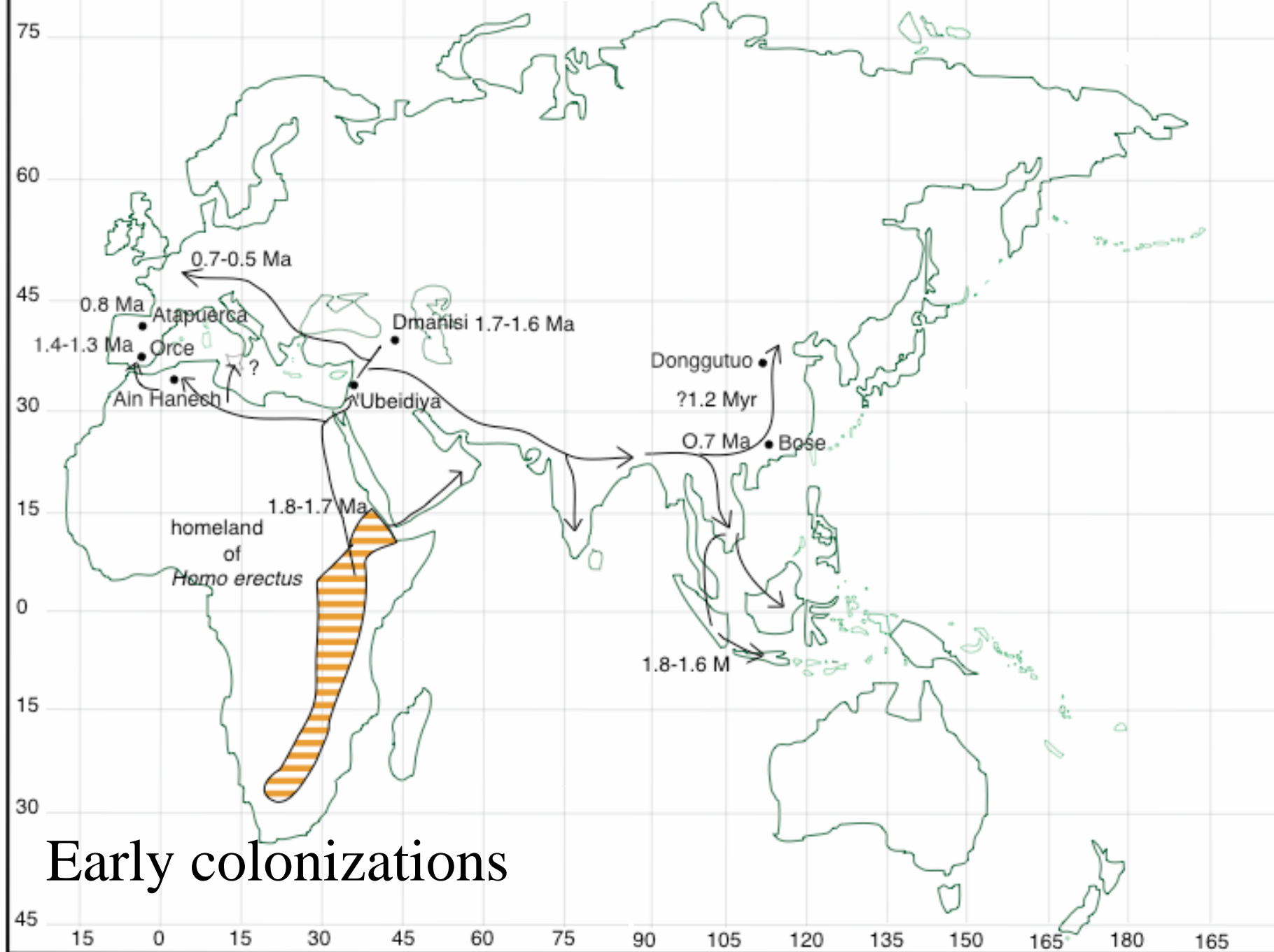


Human migrations: the cultural records

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Early colonizations

How do we trace prehistoric migrations?

