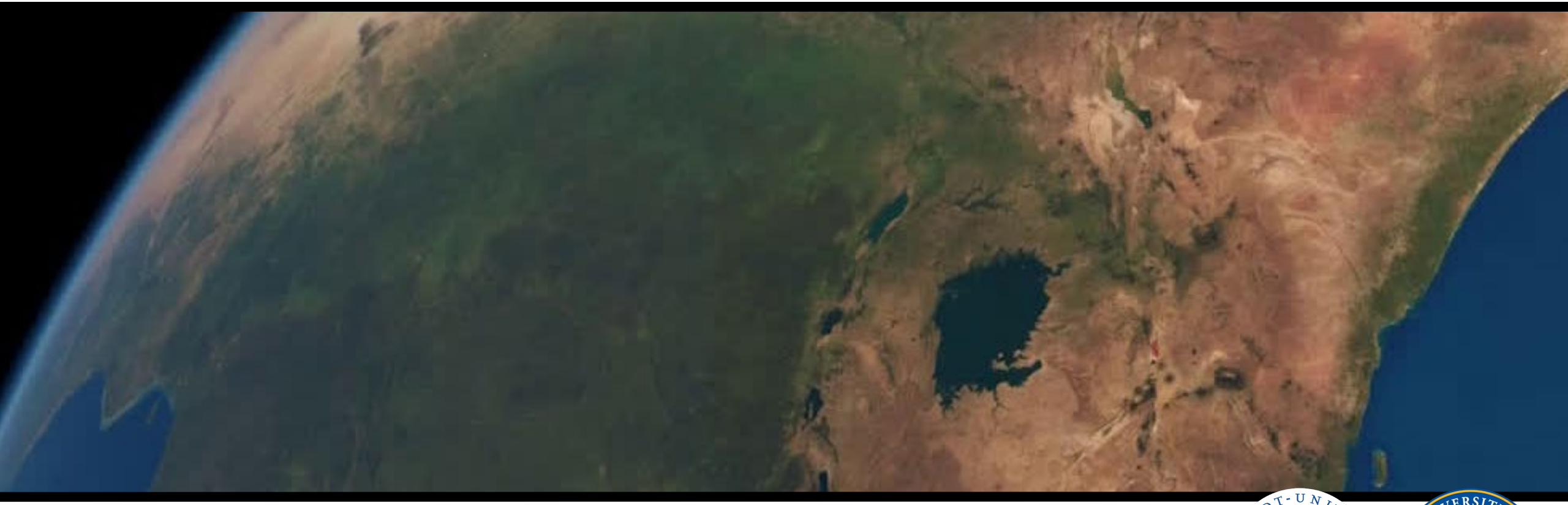
Assessing the past cultural diversity of East Africa



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Preliminaries

- East Africa conceived of here parallel to the LHEAf project: focus on Tanzania and Kenya

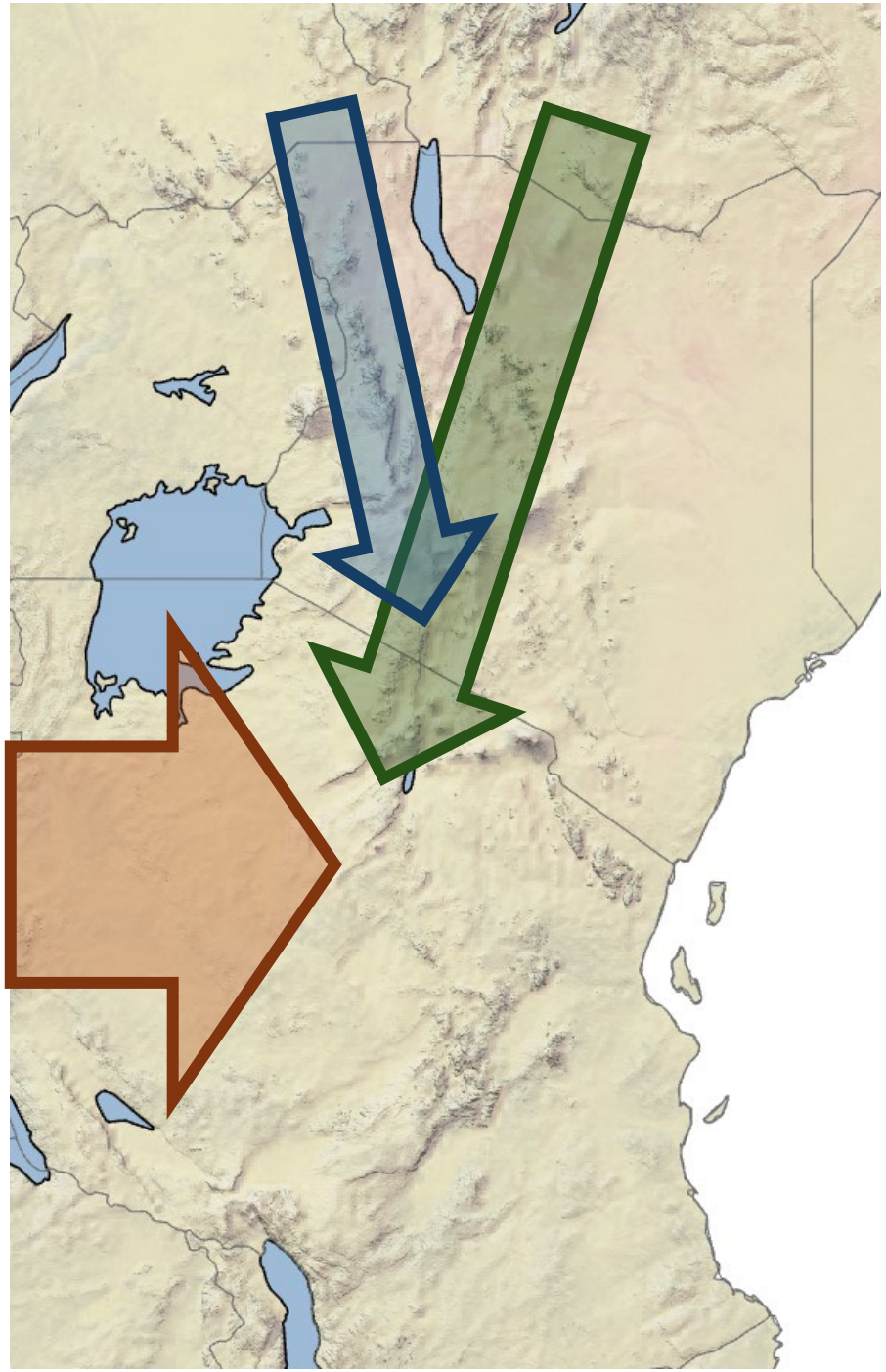
- but adjacent areas also included, as they host populations which were potentially present in East Africa in the past:

  southern Ethiopia, Uganda, Somalia
  (DRC, Burundi, Rwanda)

Preliminaries

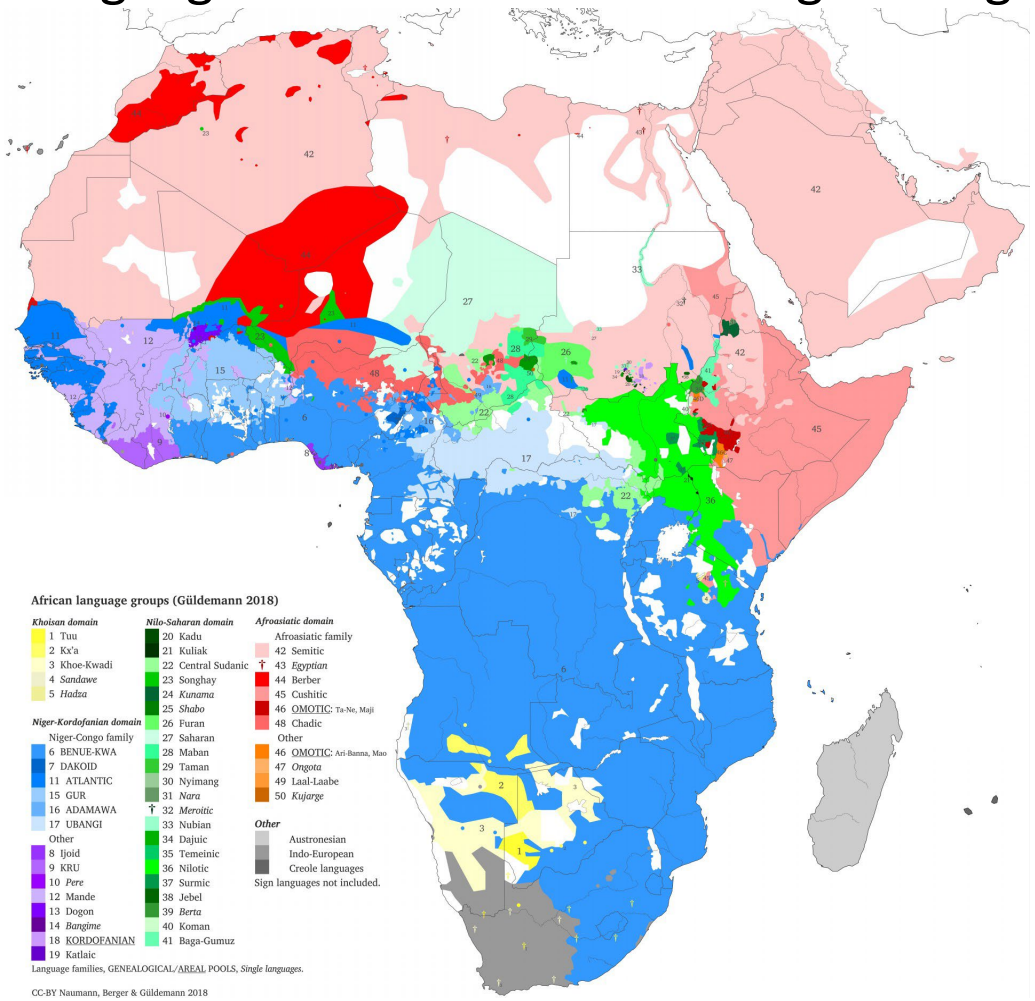
Recurrent combined archaeo-linguistic hypothesis about the spread of food production

