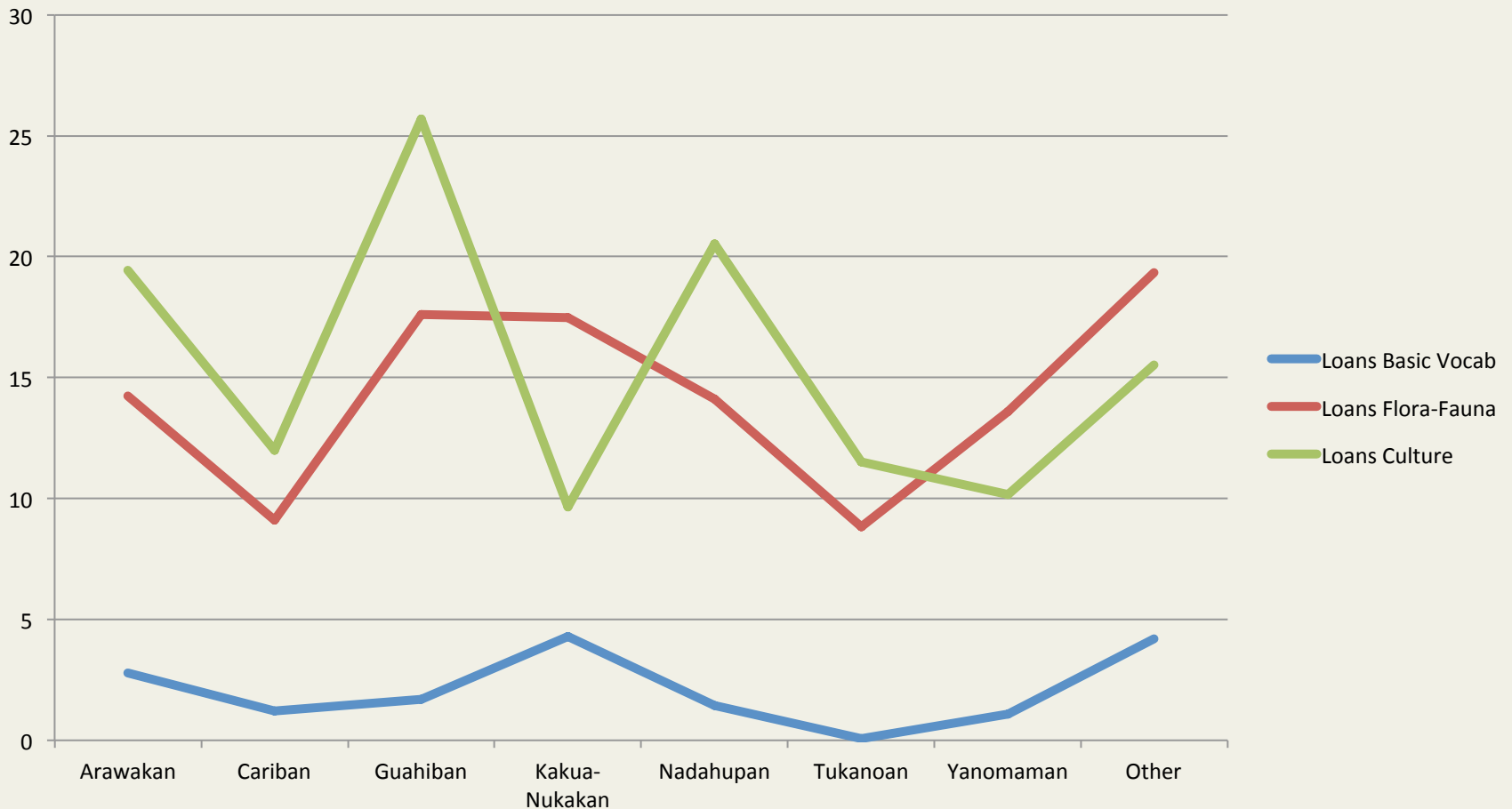
Loan totals:

Direction unknown/doubtful/into protolanguage (?) given ½ weight

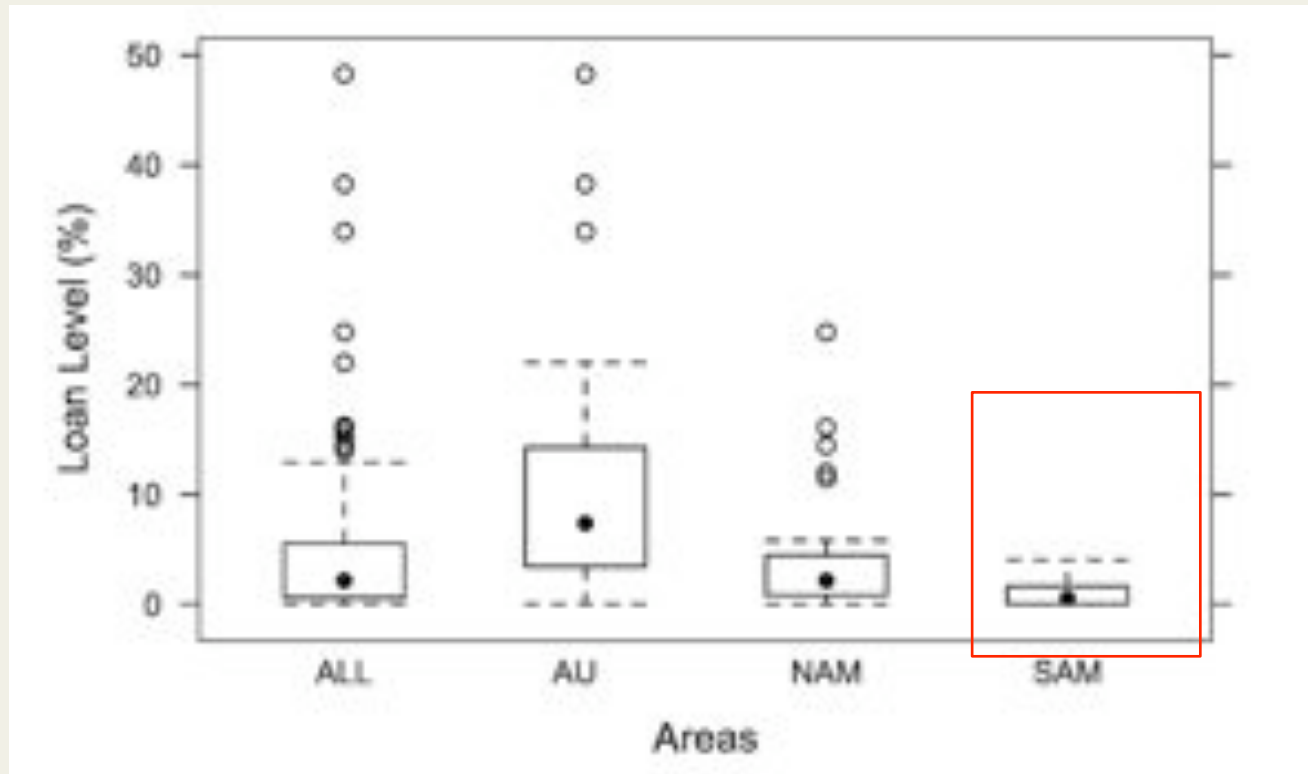
# All loanwords by semantic domain



# Non-European loans: semantic domain and recipient language family



## Loan levels in basic vocabulary: Northern Amazonia vs. elsewhere



- Basic vocabulary loan levels **significantly lower in N. Amazonia** than in other global regions considered (Australia, CA/ Great Basin, and worldwide [Haspelmath & Tadmor 2009]; Bower et al. 2011).