- **ANSWER:** Follow the same culture along a geographic trajectory. The most common elements are the stone tools. Making stone tools results from guided, learned behaviour.
- What is the evidence for the migration of the same people ?
- **ANSWER:** When moving - people (foragers and farmers) make the same or similar tools in both their homeland and their new land.

Modern humans: an evolutionary story in two parts

PART I

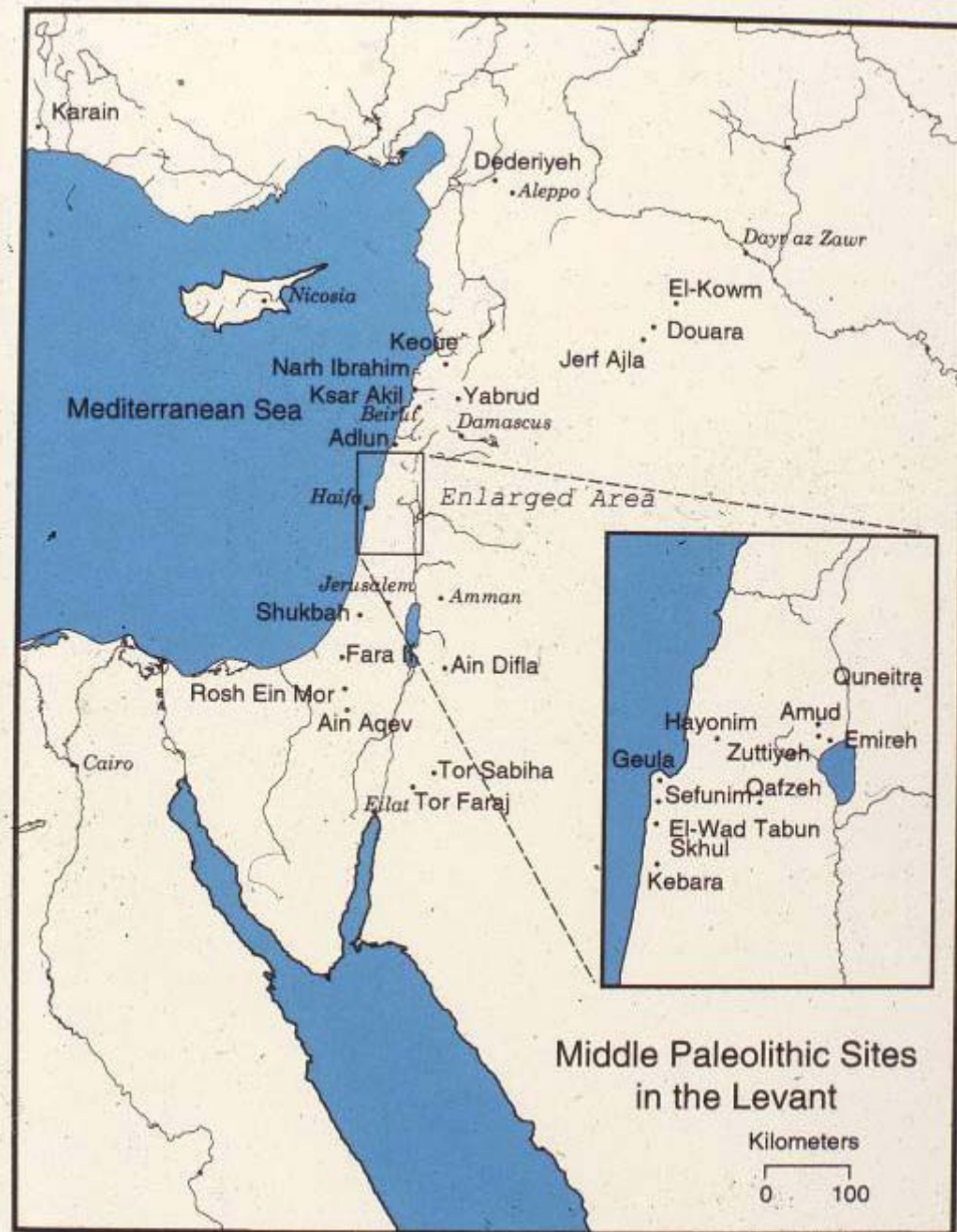
Modern humans according to molecular and nuclear genetic evidence came out of Africa some 200/150,000 years ago

