What can the modern profile of linguistic geography and genealogy of foragers tell us about human prehistory?

Tom Güldemann[1,2] and Harald Hammarström[3]

[1] Humboldt University Berlin, [2] Max Planck Institute for the Science of Human History Jena, [3] Max Planck Institute for Psycholinguistics Nijmegen

Towards an inventory of attested forager languages

- Worldwide database of forager languages
  a. Human relations area file (HRAF)
  b. Murdock (1967) = “Ethnographic atlas”
  c. Lee and Daly (1999)
  d. Hammarström (ms.) based on a large number of specialist publications
  e. Personal communication by area specialists

- Forager defined at first **eyewitness ethnographic documentation time** as subsisting on **more than 50%** on plants and animals whose **reproduction is not controlled**
- Aims to be eventually complete for all the worlds languages

> Comments and corrections very welcome!!!

http://haraldhammarstrom.ruhosting.nl/chagsapp.pdf

Towards an inventory of attested forager languages

	Forager languages Low count	Possible forager languages	Forager languages High count
No. of languages	880	376	1256
Proportion (total ca. 7100)	12%	5%	18%

Table 1: Number of forager languages across the globe

Likely global hierarchy of forager language frequency per macro-region

Australia (100%) >
North America+Mesoamerica (34,5%) = South America (15-40%) >
New Guinea+Central Pacific (10-20%) >
Tropical Asia+Western Pacific (8,5%) >
Northern Eurasia (4,5%) = Africa+Arabian Peninsula (3%)

Towards an inventory of attested forager languages

	Larger families	Small families	Isolates	Unclassi-fied	Total
Lineage total	58	106	99	94	357
Lineages with	35	49	38	7	129
forager langs.	60%	46%	38%	7%	36%

Table 2: Distribution of forager languages across linguistic lineage types

Frequency of lineages with forager languages per lineage type

Larger families > Small families > Isolate languages > Unclassified languages

> the larger the linguistic lineage, the greater the likelihood of hosting a forager language

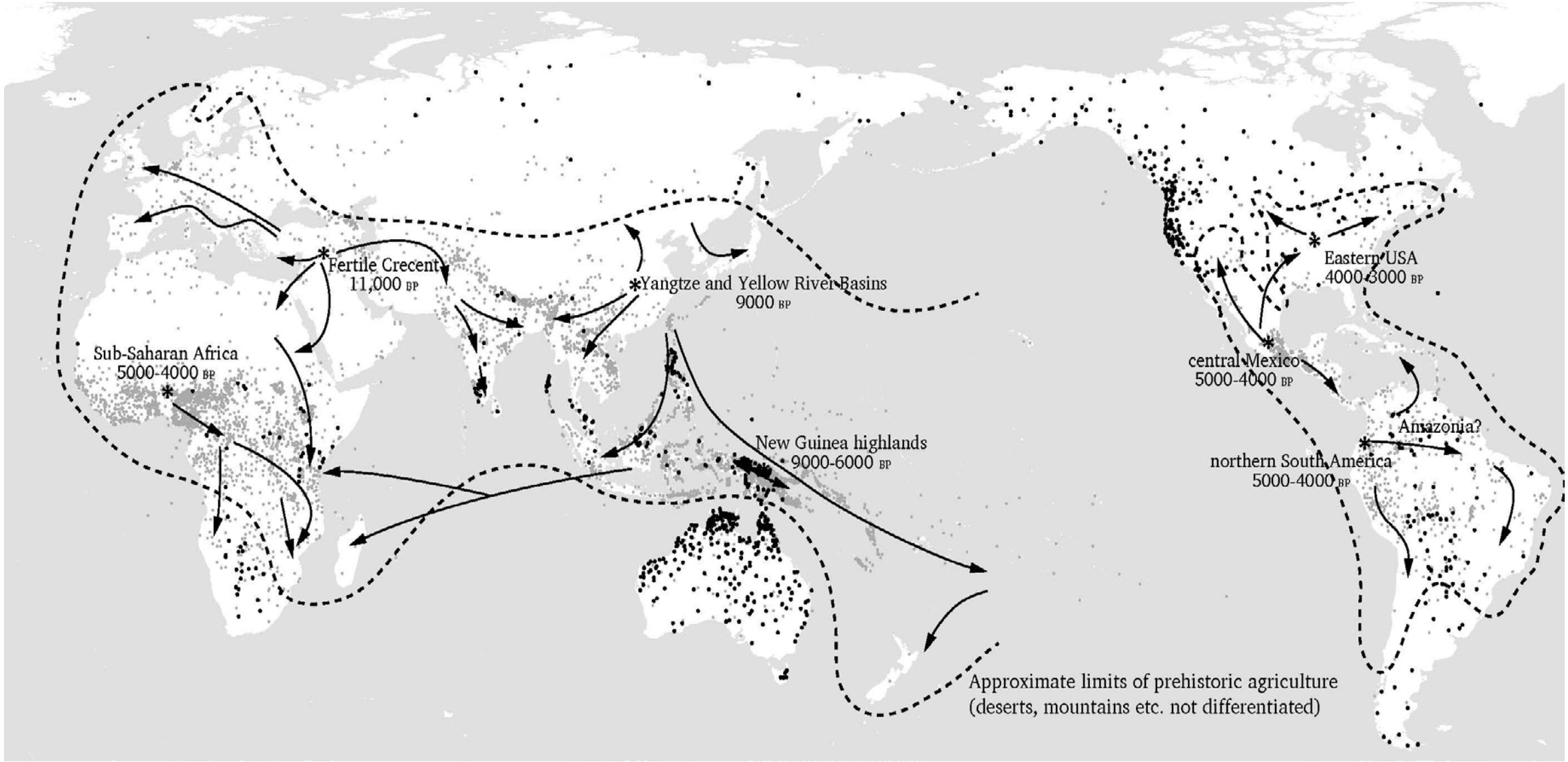
> !!! but once a small family has a forager language, it is very likely (87%) to only have forager languages (not shown here)