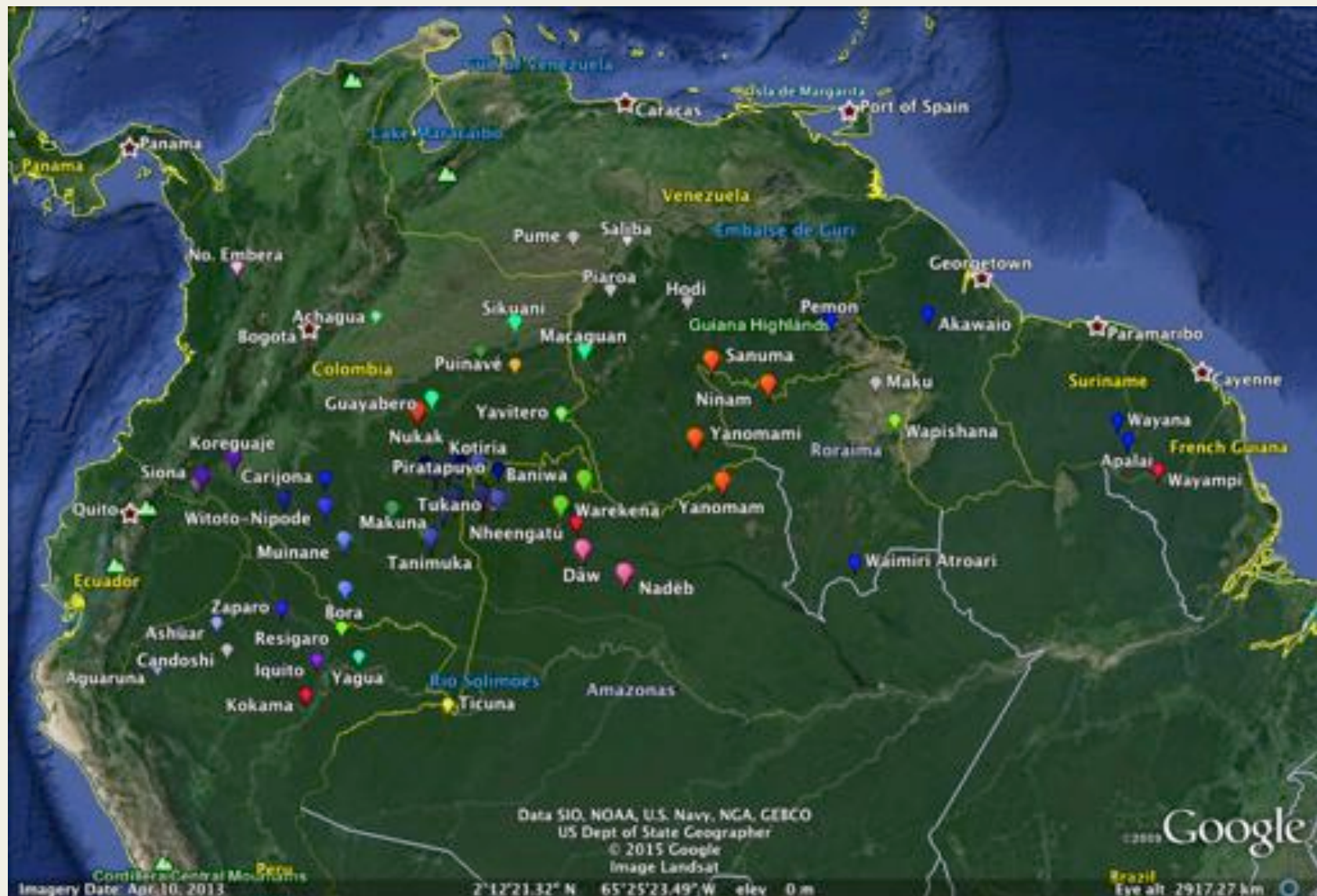
# Wanderwörter: A closer look

- Criteria for identification:
  - plausible loanword
  - attested in at least 4 different language families (i.e. at least 3 clearly identifiable loan events)
- Identified with reference to all northern languages in survey
- Overall results:
  - 59 meanings associated with WW  
(31% of flora-fauna meanings, 50% culture, 0% basic vocab)
  - 78 different WW etyma identified

WW etyma  $\geq 5\%$  of Flora-fauna + Culture terms attested (84% languages surveyed)



WW LOAN etyma  $\geq 5\%$  of Flora-fauna + Culture terms attested (73% languages surveyed)





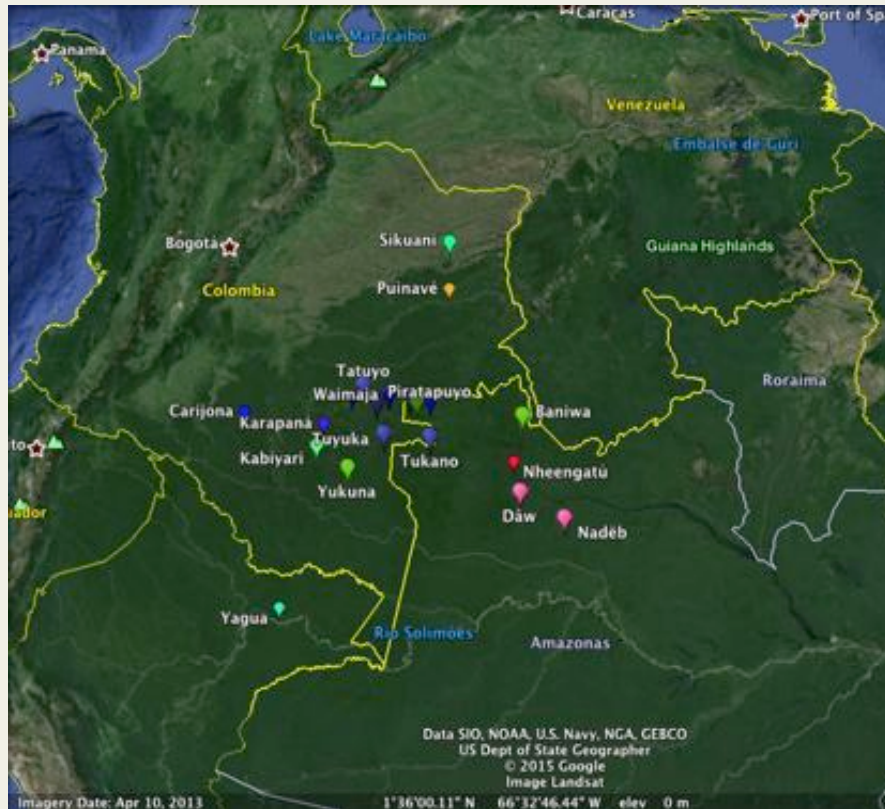
# WW as evidence for overlapping regional networks

## Across northern Amazonia:

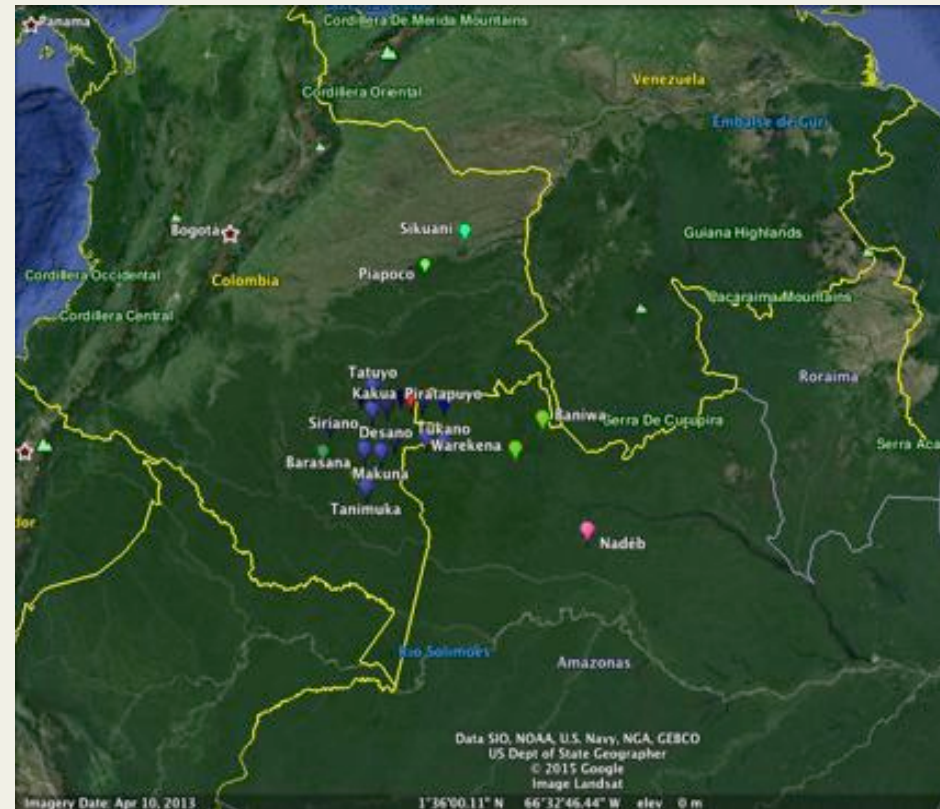
- Regional subsystems: Upper Rio Negro, Caqueta-Putumayo, northern sub-Andean area, Orinoco-Guianas
- Connections linking these regions
- Some very widespread WW patterns

# Alto Rio Negro (and neighbors)

Coca  
%patu



Banisteriopsis (ayahuasca)  
%kapi

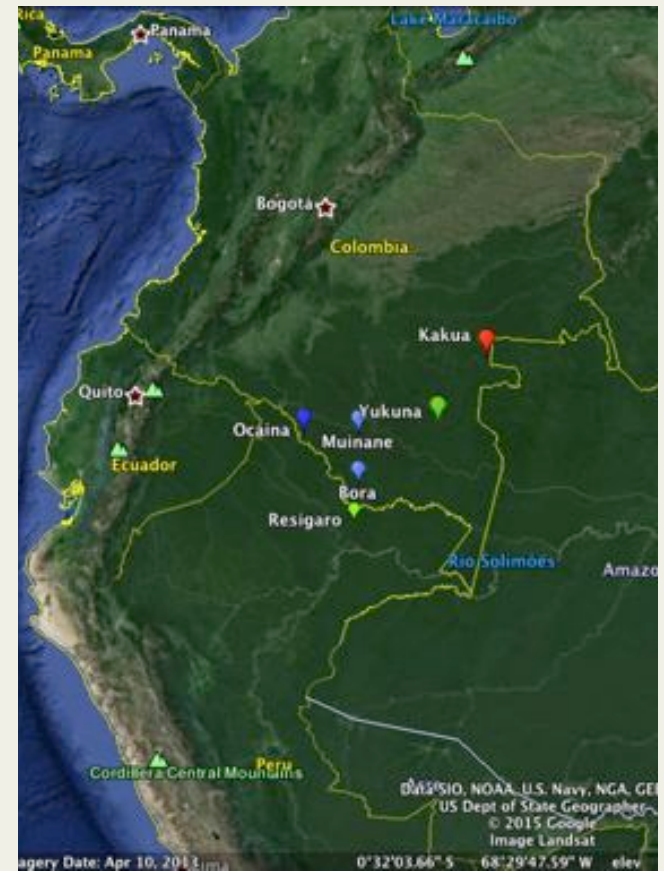
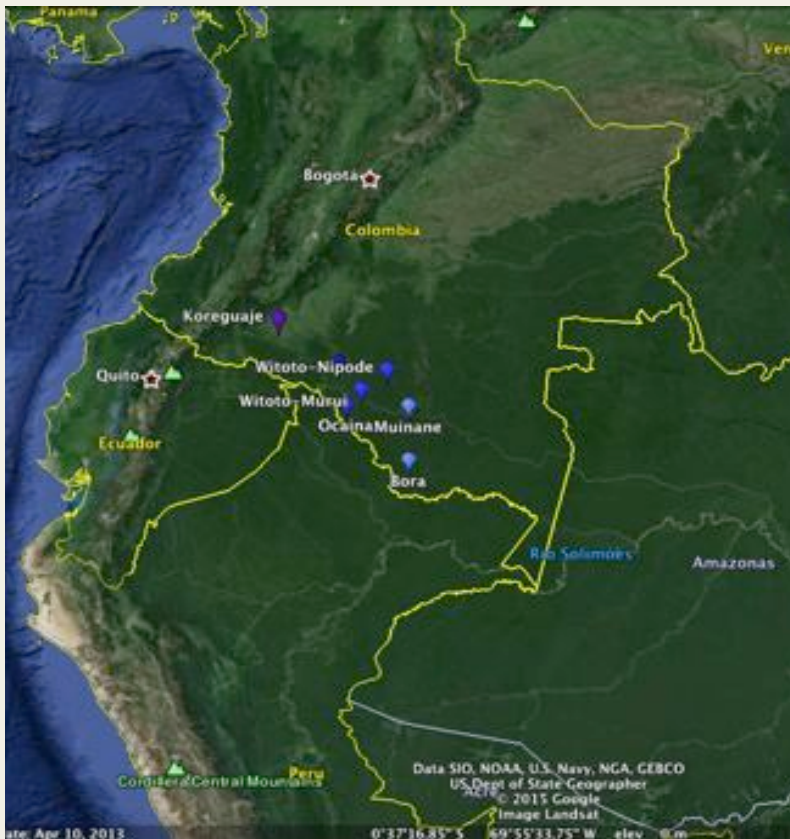