- First expansion of **Cushitic speakers** from Ethiopia practicing farming and pastoralism (Ehret 1982; Ambrose 1982, 2001) – **"Savannah Pastoral Neolithic"**
- Second expansion of **Nilotic speakers** – **"Elmenteitan (Pastoral Neolithic)"**
- Later expansion of **Bantu speakers** - **Iron Age farming**



Linguistics

Language classification in Africa: genealogical



Map 1: Many modern linguistic lineages in Africa (Güldemann 2018b)

+ Greenberg's (1963) classification with just four African super-"families" widely accepted but methodologically and empirically not robust (cf., e.g., Campbell and Poser 2008)
> Africa is genealogically far more diverse - Map 1

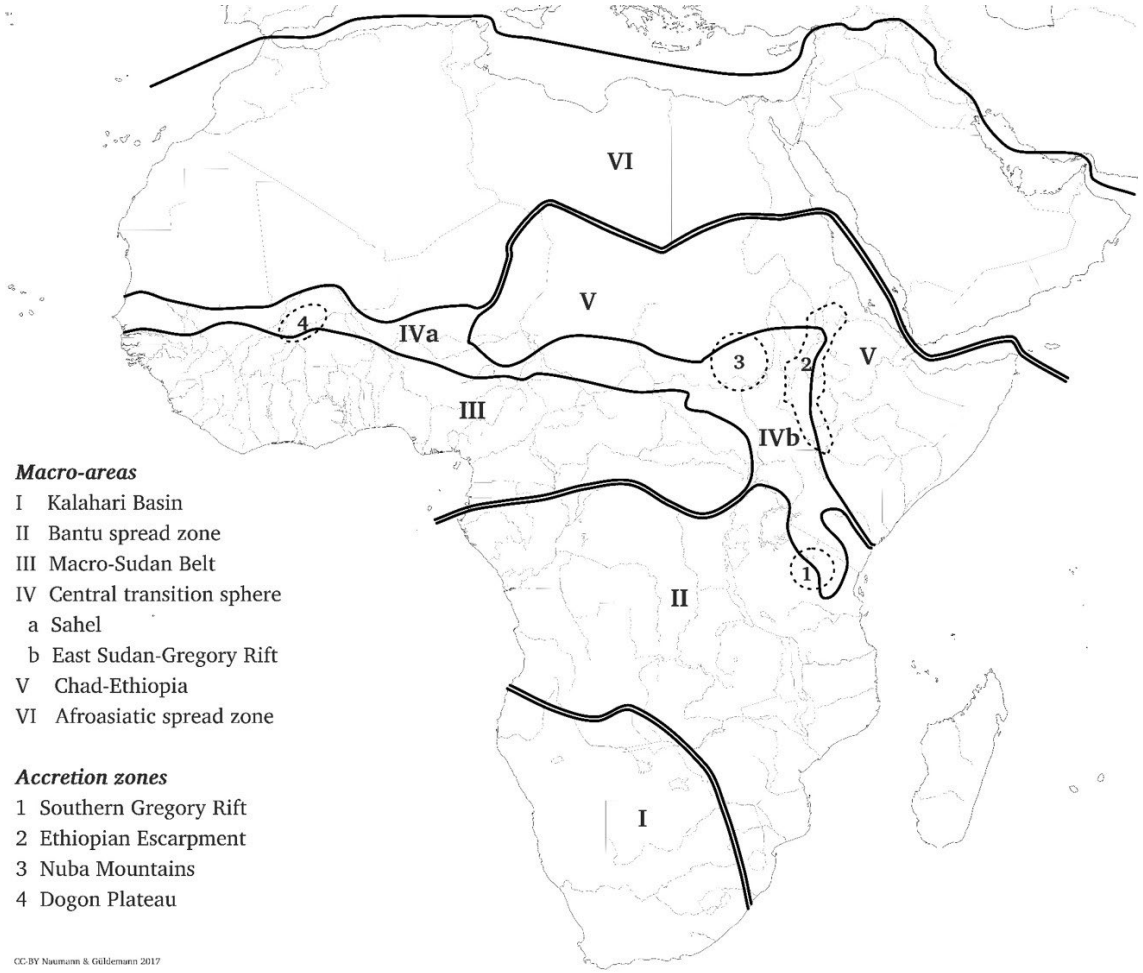
a) 2 geographically and demographically large families: Niger-Congo and Afroasiatic occupying over ⅔ of the continent and representing 80% of its languages

b) 3 intermediate families: Central Sudanic, Nilotic-Surmic, Mande

c) 35+ small units (including more than ten singletons) without convincing affiliation

Linguistics

Language classification in Africa: areal



Map 2: Macro-areas and accretion zones of Afrabia (Güldemann 2018a)

+ internal macro-areal partition of Afrabia into:

a) 2 genealogically homogeneous spread zones: II, VI - coherence due to inheritance

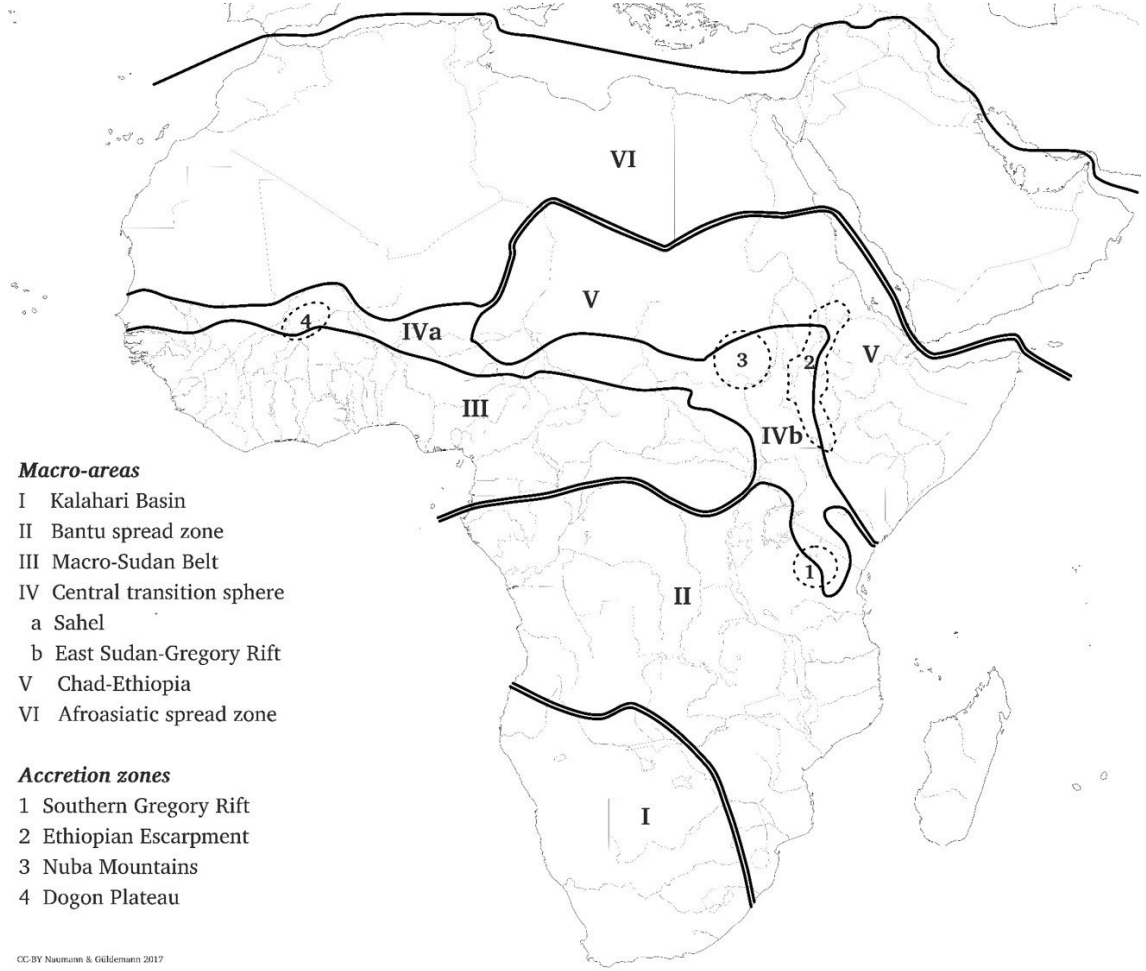
b) 3 genealogically diverse macro-areas: I, III, V - coherence due to contact

c) 1 non-coherent transition sphere: IV (2 subareas a and b) - separates II+III from V+VI

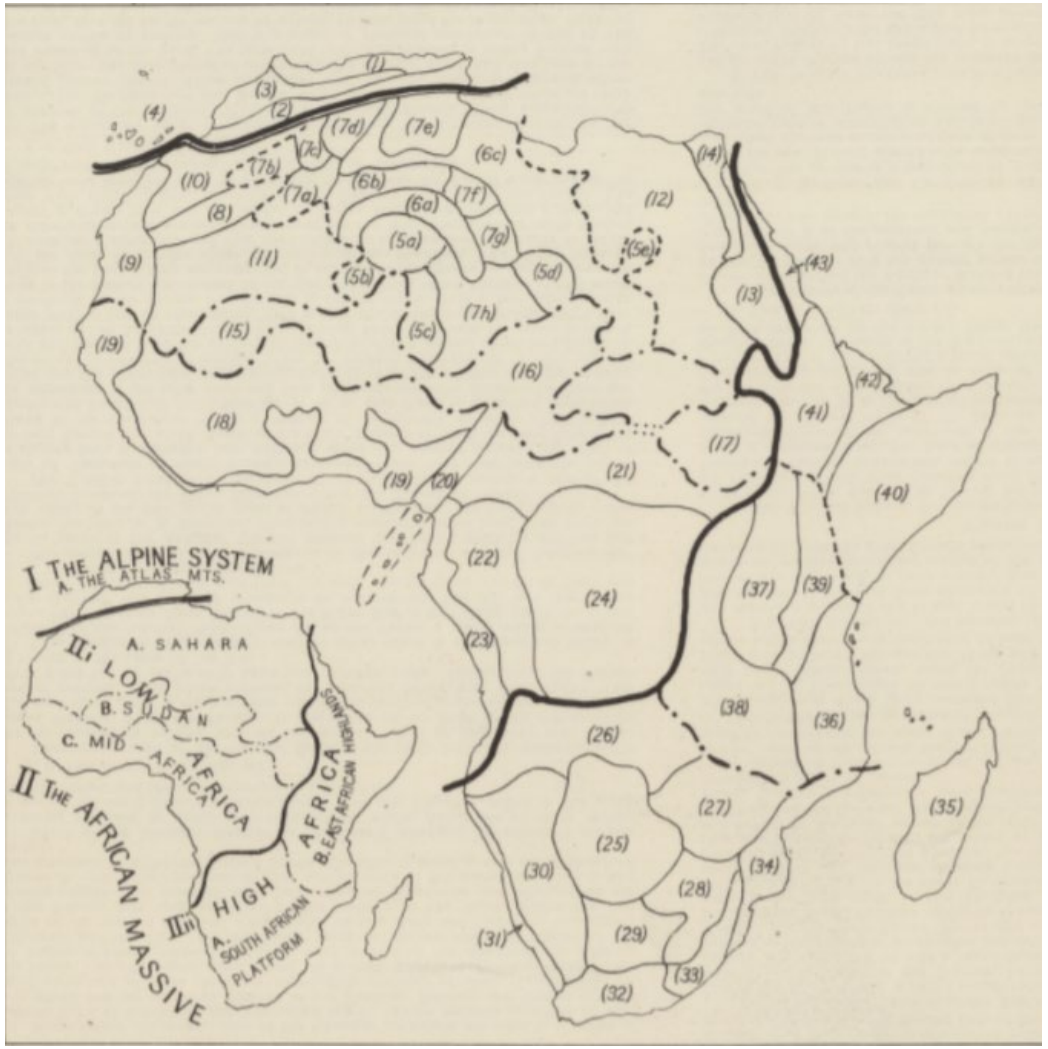
d) 4 genealogically highly diverse but small accretion zones: 1, 2, 3, 4 all within IV