Three conclusions of this survey

The modern geographical and genealogical distribution of forager languages:

1. is first of all a **function of the scope and success of the Neolithic revolution**
2. is compatible or even gives evidence in favor of the assumption that **foragers also produced geographically and genealogically large linguistic lineages** (against a possible interpretation of the Renfrew-Bellwood hypothesis).
3. speaks **against** revisionist approaches to **certain foraging populations as being secondary products of economic specialization**

1. Cause of Modern Distribution of Foragers



1. Cause of Modern Distribution of Foragers

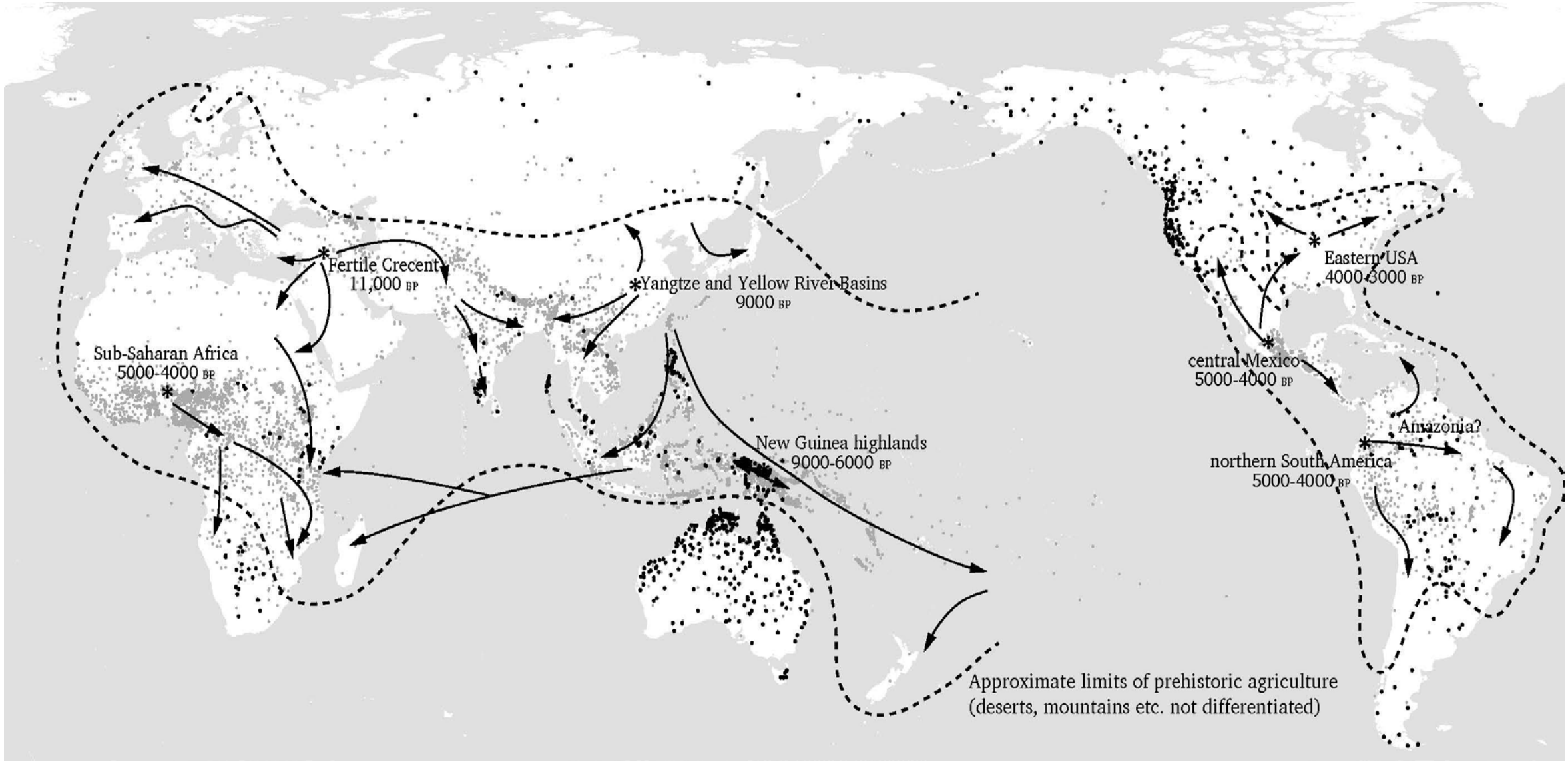
- Foragers adapted in principle to very diverse environments which precludes any correlation with environmental factors