East Tukanoan and Arawak role in spread

# Caqueta-Putumayo (and neighbors)

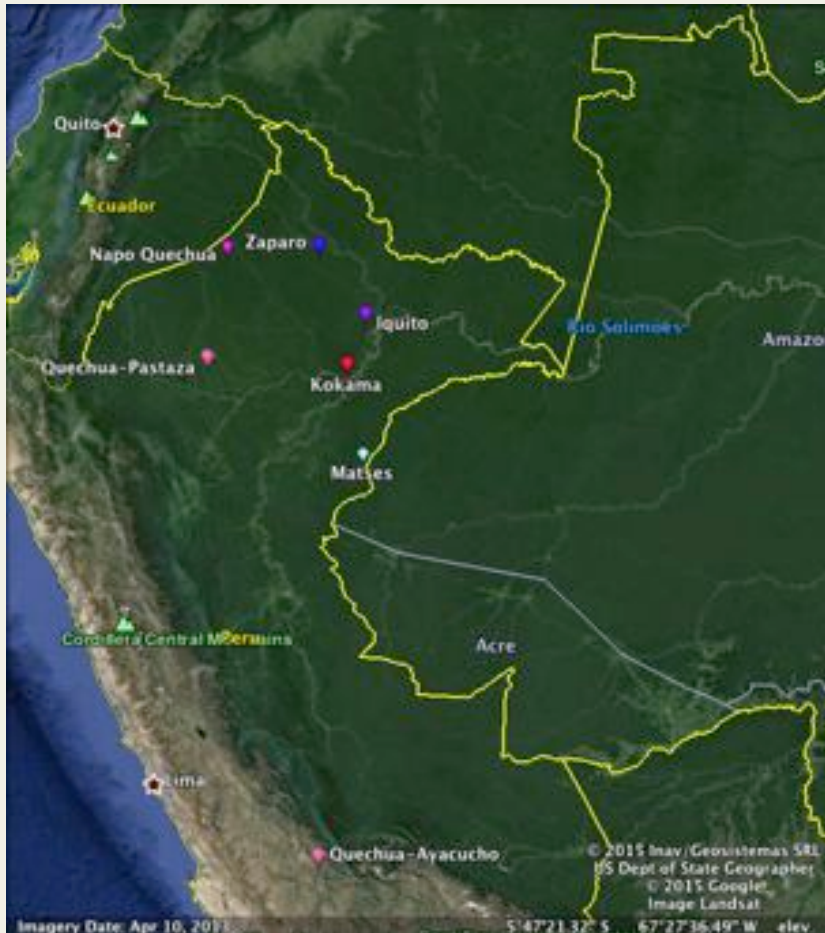
Coca  
%hibie

Iguana  
%mana?o



# Northern sub-Andes

Cricket  
%tjiriku



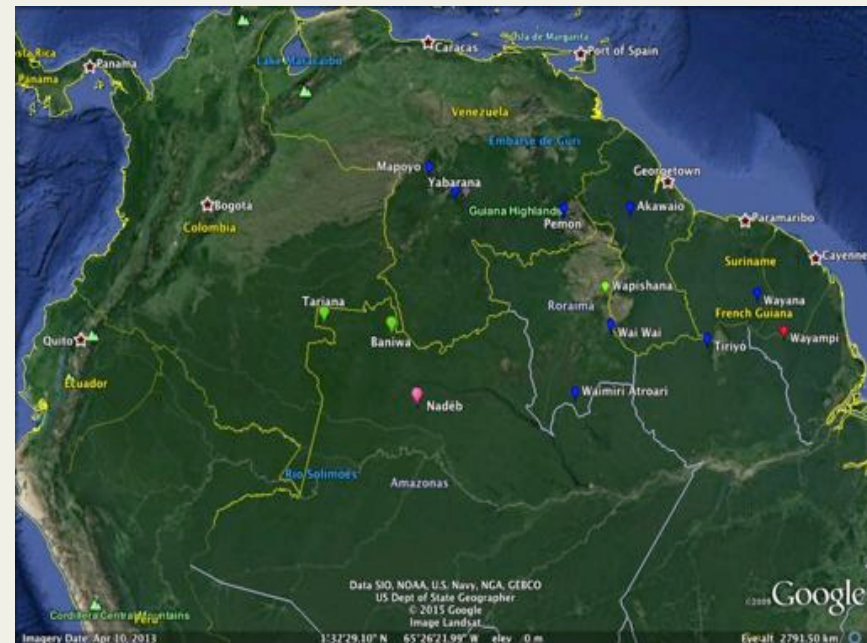
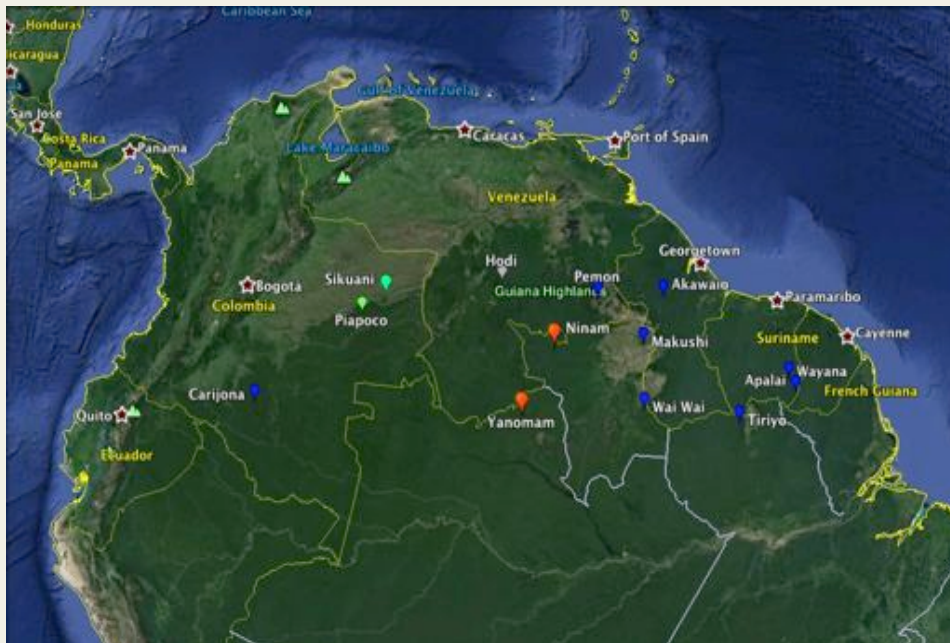
Banisteriopsis (ayahuasca)  
%jahe