Linguistics

Language classification in Africa: areal



Map 2: Macro-areas and accretion zones of Afrabia (Güldemann 2018a)



Map 3: High Africa in physiography and linguistics (Lobeck 1946 > Güldemann 2019)

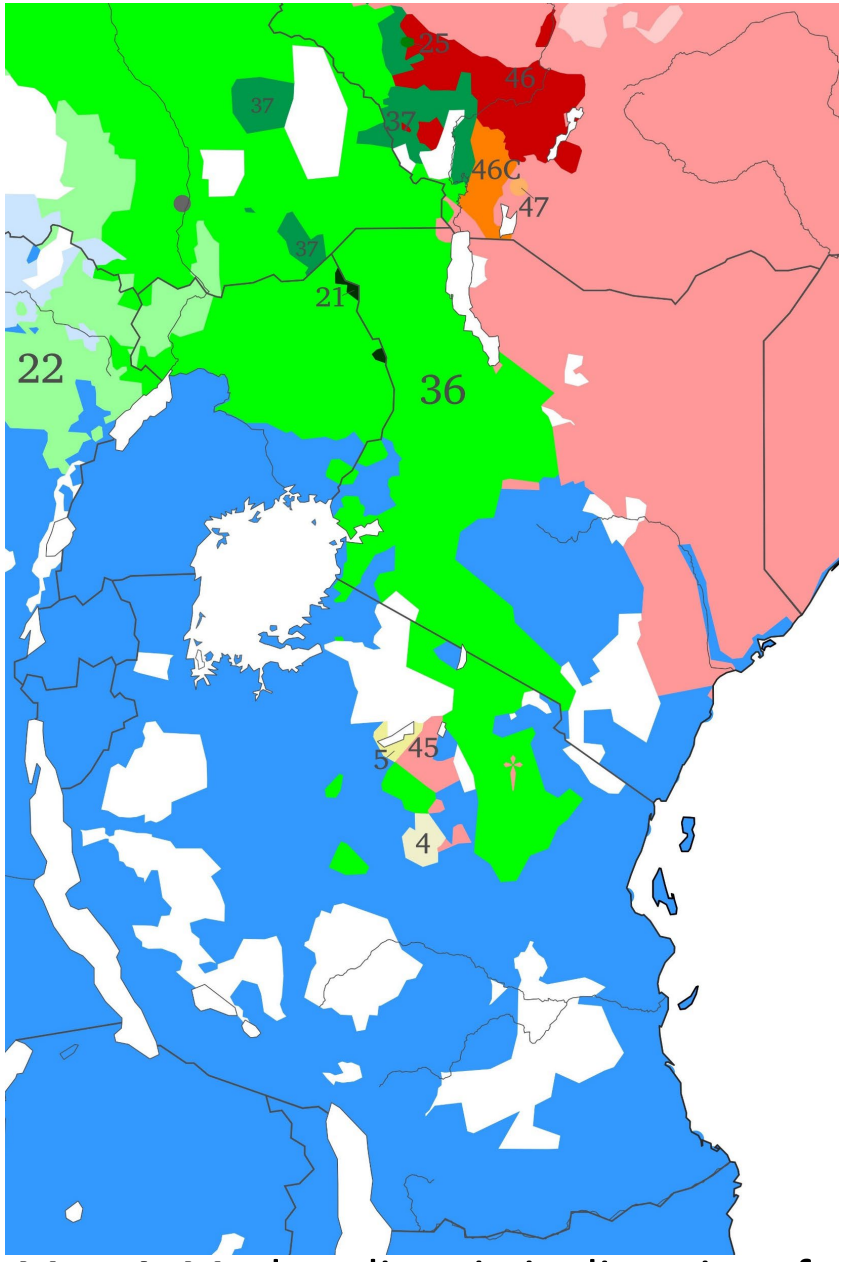
Linguistics

Ethno-linguistic profile of East Africa

No.	Basic unit (Highest order)	Greenberg (1963)
4	***Sandawe*** (?Khoe-Kwadi-Sandawe)	KHOISAN
5	***Hadza***	KHOISAN
6	**Bantu** ~ Benue-Kwa (Niger-Congo)	NIGER-KORDOFANIAN
21	Kuliak	NILO-SAHARAN
22	Central Sudanic	NILO-SAHARAN
36	**Nilotic** (Nilotic-Surmic)	NILO-SAHARAN
37	Surmic (Nilotic-Surmic)	NILO-SAHARAN
25	*Shabo*	-
45	**Cushitic** (Afro-Asiatic)	AFRO-ASIATIC
46A	Ta-Ne (Afro-Asiatic)	AFRO-ASIATIC
46B	Maji (Afro-Asiatic)	AFRO-ASIATIC
46C	Ari-Banna ~ South Omotic	AFRO-ASIATIC
46D	Mao	AFRO-ASIATIC
47	*Ongota*	-

Notes: **Narrow East Africa**, *Isolate*, 46 = Omotic areal pool

Table 1: Linguistic lineages in wider East Africa (keyed to Map 4)



Map 4: Modern linguistic diversity of wider East Africa

Linguistics

Ethno-linguistic profile of East Africa

- embedded in High Africa (cf. Map 3)
- extension of transition zone IVb

> sandwiched between 3 African macro-areas:

II Bantu Spread zone

III Macro-Sudan Belt

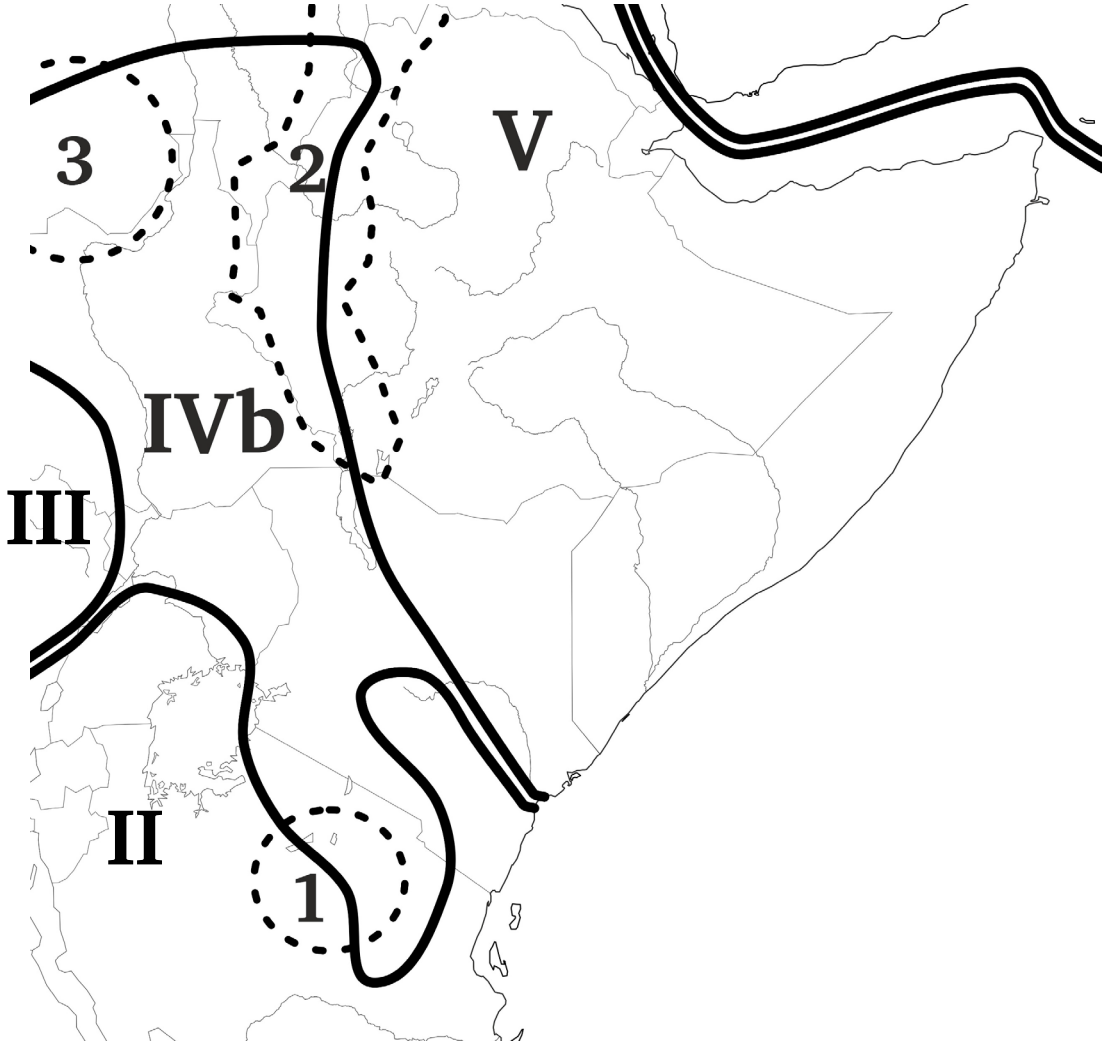
V Chad-Ethiopia

- involves two accretion zones:

1 Southern Gregory aka Tanzanian Rift (Kießling, Mous and Nurse 2008)

2 Ethiopian Escarpment

East Africa best seen as an integral part of Transition zone IVb as a kind of migration hub



Map 5: Areal setting of East Africa (cf. Map 2)

Linguistics

Dynamics of linguistic populations

- immigration of linguistic populations with food production:

Bantu from West	Bantu Spread zone II
Nilotic from North(west)	Transition zone IVb
Cushitic from North(east)	Chad-Ethiopia V

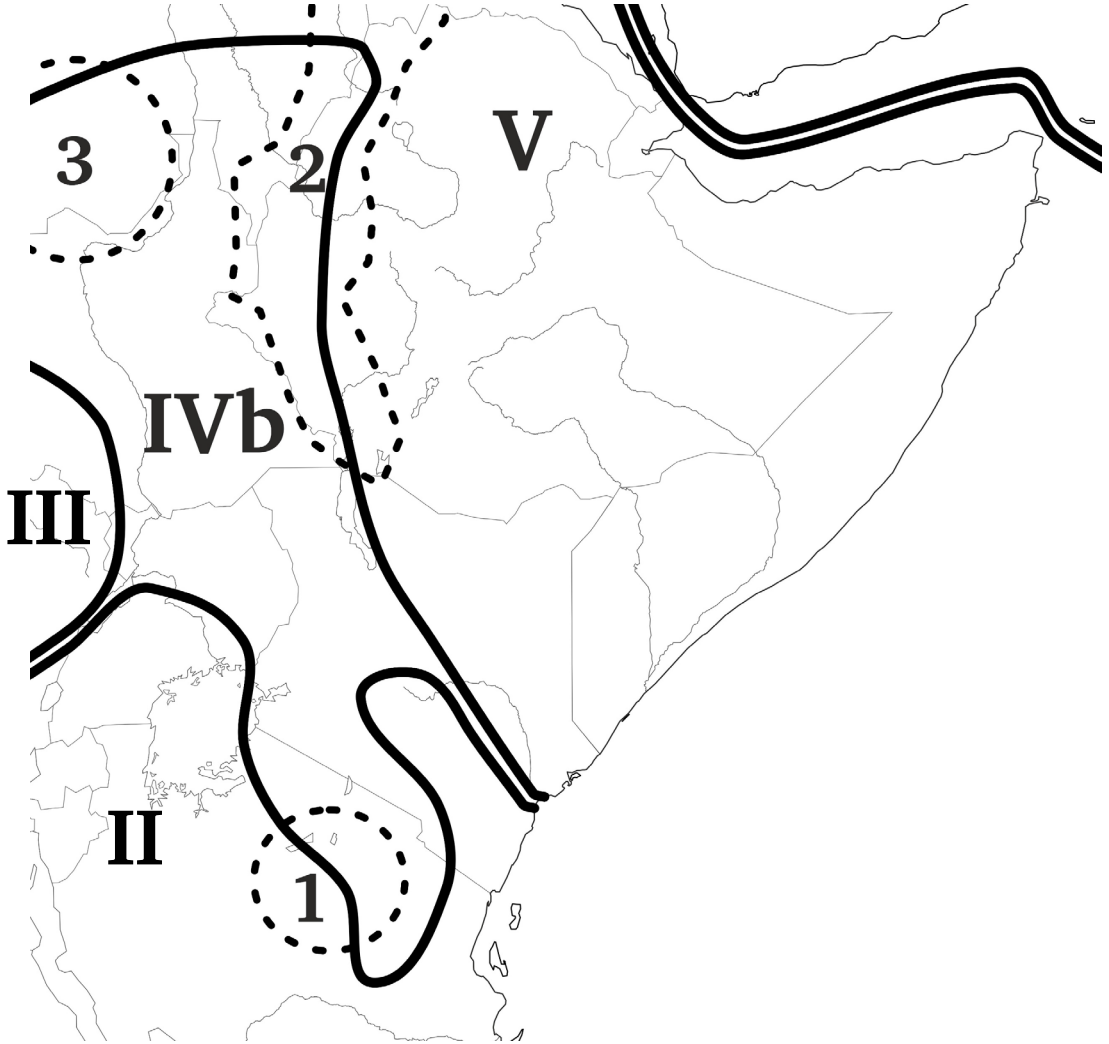
- longer presence of forager lineages:

Hadza	Accretion zone 1
Sandawe	Accretion zone 1

> but no clear evidence, alternatively:

a) forager immigration

b) forager shift to immigrant prestige language



Map 5: Areal setting of East Africa (cf. Map 2)

Linguistics

Dynamics of linguistic populations

Macro-areas (with eastern subareas) within High Africa	Lingual ingressives (= clicks)	Glottalic egressives (= ejectives)	Lateral obstruents	Head-final noun marking	Linguistic male-in-law avoidance
V (Chad)-Ethiopia		X	X	X	X
IVb East Africa	**X**	**X**	**X**	**X**	**X**
II Bantu spread zone	(X)	(X)	X	X	X
I Kalahari Basin	X	X	X	X	X

Table 2: East African linguistic features shared across High Africa (Güldemann 2019)

+ East Africa also as integral part of a yet older macro-area High Africa (cf. Map 3)
> also with more recent repercussions associated with (agro)pastoral migrations
> betrays potentially older population linkages in and out of East Africa

+ Sandawe as a potential bridge between (Chad)-Ethiopia and Kalahari Basin in terms of:
a) linguistic typology (see Table 2)
b) potential genealogical link to Khoe-Kwadi in the south (Güldemann and Elderkin 2010)

Linguistics

Dynamics of linguistic populations

- intensive language contact and mutual influence across linguistic populations

- sometimes to the extent of misinterpreting it as a genealogical link, e.g., between parts of Nilotic and Cushitic~Afroasiatic revolving around “Nilo-Hamitic” concept (as late as Hohenberger 1975)

- important role of “substrates“ = layer of linguistic features in a language/lineage that is due to shift-induced interference from another defunct language/lineage (cf. Thomason and Kaufman 1988)

Linguistics

Dynamics of linguistic populations

Post-super-strate	Source area	Colonized area	Sub-strate	References
1 South Cushitic	V	IVb-1	? (Hadza, Sandawe)	Ten Raa (1969); Kießling (2002); Kießling and Mous (2003); Kießling, Mous, and Nurse (2008)
2 Bantu E, F, G, J	II	IVb	Cushitic, Nilotic	Ehret and Nurse (1981), Cohen (1983), Nurse and Rottland (1991/2), Nurse (1991, 1994, 2000a, b), Tosco (1992), Rose (2001), Mous (2003)
3 South and East Nilotic	IVb North	IVb South	Cushitic, Kuliak	Heine (1976b); Heine, Rottland, and Voßen (1979); Winter (1979); Heine and Vossen (1983); Rottland (1983a, 1996); Brenzinger (1992); Ngure (2015)
4 South and West Nilotic	IVb North	IVb South	Bantu	Rottland and Okombo (1986, 1992), Adhiambo (1991), Nurse and Rottland (1991/92), Dimmendaal (1995a, b, 2001), Kuteva (2000), Reh (2000), Rose (2001), Wrigley (2001), Hieda (2011)

Table 3: Linguistic substrate (candidates) in East Africa

Linguistics

Dynamics of linguistic populations

- substrate identified in particular by differential linguistic-structural profiles within a lineage as a function of the areal context - candidates for areally acquired features in East African colonizing lineages:

  - Bantu: loss of tone
  - Nilotic: innovation of sex-based gender
  - Cushitic: head-initial word-order traits, clause-second clitic cluster

- structural arguments for linguistic substrate often supported by other evidence

> e.g., current sociolinguistic patterns (Winter 1979, Brenzinger 1992, Ngure 2015) support shift of Cushitic speakers to Nilotic and Bantu languages assumed for the past

Linguistics

Dynamics of linguistic populations

+ wide-spread recent and current presence of forager populations relevant for unknown substrates

a) language isolates:

- Hadza, Sandawe (if not related to Khoe-Kwadi)
- (Shabo, Ongota in Horn of Africa)

b) groups with unclassified languages as potential isolates:

- Serengeti Dorobo (Meitaya et al. 2014)
- Hamba (Moser 1987, p.c.; Sommer 1992)

c) languages within lineages involving mostly food-producing groups:

- Cushitic: Aasax, Kw'adza; Dahalo; Boon; Yaaku, Waata; Elmolo, Aweer~Boni
- Nilotic (South): Omotik; Akie, Okiek~Sogoo

d) groups within food-producing speech communities:

- Nilotic (East): Maa (Rottland and Vossen 1977), Turkana (Stiles 1993)
- Bantu (coastal): Mijikenda etc. (Möhlig 1986; Walsh 1992/3, 2003)

> linguistic heritage largely lost but possible influence on colonizing lineages to be factored in

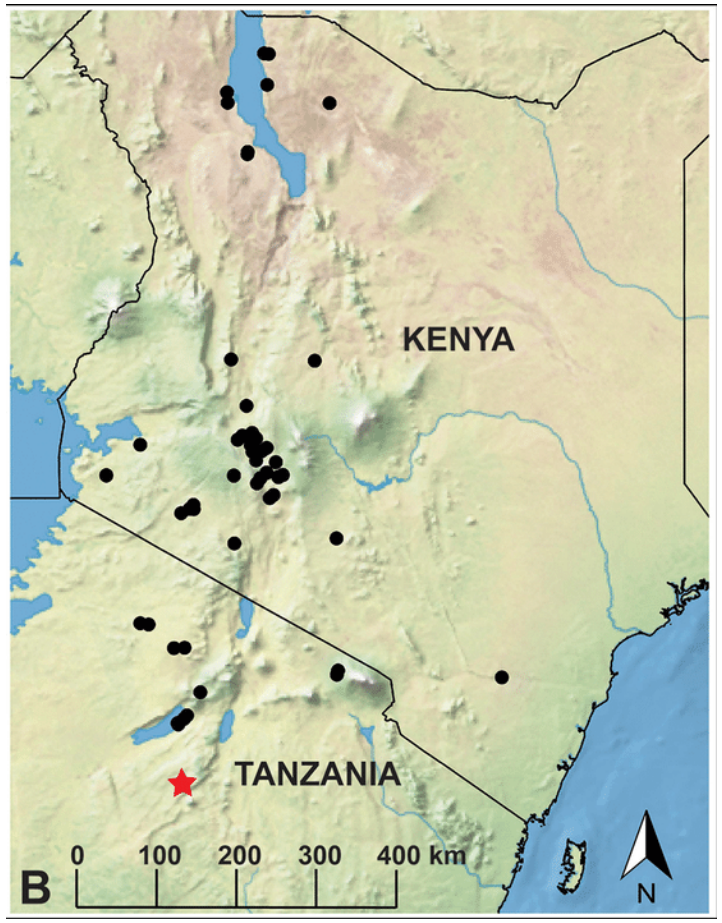
Archaeology - Preliminaries

- Multiple economic layers to consider: local (?and other) foragers, mobile herders (Pastoral Neolithic), Bantu farmers, Iron Age agropastoralists