PART II

The Upper Paleolithic Revolution took place some 50,000 years ago and its best record is in sites of Modern humans who moved through the Levant and possibly the Arabian peninsula into EURASIA and Australia

PART I

Following the Omo Kibish (200ka) and Herto (160 ka) fossils in Ethiopia the richest archaeological record is in the Levant



El-Wad

Jamal

et-Tabun

Skhul



Mt. Carmel caves = Wadi Mughara = Nahal HaMearot

TABUN CAVE - Today

by 50/47,000 the onset of the UP

B- Mousterian

from 85/ 80,000 yrs

C -Mousterian

from 140/130,000 yrs

D- Mousterian

from 220/250,000 yrs

E -Acheulo-Yabrudian

from 400/350,000 yrs

F- Upper Acheulian

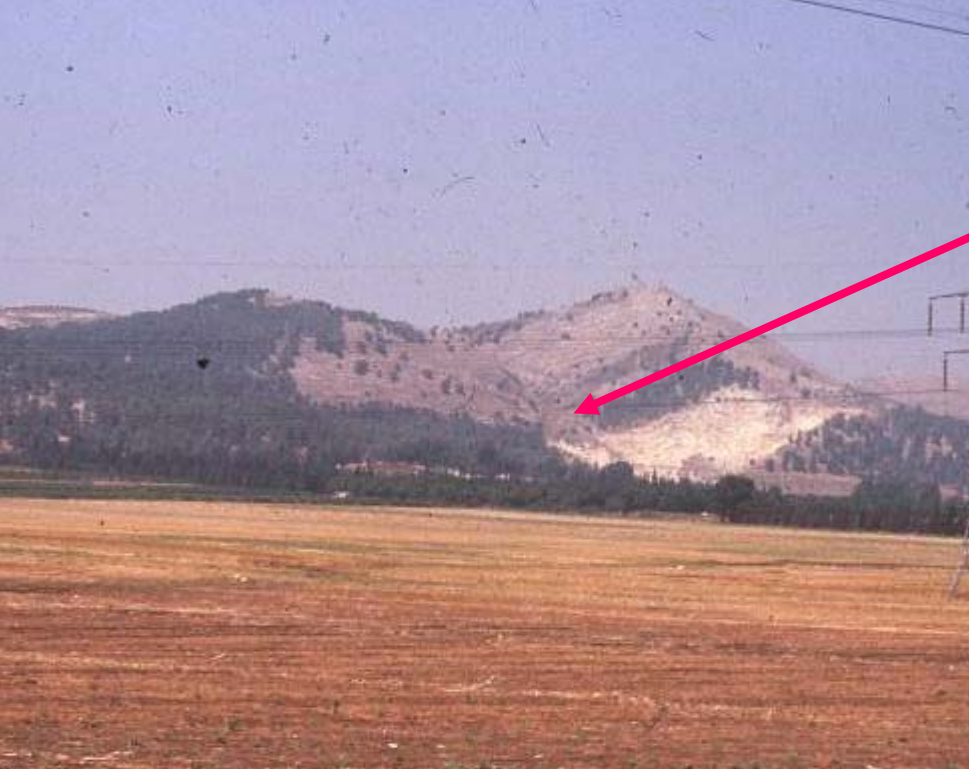


Archaic Modern humans buried their dead, used red ochre and sea shells (as decorative elements) in Skhul and Qafzeh caves