- Geographical origins and trajectories of the Neolithic revolution quite well specified by archaeology etc.

> co-varies with forager distribution in various significant ways

- Foragers more widely distributed across the globe than “traditional” food producers

1. Cause of Modern Distribution of Foragers



1. Cause of Modern Distribution of Foragers

- Three large areas strongly predominated by forager languages:
  Australia, North America, South American cone

> different types of traditional food production not successful

- Two large areas with compact distribution of forager languages:
  Siberia, Kalahari Basin

> foraging only competed with traditional (?more tolerant) herding

- Dense forager distributions persisting into the recent past correlate strongly with relative absence of other competing subsistence modes

2. Forager language expansion

- “Farming/language dispersal hypothesis” by Bellwood-Renfrew can be used to combine Neolithic revolution with explaining the linguistic profiles of food-producing vs. foraging peoples (cf. Wichmann 2008)

- Do foraging lineages show an inherent overall tendency to be small in terms of geographical spread and language-number size?
  - In many areas, YES! - subject to the Neolithic revolution
  - In North America and Australia, NO! – the only areas which until recently remained undisturbed from subsistence competition

2. Forager language expansion

"Absence of evidence is not evidence of absence!"

Areas occupied today by farmers are "black boxes" with respect to the geographic and genealogical lineage profile of previous forager occupation

> in principle compatible with any hypothesis, including the idea that large Neolithic language families simply replaced large pre-Neolithic language families

3. Revisionist approaches to forager groups

- After “Man the hunter” a number of insightful studies rightly called for a more nuanced perspective on the recurrent modeling of the pre-Neolithic human past by modern forager analogues in general as well as in individual world regions, particularly regarding two in principle independent points:

  - a) mostly unlikely isolation of foraging societies
  - b) non-universal originality of foraging subsistence

    > useful distinction of “primary” vs. “secondary” foraging in view of clear cases for “agricultural devolution” (Mlabri, Tasaday, etc.)

3. Revisionist approaches to forager groups

- Explicit or implicit extension of the concept of “secondary foraging” as “economic specialization” to entire geographical areas:
  - Amazonia
  - Papua New Guinea
  - India
  - Penan in Borneo
  - Pygmies in Africa
  - San in Kalahari Basin
  - …

3. Revisionist approaches to forager groups

- Non-linguistic considerations aside, the linguistic facts of our survey alone predominantly contradict such claims
- If foraging is secondary, deriving from a subsistence shift of a population that originally had a food-producing culture, their language should belong to a language family that is likely to have had a food-producing ancestor
- Many forager languages do indeed belong to the same family as some food producing neighbor(s) (e.g. Central Africa, India, South East Asia, Pacific)

> Such linguistic cases do not rule out (nor imply) secondary foraging

- But many foraging languages (notably in Kalahari Basin, Amazon, Papua New Guinea) belong to independent linguistic lineages

> Secondary foraging is highly unlikely on purely linguistic grounds

3. Revisionist approaches to forager groups

- Foraging “reversal” entertained in particular for tropical rain forest environment which has been generally viewed as impedimental for independent foraging subsistence: Headland 1987, Bailey et al. 1989
- But considerable correlation of forager languages and linguistic-genealogical isolation in such relevant areas as Amazonia, Papua New Guinea, Andaman Islands (Central Africa, South East Asia, and Philippines give evidence for forager isolation in other, genetic terms)
- Recurrently controversial forager language status in such rain forest areas as Papua New Guinea or Amazonia may even shed light on “incipient” food production in secondary “non-centers” (Harlan 1971)

Linguistics and the study of foraging societies

- Attempt to show that linguistically oriented assessments of forager societies, even on a relatively abstract level, can inform crucial issues of the nature and history of foragers and humans more generally

- CHAGS in Vienna appears to witness an increased interest in the linguistic aspects of foragers