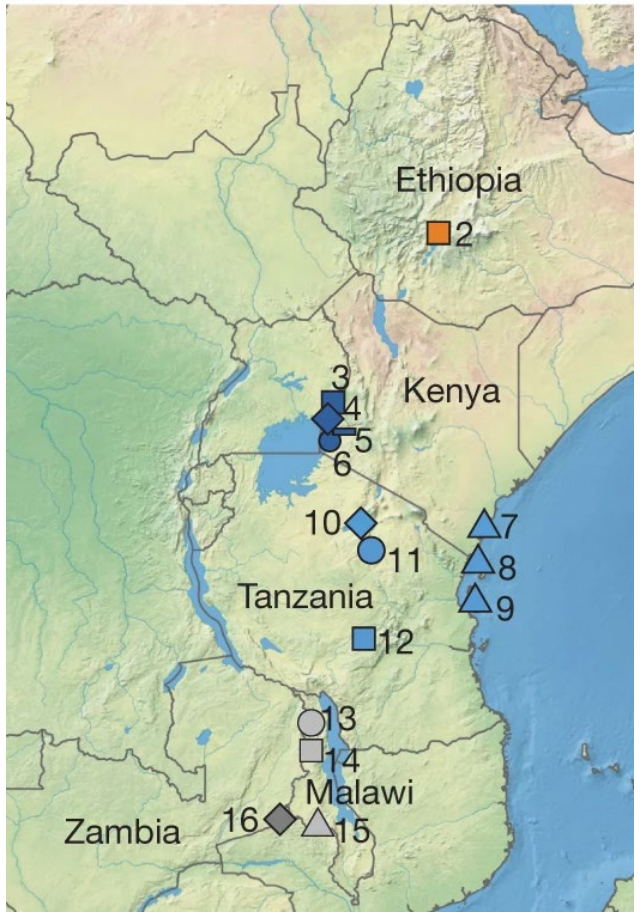
- Hypotheses proposed few migrations of homogenous populations lumped into archaeological “cultures” (notably, Savanna Pastoral Neolithic ~ SPN)

- Today expanded archaeology with high resolution radiocarbon dating and archaeogenetics now available to test different models