Skhul cave
with
several burials

Mt. Qafzeh, Archaic modern humans

Burials dates to 92 ± 5 ka



Kebara cave
A Neanderthal
Burial about
 $\pm 58/60,000$ yrs



Marine Isotope Stage	Ka B.P.	ENTITIES	HOMINIDS	Combined TL and ESR chronology
3	38/36 46/47	Early Ahmarian Emiran	"Egbert" (Ksar 'Akil)	UPPER PALAEOLITHIC
4	50	"Tabun B-type"	<i>Dederiyeh</i> <i>Amud Kebara</i> <i>Tabun Woman?</i>	Dederiyeh ? Tor Faraj Amud Kebara Tor Sabiha Tabun B
5	100	"Tabun C-type"	<i>Qafzeh</i> <i>Skhul</i> <i>Tabun II (jaw)</i>	Skhul Qafzeh Tabun C Quneitra ?
6	150	"Tabun D-type"		Douara IV ? Hyonim upper E Aln Aqev ? Hyonim lower E Tabun D Abu Sif ? Hayonim F Rosh Ein Mor
7	200	Hummalian		Yabrud I (1-10)
8	250		<i>fragments in Tabun E</i>	Tabun E
9	300	Acheulo-Yabrudian in the northern & central Levant	<i>Zuttiyeh</i>	Upper Acheulian in the southern Levant
10	350	Upper or Late Acheulian		Tabun F

The Upper Palaeolithic Revolution

Local Neanderthals

Arrival of Archaic Modern humans ?

Summary of Levantine Middle Palaeolithic chronology

The Evolutionary Story

PART II

The Upper Paleolithic Revolution and the migrations of Modern humans

- Where did the people come from?
- **ANSWERS:**
 - 1. South Africa (Mellars 2006)
 - 2. East Africa or the Nile Valley
- How long did it take to move from SW Asia to Western Europe ?
- **ANSWER:** The sites in the East are older than the sites in the West by about 5,000 radiocarbon yrs.

Was the origin
of Modern humans
in South Africa??

Howiesons Poort

65-55 Ka

What are the difficulties in tracing the Modern humans as they move into Eurasia ?

1. Fuzzy cultural terminology.
2. Ambiguities in the radiocarbon chronology from 50-35 Ka B.P.
3. Ignoring taphonomy when considering the presence of human relics and artifacts, and trusting only field eye observations.

Changes in the lithic assemblages along the geographic trajectory of human migrations

1. The pioneers of a major cultural transformation such as the Upper Paleolithic Revolution, employ new lithic technique(s)/method(s) but several of their shaped stone tools resemble those of their ancestors.
2. Changes in the lithic assemblages occur both in the “core area” and especially as they move into new territories. Changes can result from an adaptation to environmental resources (e.g., new raw materials), as well as through encounters with local people.
3. Encounters could take on three forms: physical conflict, friendly communication, and ignoring the ‘others’. Attitudes can change through time. Being nice to each other is reflected in peaceful acculturation.

So who were the ancestors of the Modern humans????

Molecular and nuclear genetics indicate that the ancestors of Modern humans came from Africa . They were the makers of MSA or Middle Paleolithic stone tools also known as Mousterian

Archaeologists may agree but their interpretations of the evidence vary. Hence- there are different opinions on this subject

Every Mousterian industry could have been
the progenitor of the first
Early Upper Paleolithic Industry (EUP)
also called Initial Upper Paleolithic (IUP)