# Orinoco/Guianas

Cashew  
%eroi

Knife  
%marije



Carib role in spread

# Linking regions

## Rio Negro, Caqueta-Putumayo, and beyond

%kumu

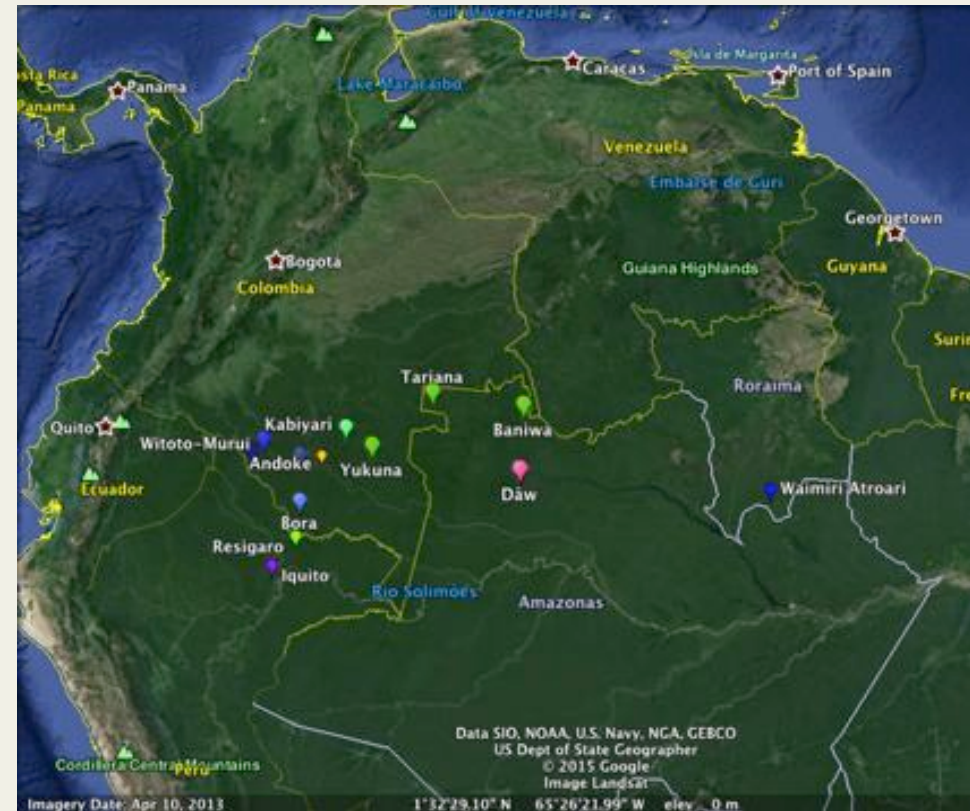
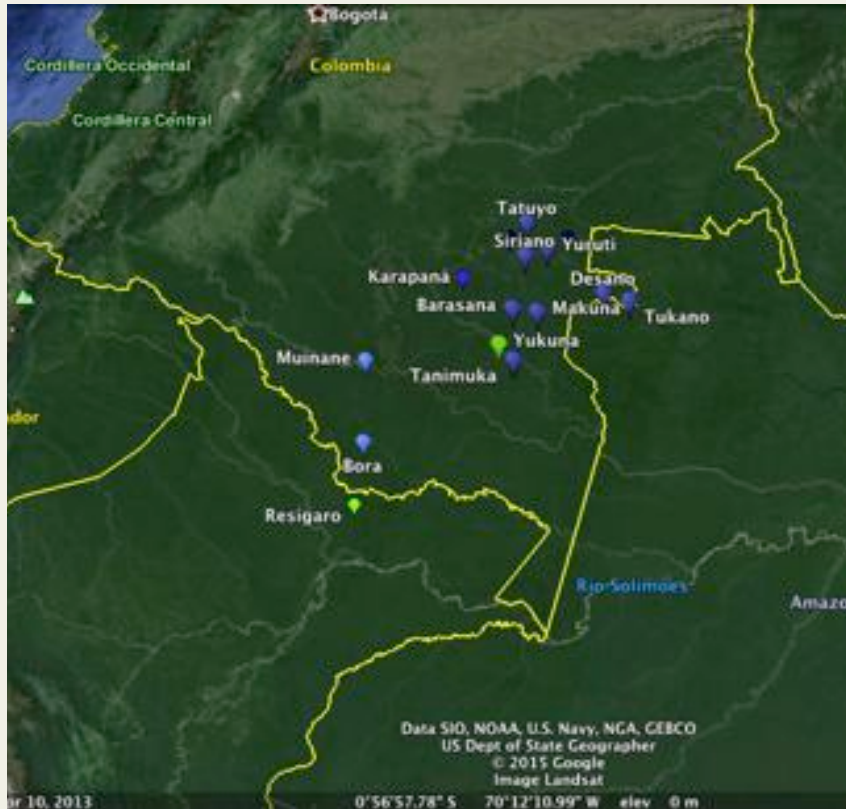
'signal drum' (Arawak, Bora)

'canoe', 'bench', 'healer' (East Tukanoan)

'laurel tree' (Arawak, Bora, East Tukanoan)

Dolphin

%amana



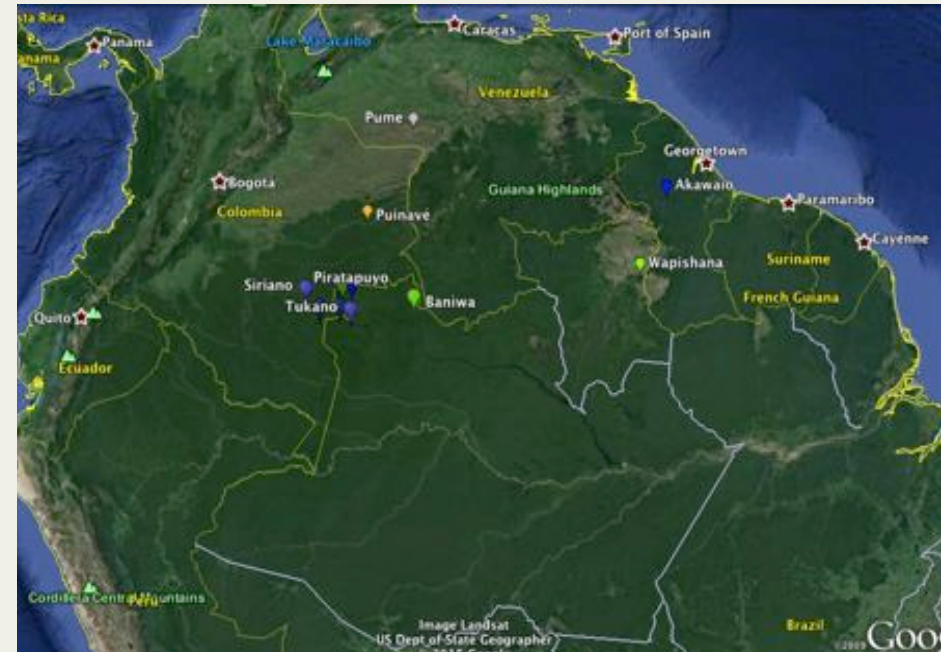
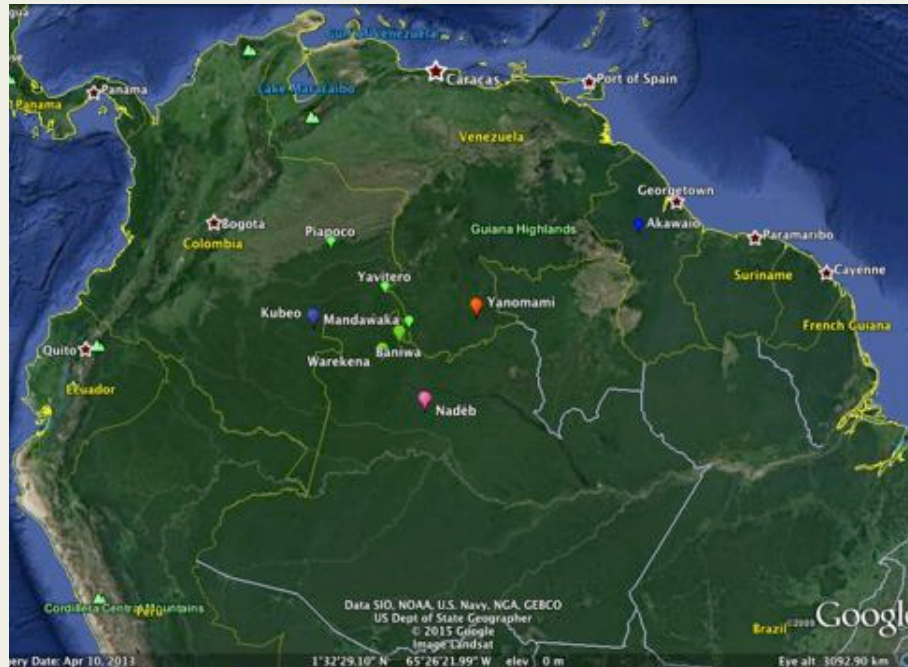
Arawak role in spread