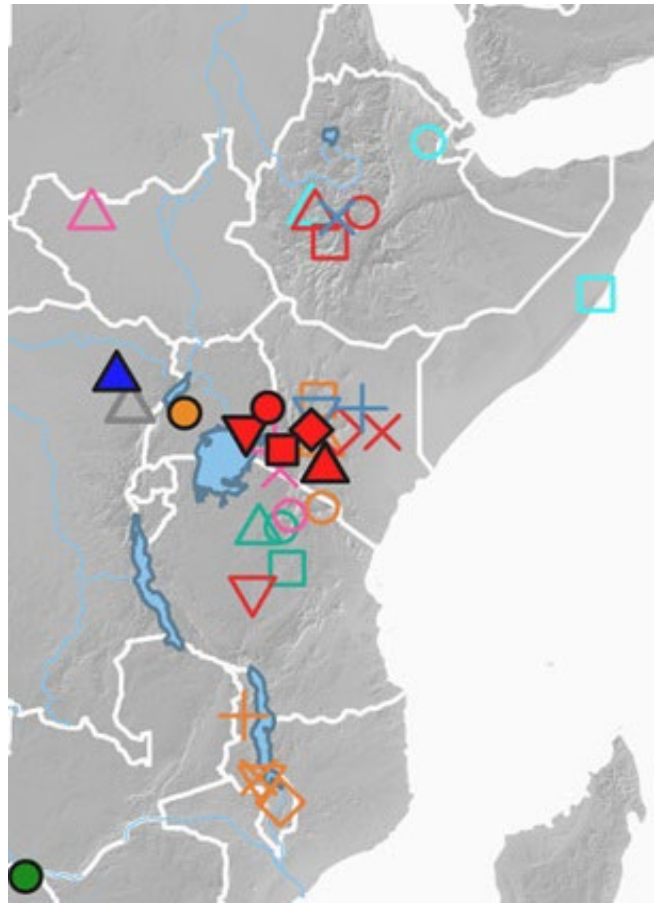
Archaeology - Preliminaries



Pastoral Neolithic sites



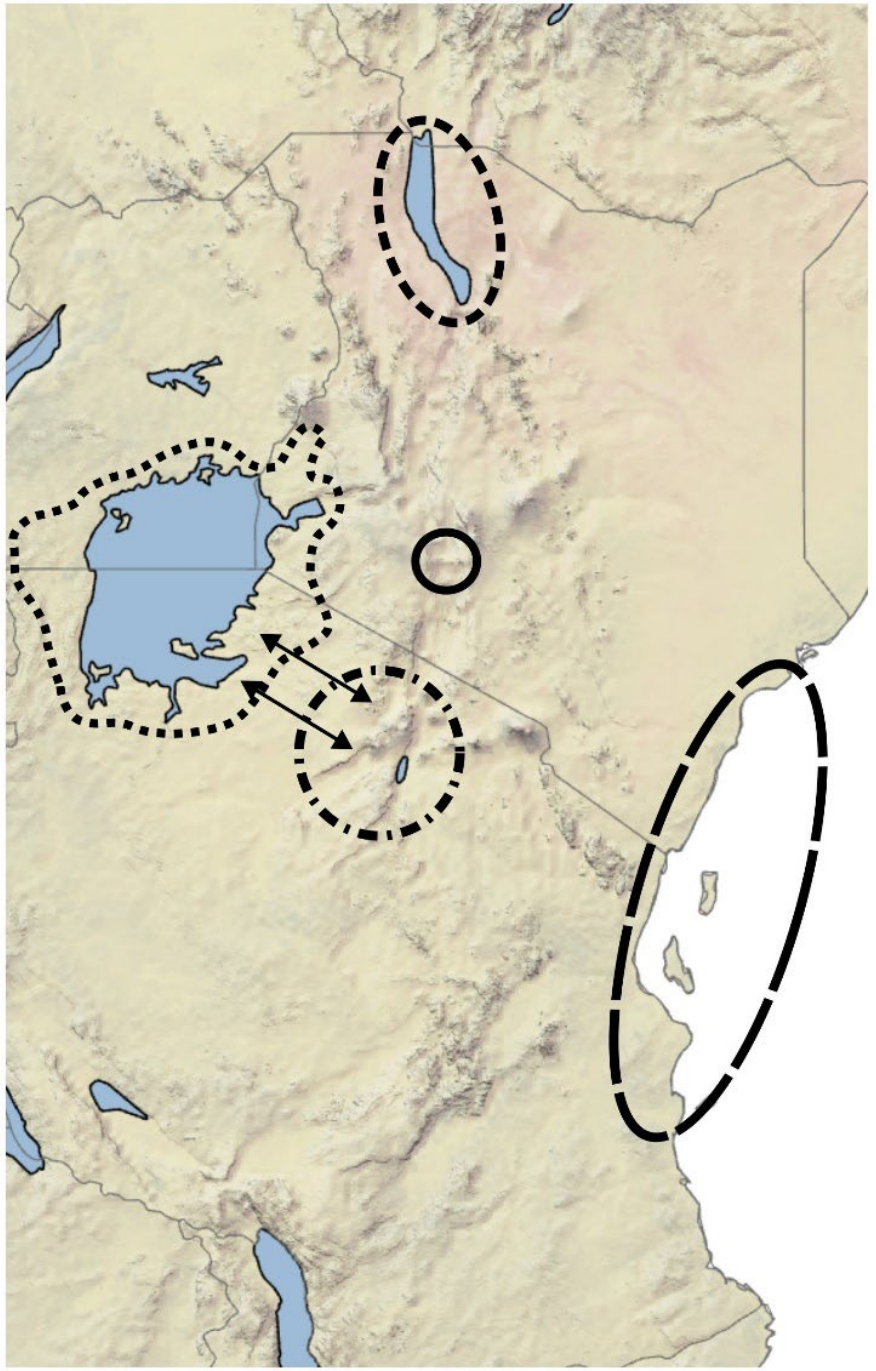
Forager aDNA samples



Neolithic and Iron Age aDNA samples

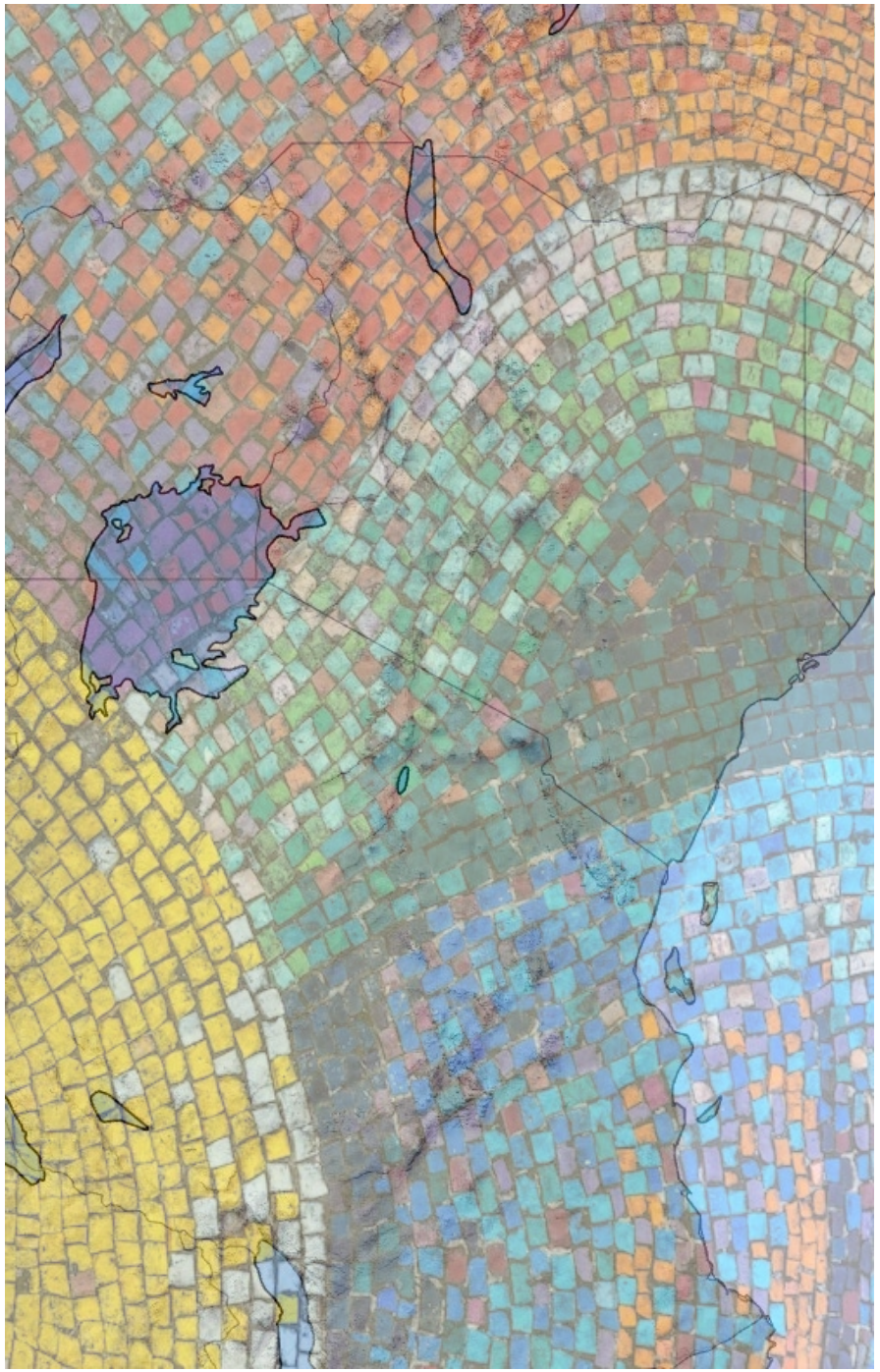
Archaeology - Foragers

- 12,000-2,000 BP: Regional groups with localized adaptations
- Stable lake basins (e.g. Victoria) supported complex pottery using foragers
- Elsewhere, many diverse groups but not well studied



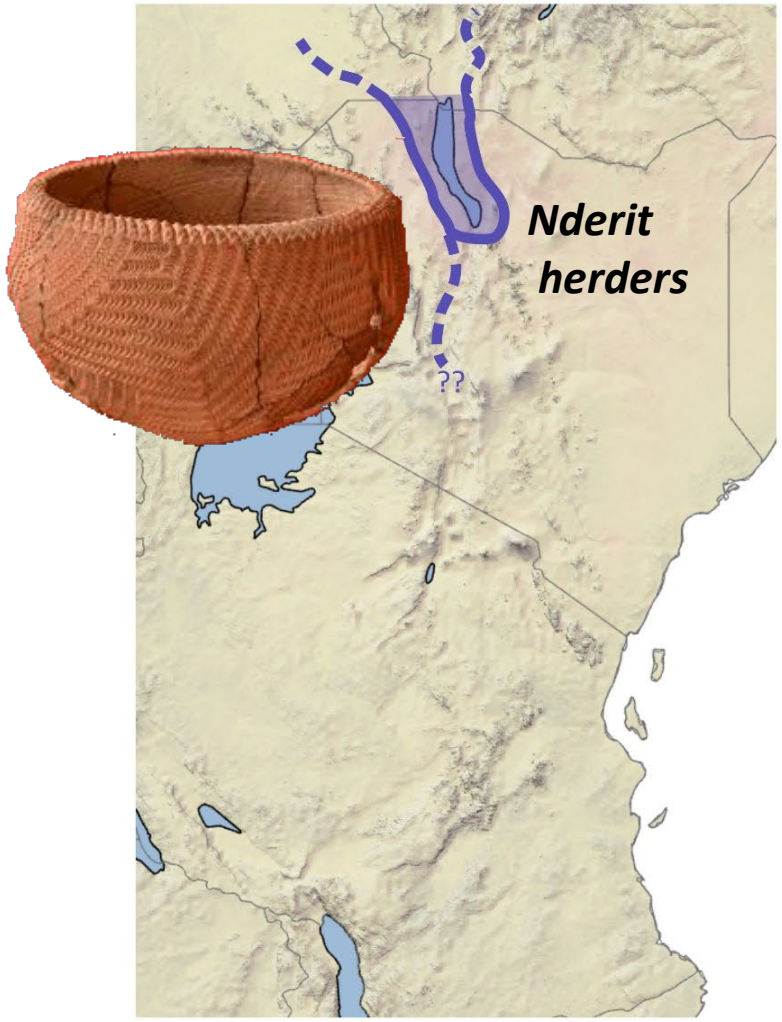
Archaeology - Foragers

- General assumptions of population homogeneity
- Regional patterns exist but data show a complex “mosaic” of diverse forager groups, including contact between more distant regions
- Potential for high linguistic diversity across space and time prior to arrival of food producers

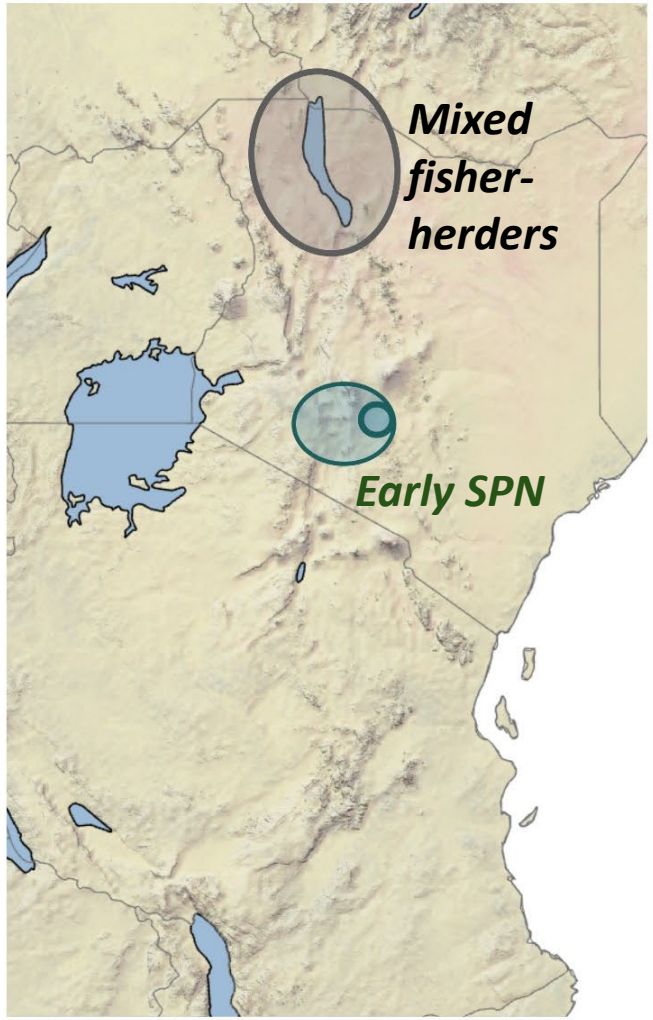


Archaeology - Pastoral Neolithic

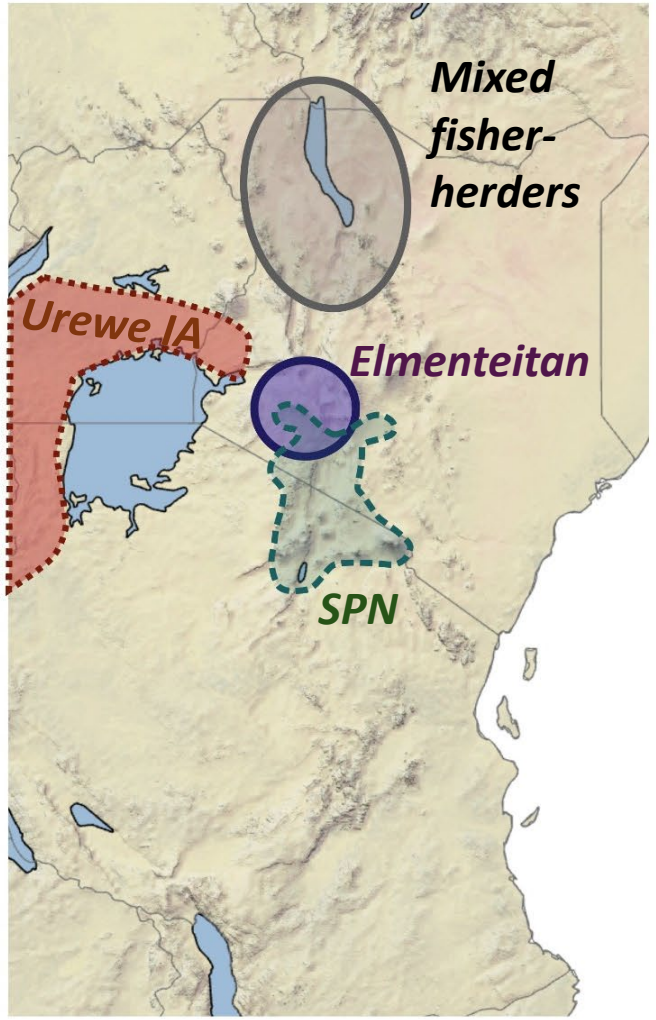
5000-4000 BP

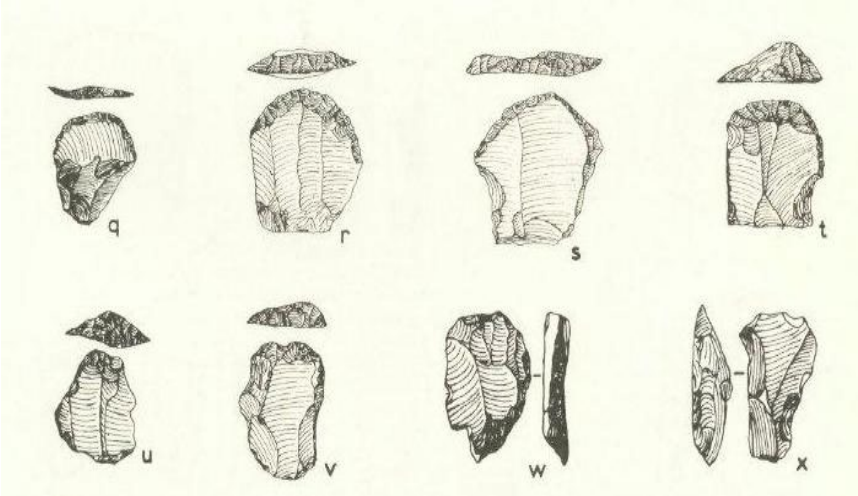


3300 BP



3000-2500 BP





Savannah Pastoral Neolithic (SPN)