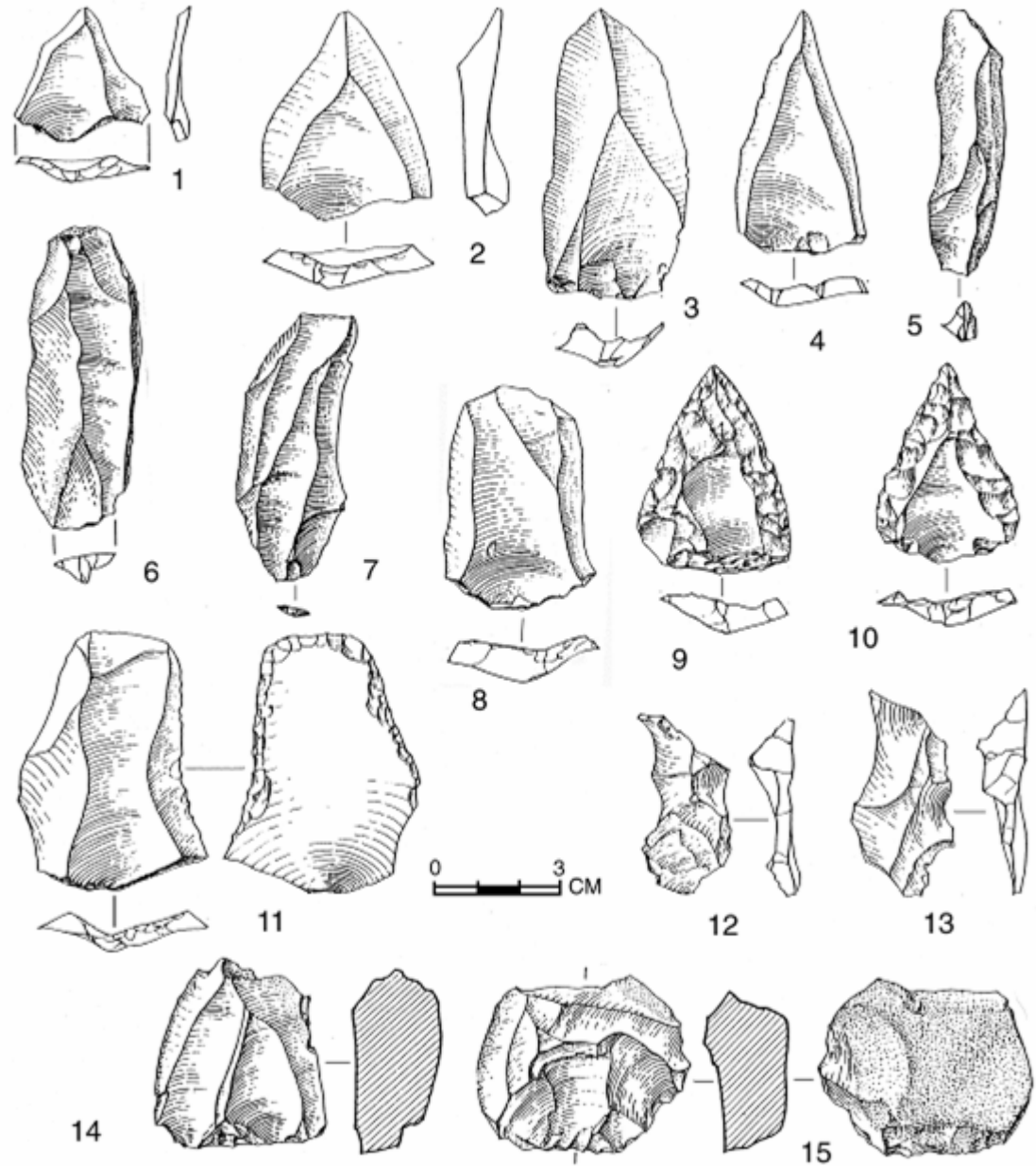
BUT DID IT HAPPEN THIS WAY??