# Linking regions

Rio Negro, Orinoco-Guianas, and beyond

Fermented drink  
%jalaki

Fermented drink  
%pajaru



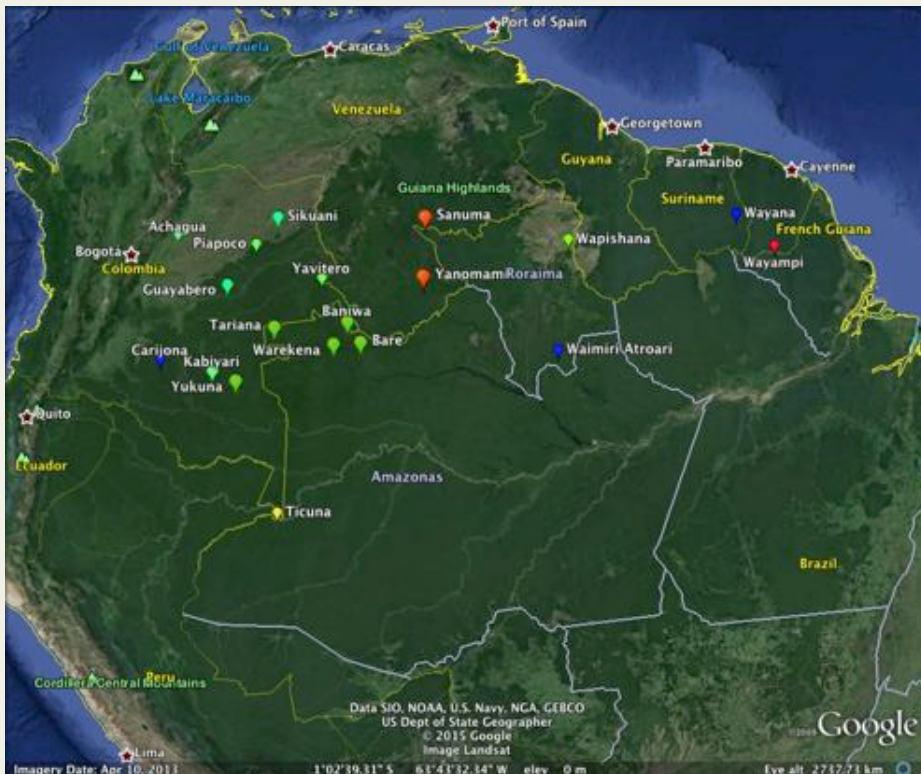
Arawak role in spread

# Linking regions

Widespread in northern Amazonia

Guan  
%mare

Vulture  
%wadzuri



Arawak role in spread

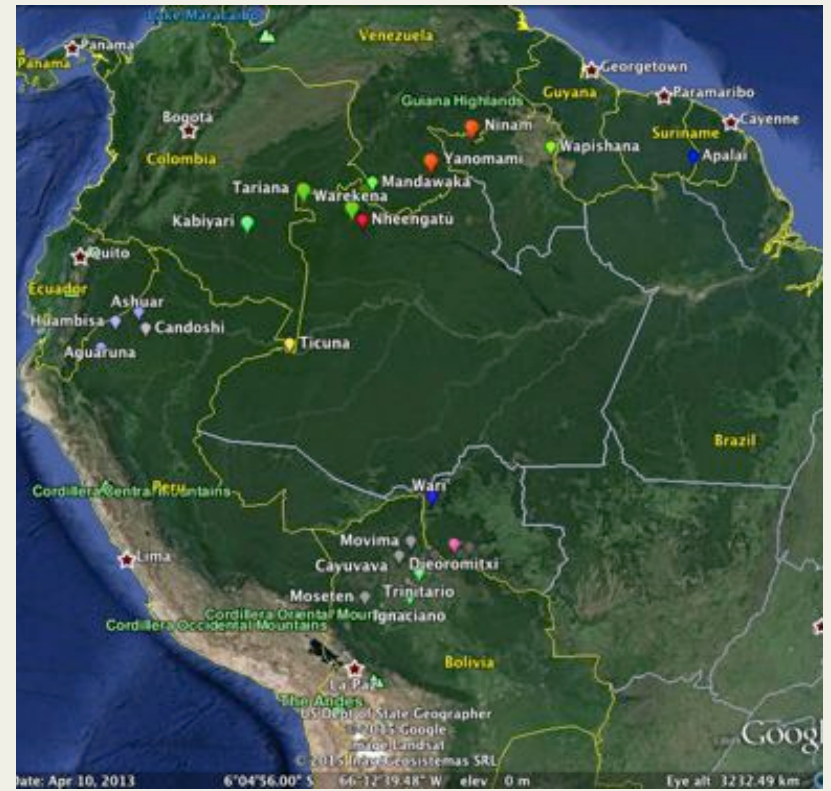


# Linking regions

## Very widespread WW

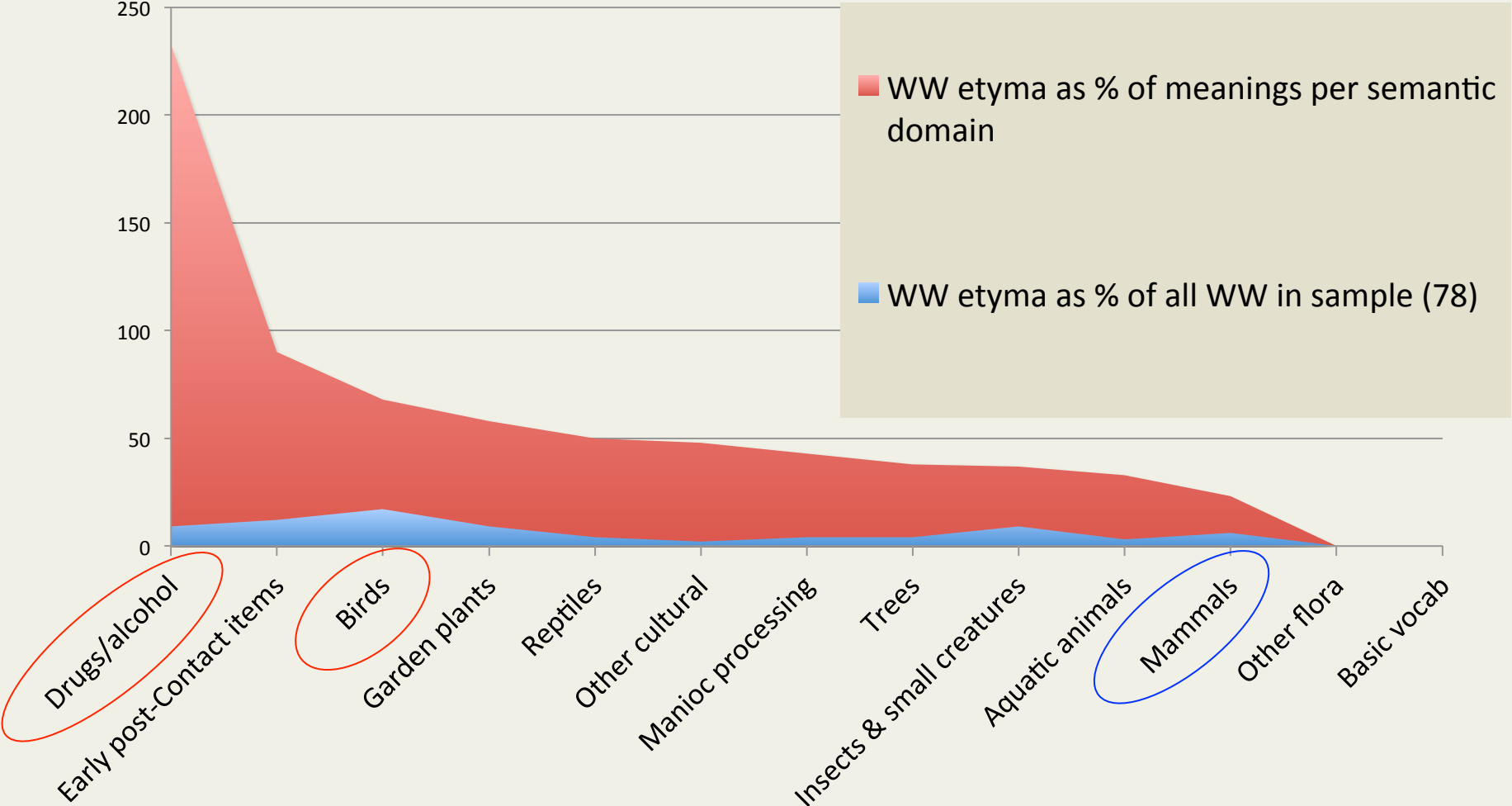
Egret/heron  
%wakara

Parrot  
%awaro