Pottery is diverse: Narosura, Maringishu, Akira (TIP), Nderit, and others

Diverse stone tools, mortuary traditions, and subsistence

Sites concentrated in savanna ecotones,

Previously presumed to be Cushitic speakers

Elmenteitan Pastoral Neolithic

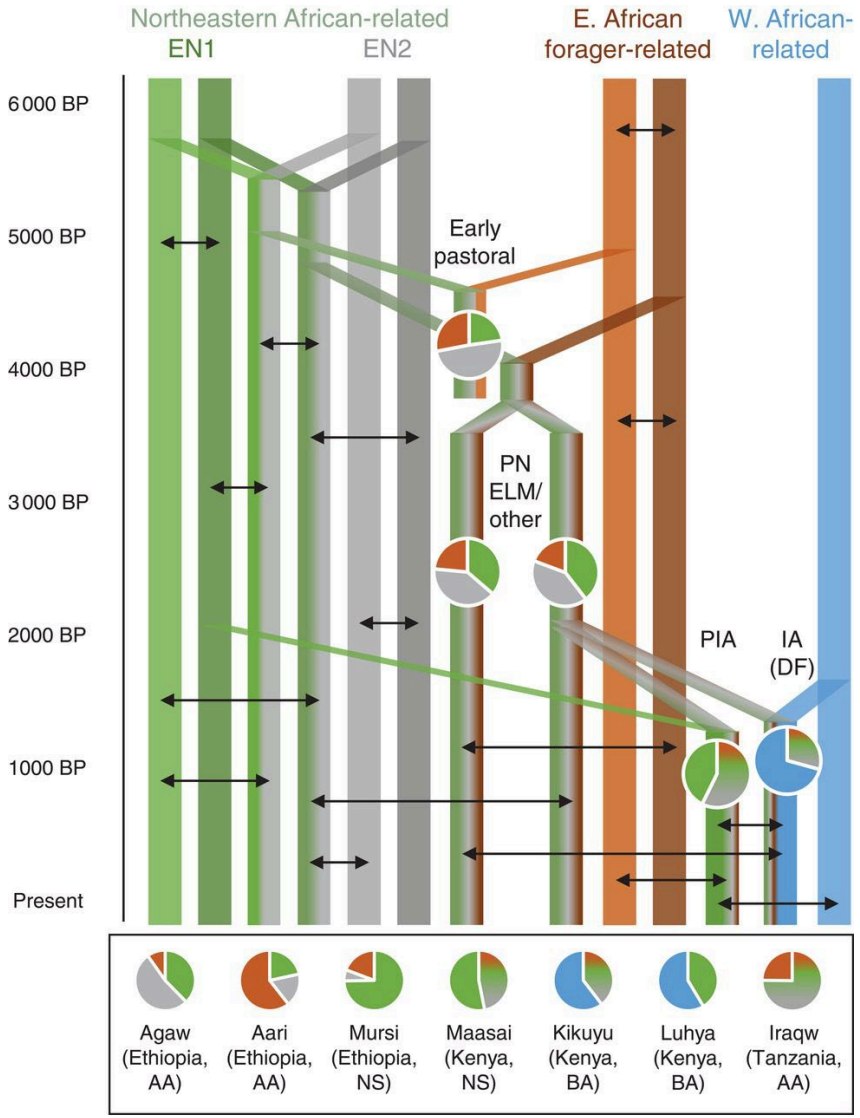
Minimally decorated lugged, spouted pottery with mica temper

Highly uniform lithic technology, long distance exchange for green obsidian

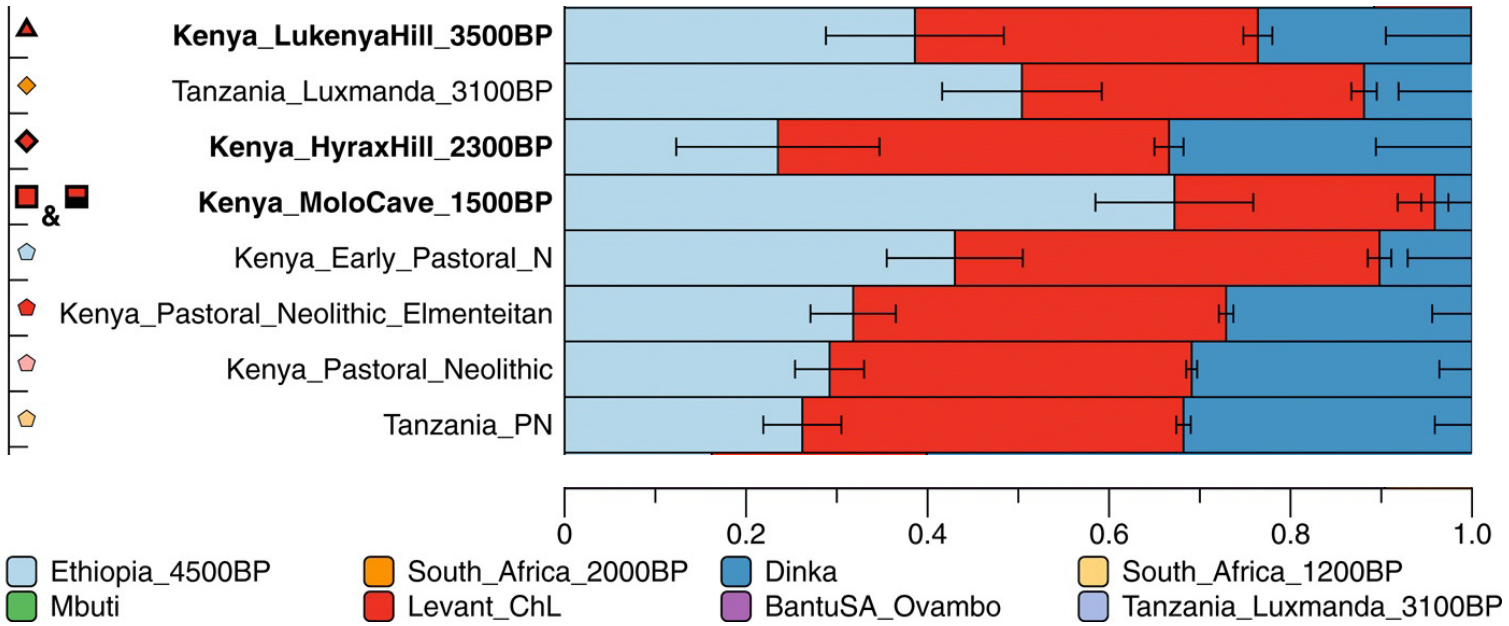
Sites concentrated in SW highlands

“Specialized pastoralism” with focus on milk production?