The answer is - NO !

it happened only in one **core area**
like all industrial and cultural revolutions

For example:

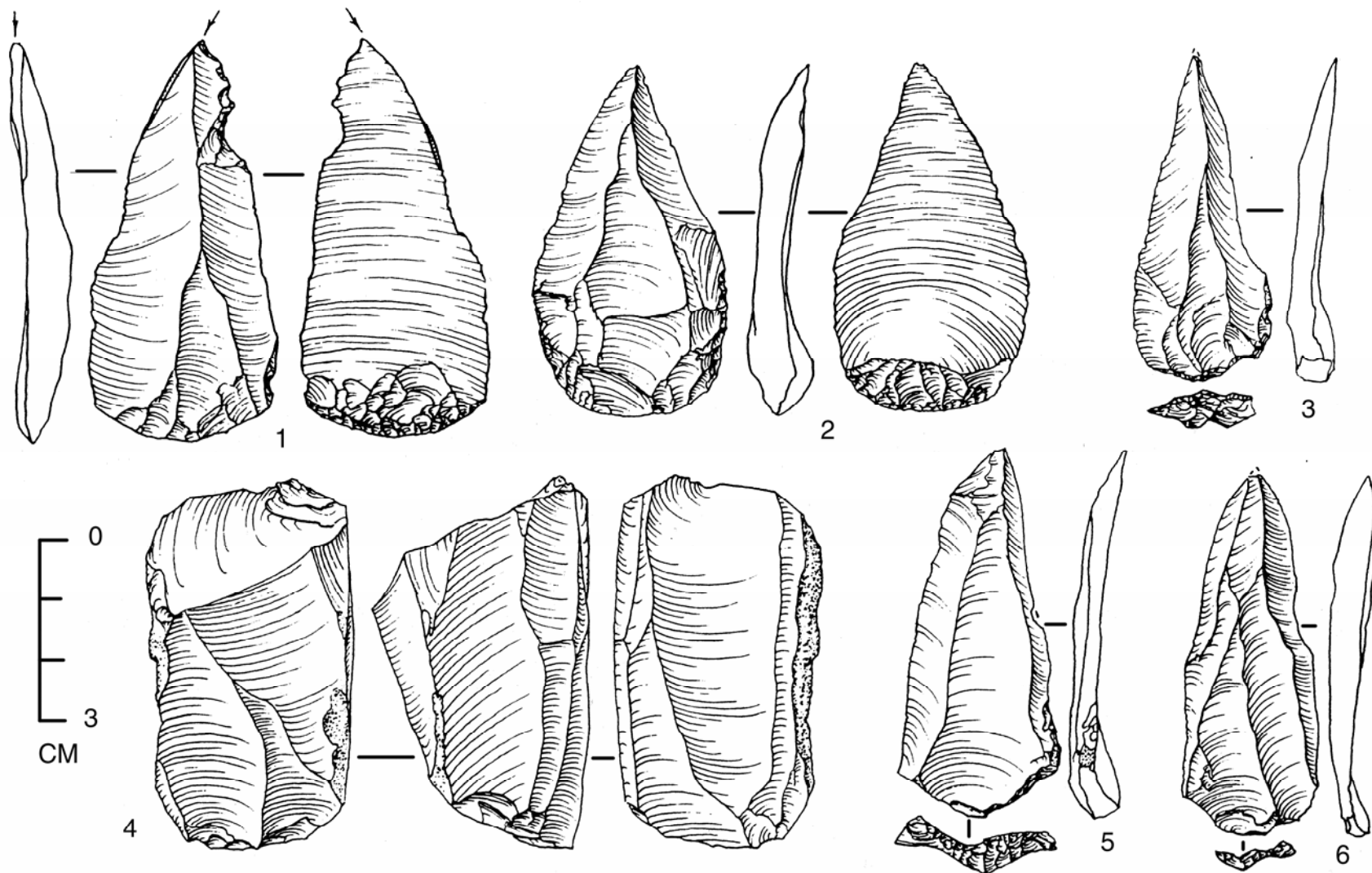
Late Mousterian
in the Levant
from
Kebara Cave
50,000-47,000 B.P.
attributed to the
local Neanderthals