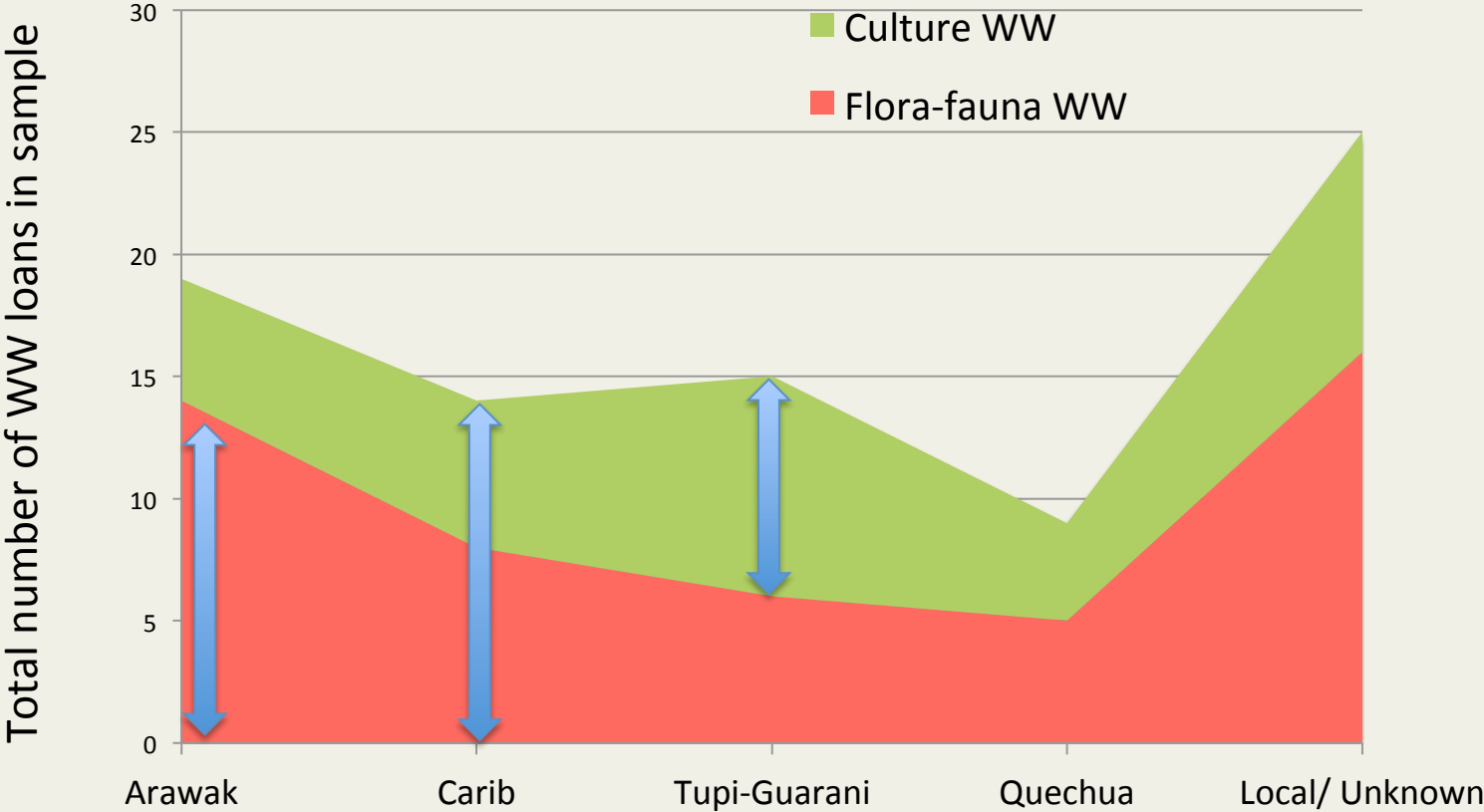


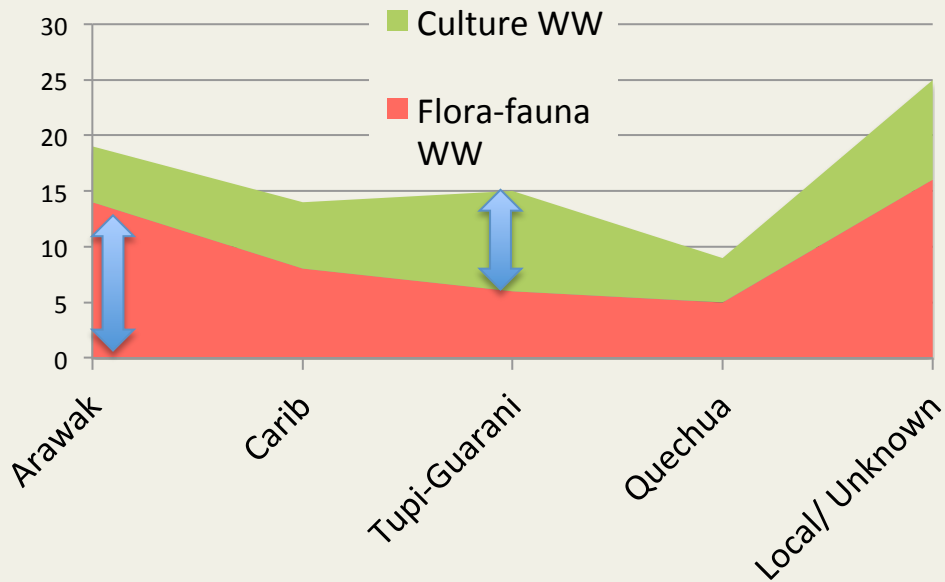
Data collection south of Amazon River mostly limited to Guapore-Mamore, Xingu, and Chaco

# Wanderwörter densities by semantic domain

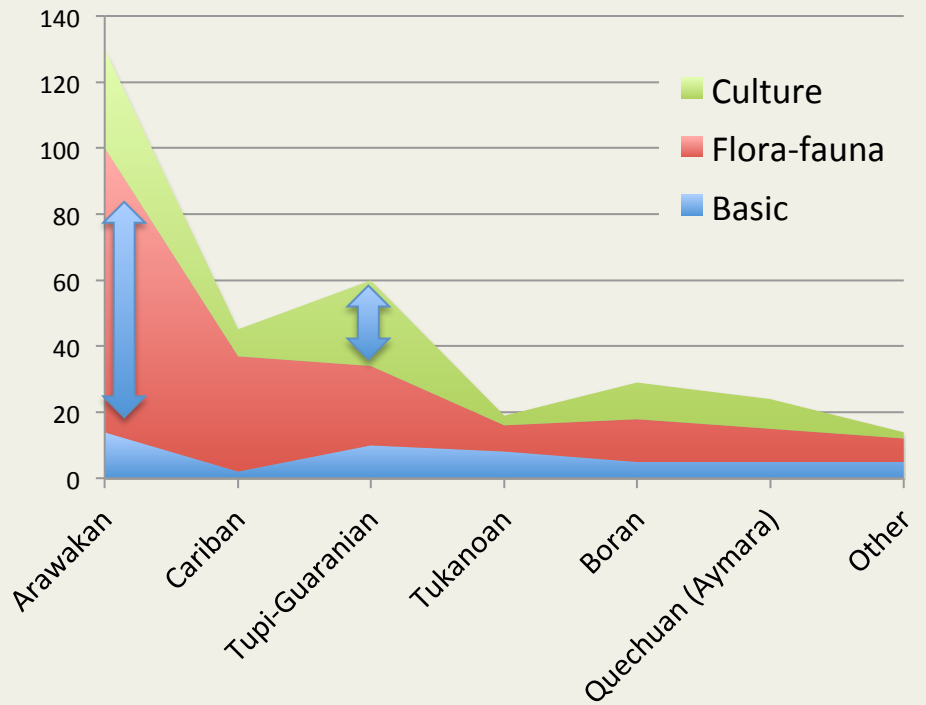


# Wanderwörter by probable major vehicle of spread

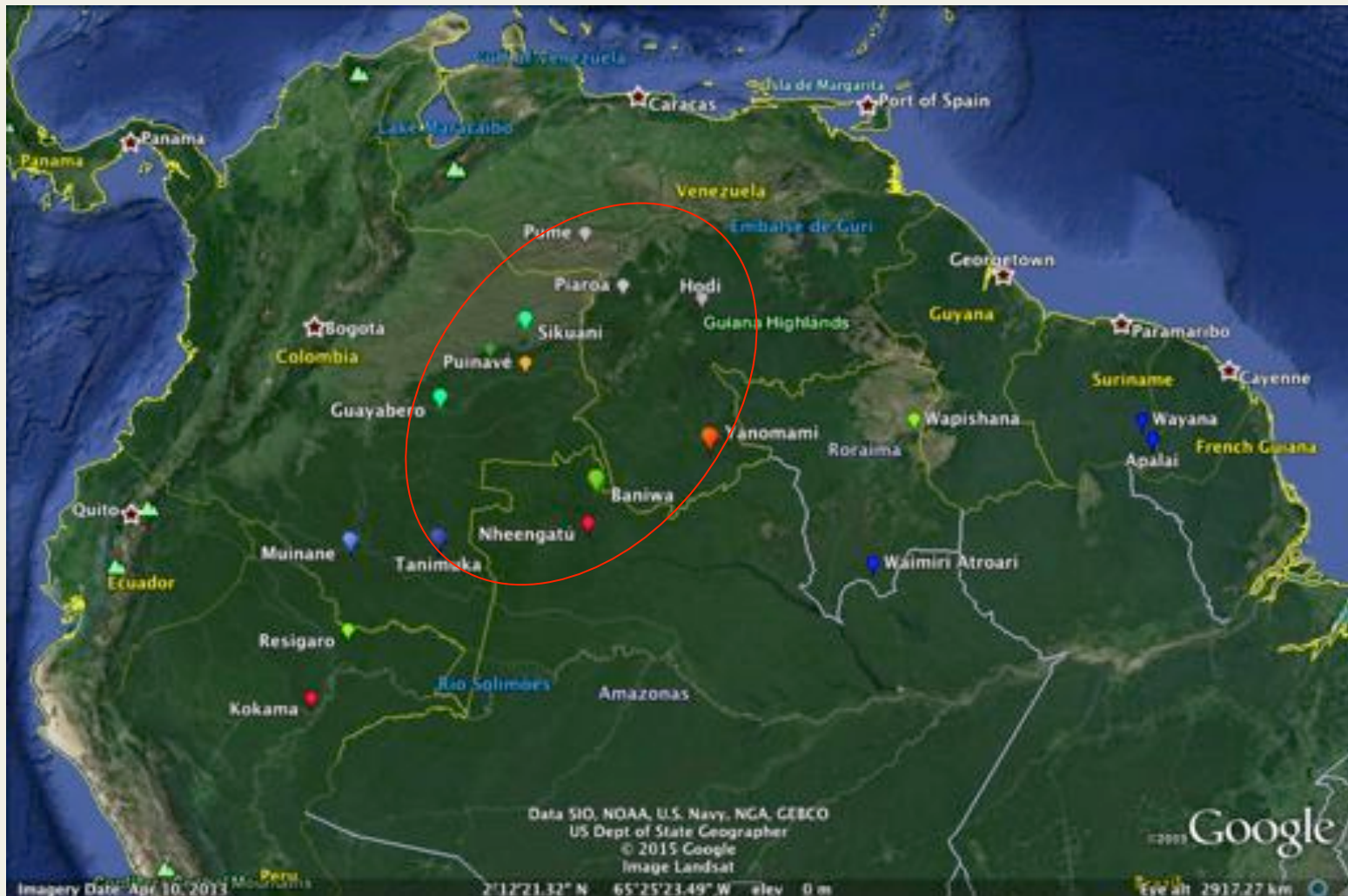




## Non-WW loanwords by donor



WW LOAN etyma  $\geq 7.5\%$  of Flora-fauna terms attested (20% languages surveyed)