Archaeogenetics - Pastoral Neolithic

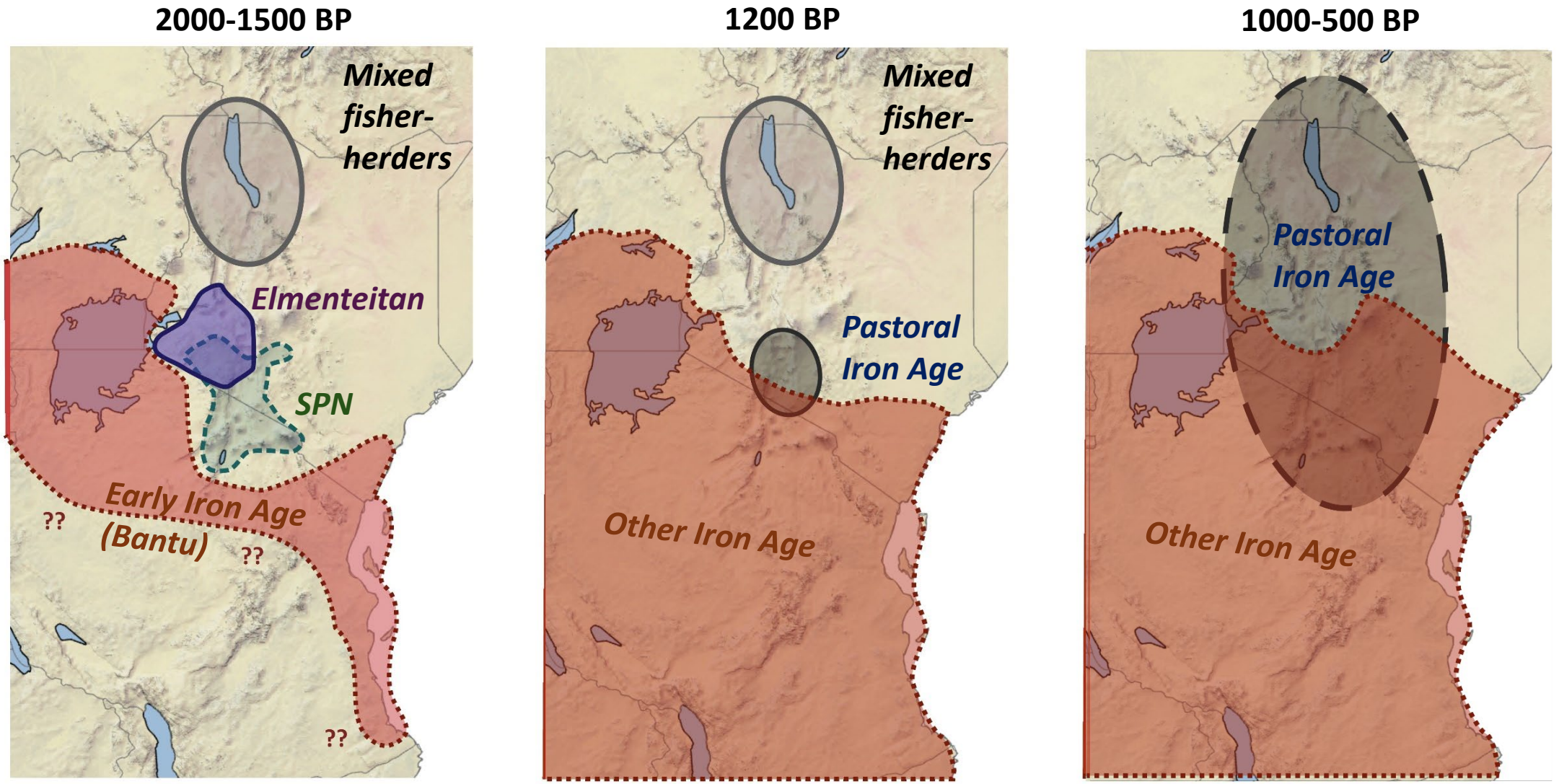


Genetic admixture of SPN and Elmenteitan individuals

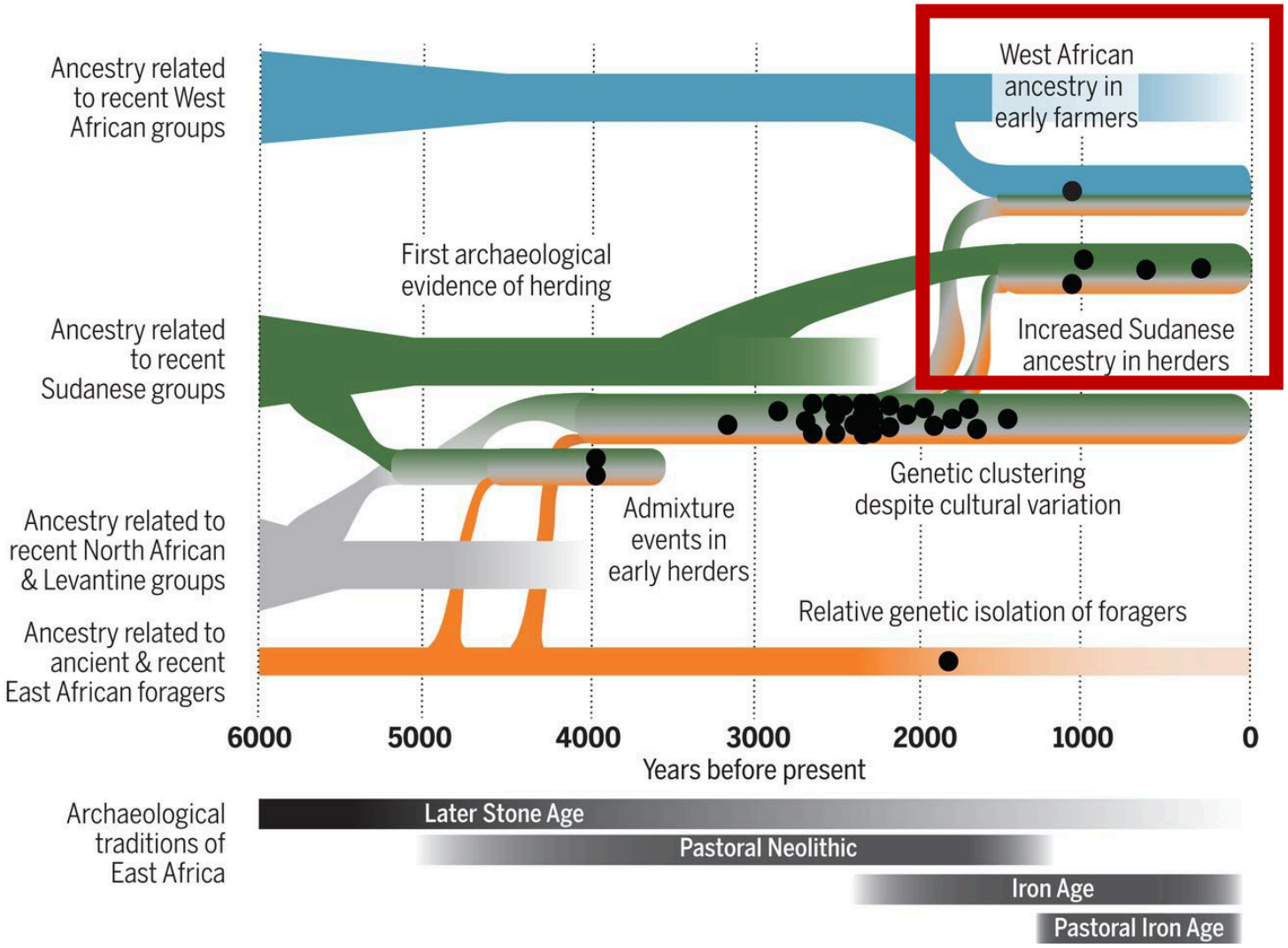


Prendergast et al. 2019; Wang et al. 2020

Archaeology - Iron Age

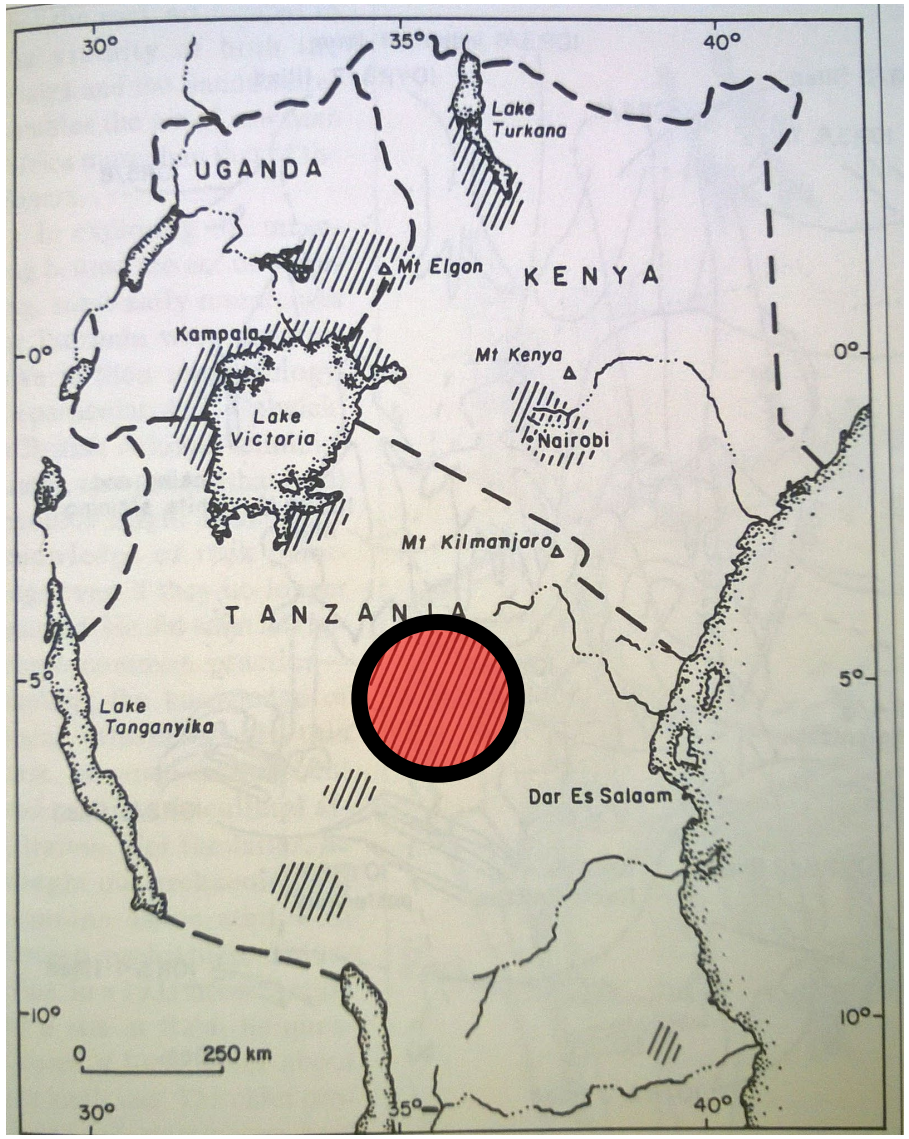


Archaeogenetics - Iron Age



- Expansions of populations with West African ancestry
- Spread of groups with more recent Sudanese/Nilotic ancestry
- But Iron Age poorly studied, samples from Rift and W. Kenya only

Rock Art



- Multiple models relating rock art traditions to populations (Odner 1971. Masao 1979, Phillipson 1976, Anati 1996, Coulson and Campbell 2001)

- General agreement: some traditions (e.g., in C. Tanzania) reflect foragers pre 3200 BP

- Schematic cattle across Kenya attributed to Pastoral Neolithic herders - but doesn't match up with group distributions

Rock Art

- Kessey (2011): Can't directly associate rock art with ethnic or economic groups

- **Left:** "Forager" figures Kondoa, Tanzania;
- **Top Right:** schematic cattle, Kenya;
- **Bottom right:** "Bantu" geometrics

Discussion

- Potential for much greater diversity in terms of both linguistic groups and archaeological cultures through space and time

- Intensive contact between diverse populations caused both language shifts and culture/ethnogenesis (rather than simple migrations of uniform groups)

- Due to complexity and data-gaps we normally cannot directly connect older archaeological cultures with modern ethnolinguistic groups

Discussion

Combining archaeology and linguistics

Archaeo-culture	**From ca.**	**Linguistic affiliation**	
		Traditional view	**To be reckoned with**
LSA	Holocene	? Hadza, Sandawe	?! ***others***
S(avanna) PN	3300 BP	? Cushitic, Nilotic	?! ***Pre-Sandawe, Kuliak, others***
Elmenteitan PN	3000 BP	? Cushitic or Nilotic	
IA farming	2500 BP	Bantu	?! ***Central Sudanic, Kuliak***
IA (agro)pastoralism	1200 BP	Nilotic, Cushitic, Bantu	