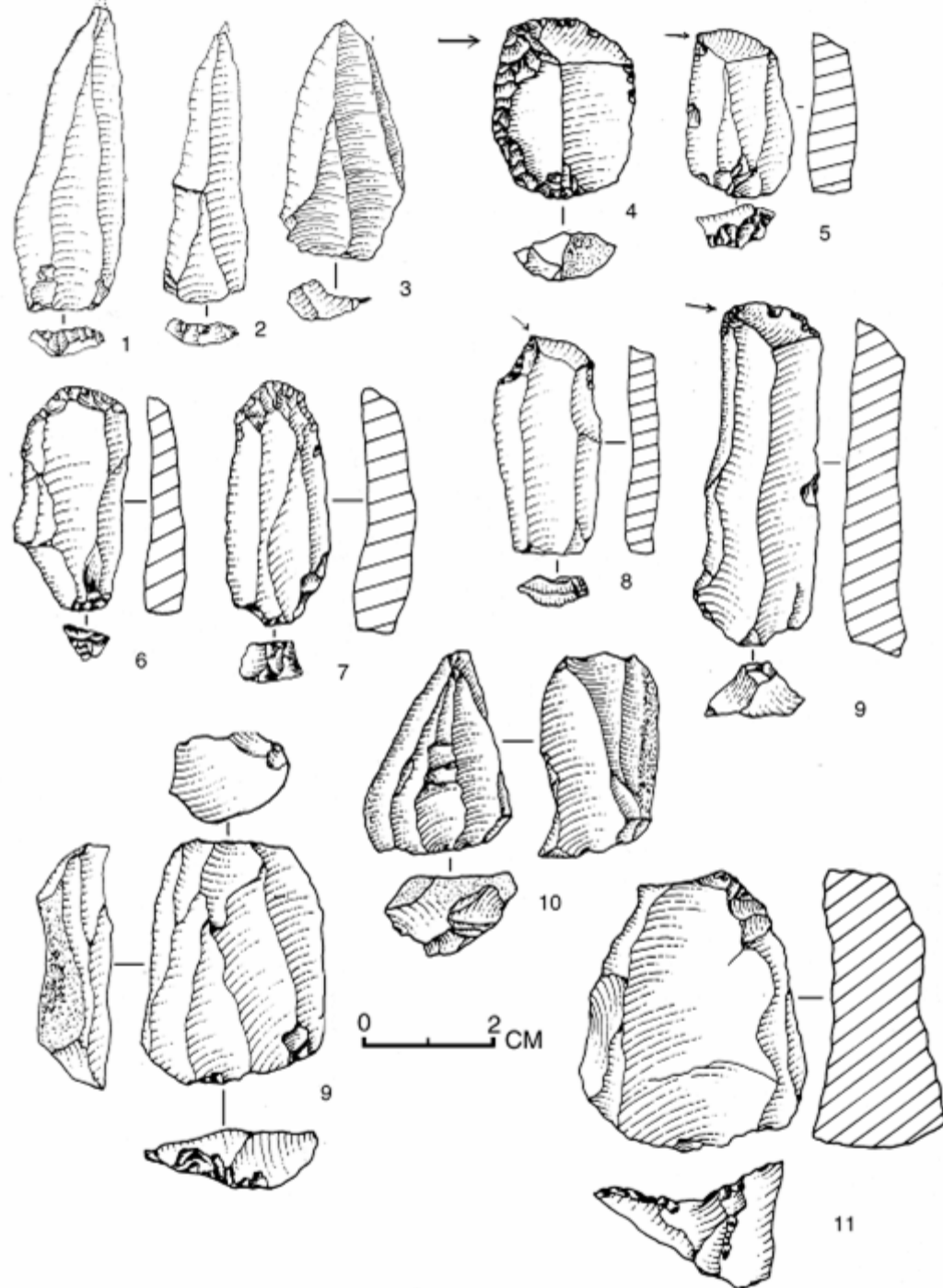
Is this a cultural
progenitor of
IUP???