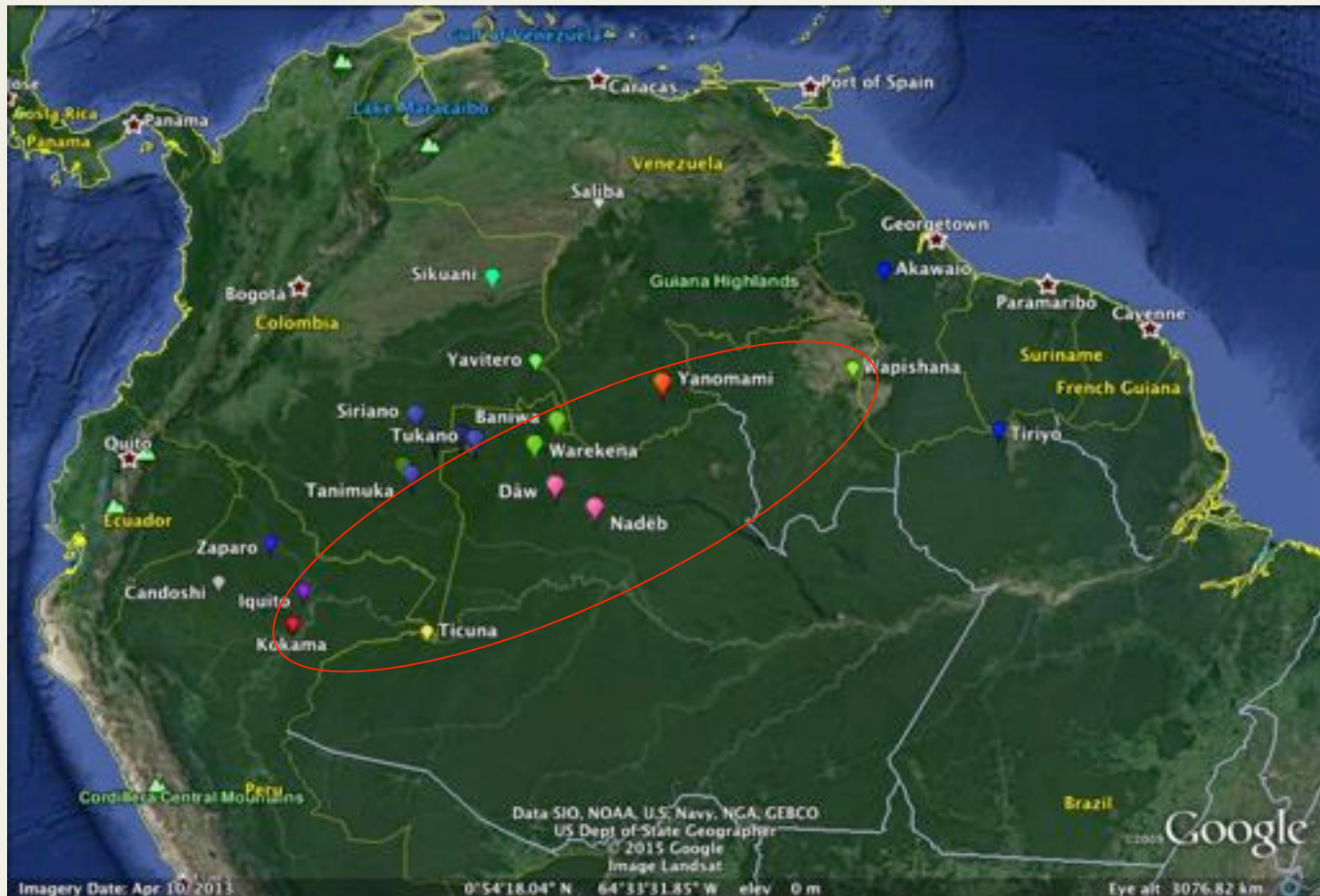


WW LOAN etyma  $\geq 7.5\%$  of Flora-fauna terms attested (20% languages surveyed)



Arawak regional exchange system, AD1000 (Carling et al. 2013:23)

WW LOAN etyma  $\geq 10\%$  of Culture terms attested (26% languages surveyed)



# Assessing loanword patterns

Quality vs. quantity of interaction?

- Basic vocab loan rates in Amazonia are very low, even in contexts where interaction has been intense
- Flora-fauna loans/WW notably high in comparison to basic vocab; major role of Arawak languages in their diffusion (esp. bird species)
- Possible correlation with Arawak influence in Amazonian ritual culture?
  - trade in ritual paraphernalia involving e.g. feathers
  - role of animal and plant names in northern Amazonian ritual discourse (see Hill 1993, Meléndez 2014)



# Assessing loanword patterns

Extent and intensity of interaction?

- Wanderwörter reflect:
  - localized interactions
  - regional contact zones
  - wider networks of interaction
- Dispersed families (Arawak, Tupi-Guarani, and Carib) as probable sources of multiple WW – consistent with view of these families as influential players within a wider interactive system

# Investigating grammatical diffusion

Low loan levels  $\neq$  lack of intensive linguistic interaction?



Survey of 60 northern languages from 19 families

# Region vs. family in grammatical profiles: Upper Rio Negro and Caquetá-Putumayo

Language families:

Nadahup

Kakua-Nukak

Arawak

East Tukanoan

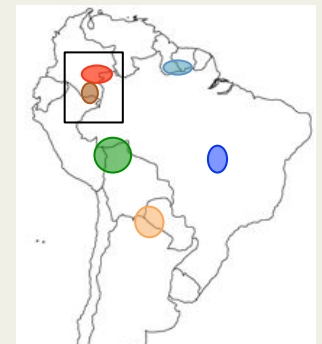
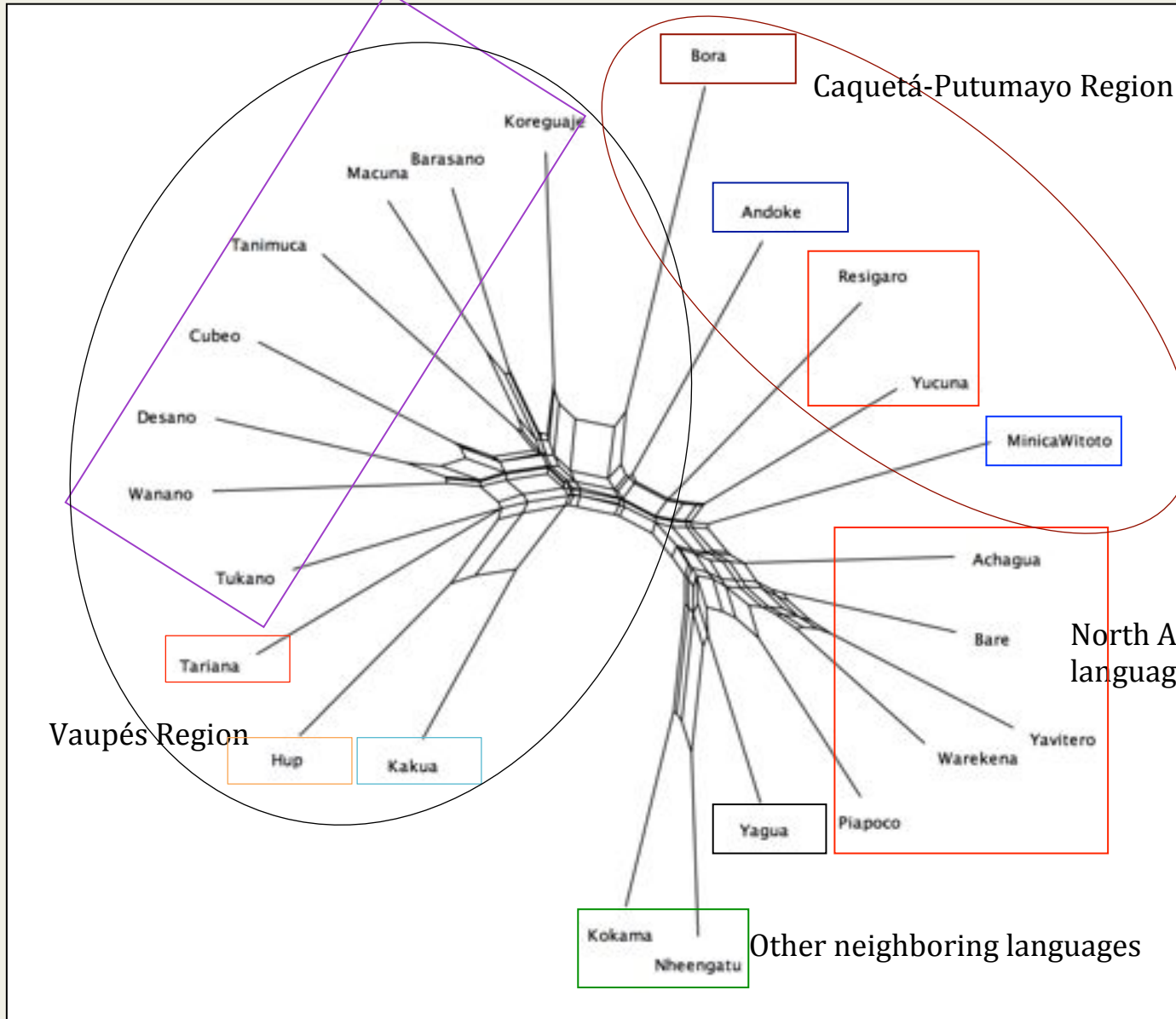
Boran

Andoke

Witoto

Tupi-Guarani

Yagua



# Region vs. family in grammatical profiles: Upper Rio Negro and western Guianas

Language families:

Nadahup

Kakua-Nukak

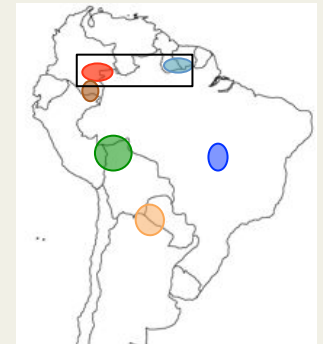
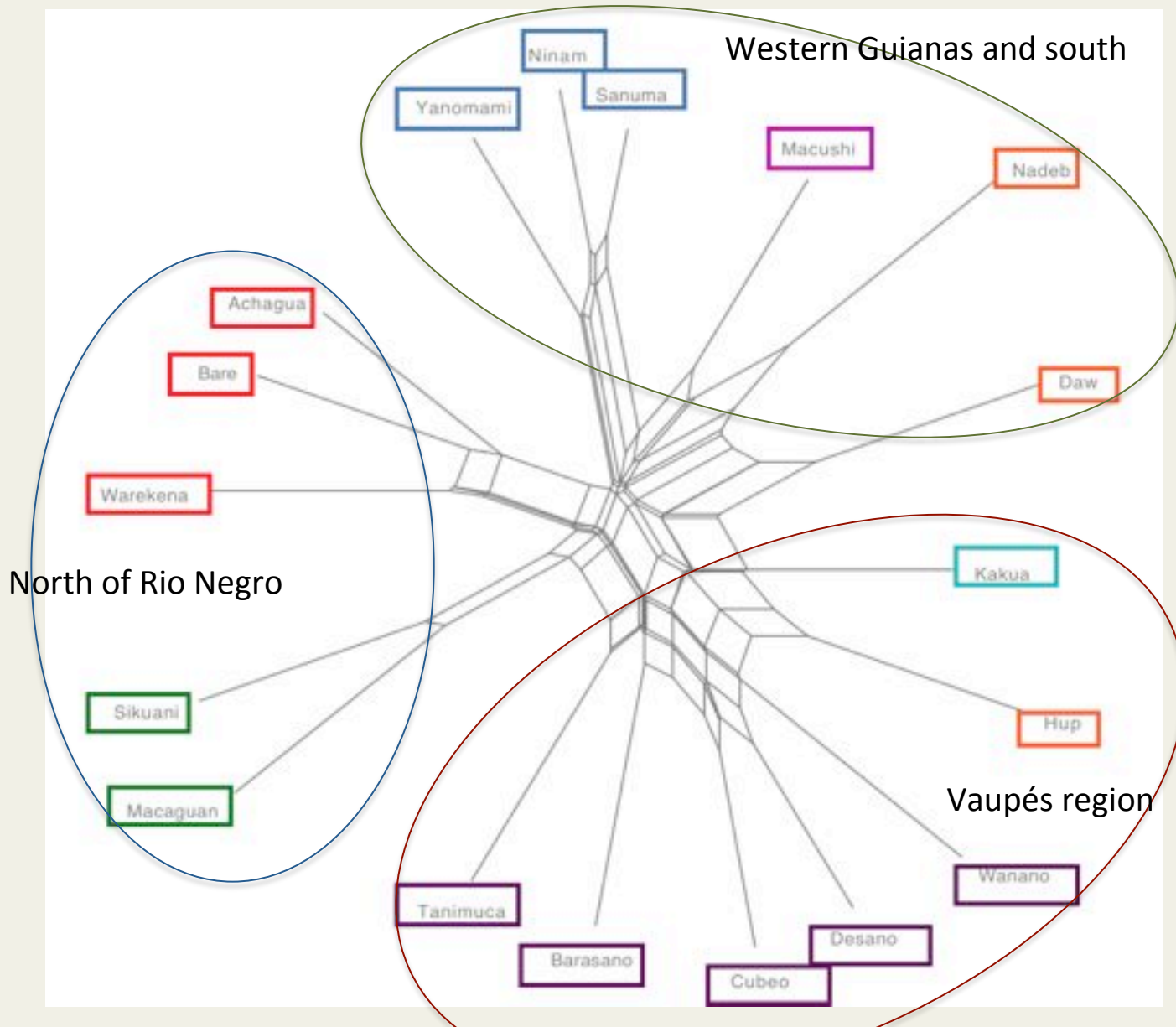
Arawak

East Tukanoan

Yanomami

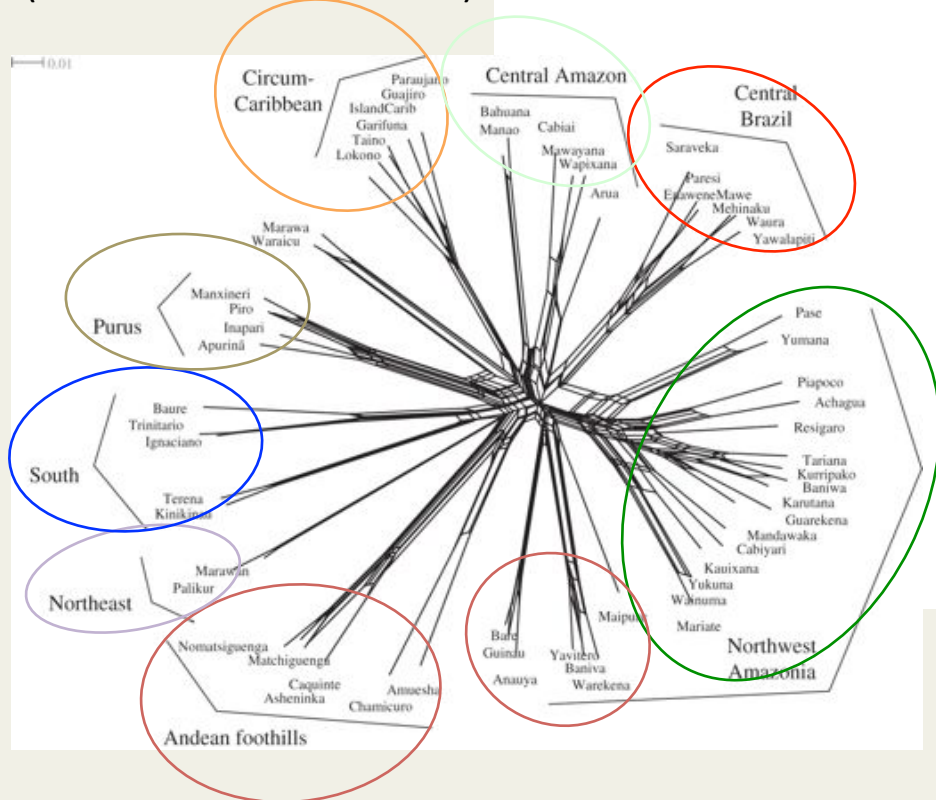
Carib

Guahiban

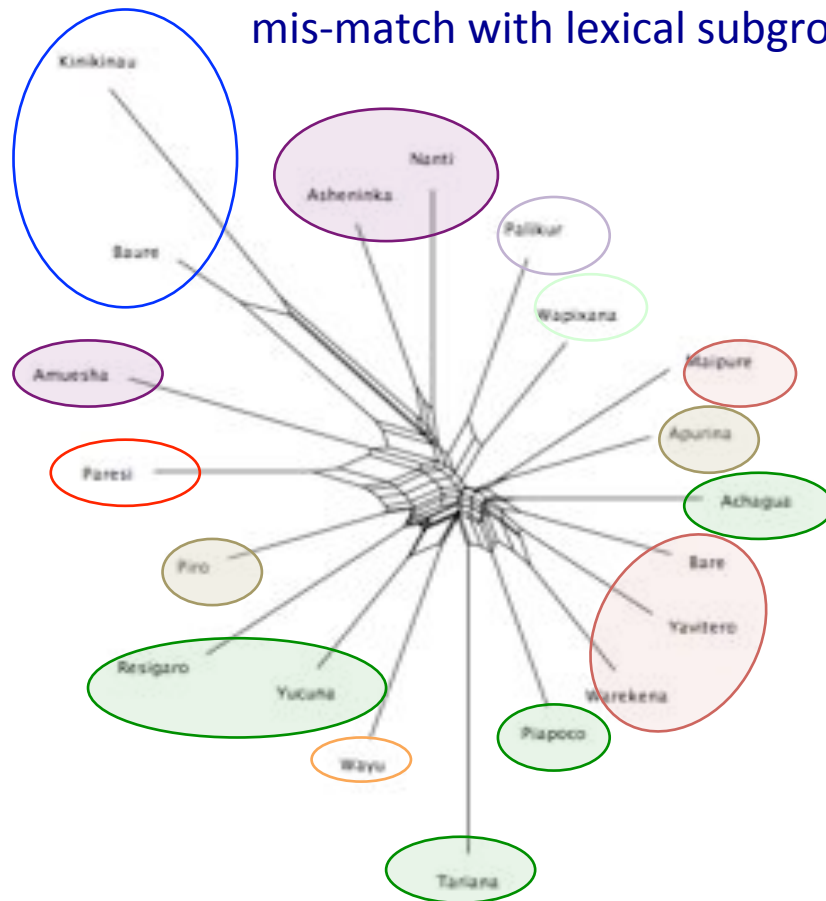


# Stability of lexicon vs. diffusability of grammar: Arawak languages

Lexical similarity analysis: defined subgroups  
(Walker & Ribeiro 2010:2)



Grammatical similarity analysis:  
mis-match with lexical subgroups



Eriksen and Danielsen (2014) consider a different set of structural features and derive a similar outcome; see also Eriksen & Galucio 2014 for Tupi-Guarani

# Conclusions

Contact has played a major role in shaping Amazonian linguistic diversity:

- Regional systems linked by wider networks of contact
- Dispersed 'matrix' language families had role as linkers, but were also profoundly affected by their neighbors
- Widely shared language ecologies have promoted diversity in the face of frequent contact → Lexical conservatism + grammatical change

# Conclusions

Why so many families, and why so few large ones?

Dynamics of isolation/interaction variable over time:

(cf. O'Connor & Muysken 2014)

- Likely *early* stage of diversification (facilitated by relative isolation?)
- Later long-term maintenance with limited further cladogenesis – facilitated by regular interaction

The dynamics of linguistic diversity are intimately tied to ideological factors, which can also be highly sensitive to contact.

# Thanks to:

## MPI EvA!!

National Science Foundation grant HSD0902114 'Dynamics of Hunter-Gatherer Language Change' and an ACLS fellowship (2014-15); prior fieldwork support from NSF, Fulbright-Hays, LLILAS/Mellon, and MPI EvA.

The Hupd'äh and other peoples of the Upper Rio Negro for their participation and collaboration in fieldwork.

The Museu Paraense Emilio Goeldi for sponsorship and affiliation in Brazil.

Co-authors Barry Alpher, Claire Bower (Yale), Russell Gray (U of Auckland), Cynthia Hansen (Grinnell), Hannah Haynie (Yale), Jane Hill (U of Arizona), Keith Hunley (U of New Mexico), Patrick McConvell (ANU), Catherine Sheard (Yale), Jason Zentz (Yale).

Past and current members of UT Amazonian Languages Research Team:

Karina Baeza, Tanja Bauerlein, John Blaha, Katherine Bolaños, Ana Paula Brandão, Zachary Burnett, Emily Buell, Anissa Cappucino, Rebekah Evans, Jaqueline Fox, Paulina Franco, Lauren Franklin, Bettie Gonzalez, Dhananjay Jagannathan, Sarah Kuntz, Aimee Lawrence, Addison Martinez, Joyce McCormick, Kelsey Neely, Amanda Novak, Jonathan Quintanilla, Melody Ann Ross-Nathaniel, Leslie Smith, Wikaliler Daniel Smith, Jenna Tipton, Daniel Valle, Becky Walker.



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