Examples for IUP (=Initial Upper Palaeolithic) industries:

Boker Tachtit = "Emiran"



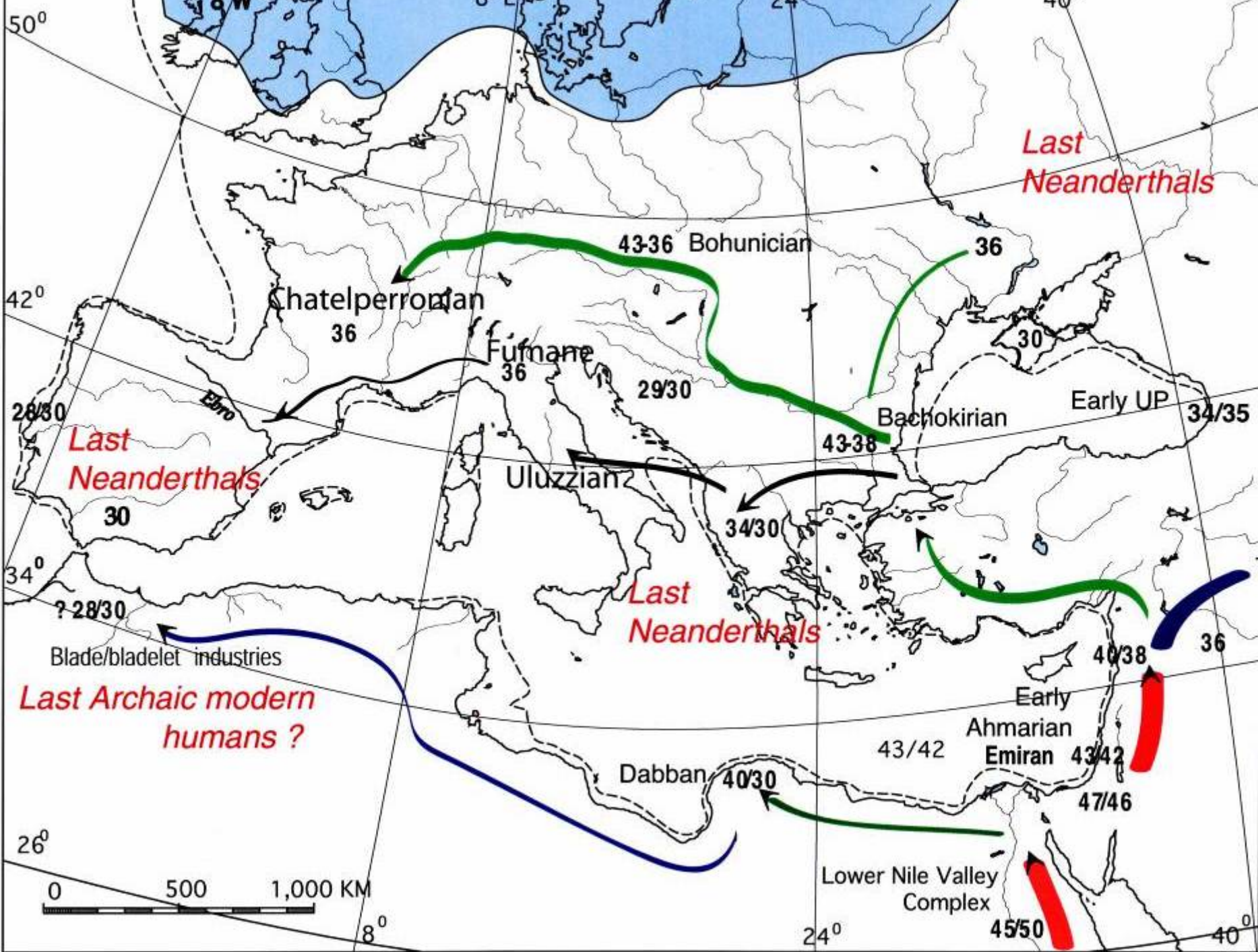
Ksar 'Akil
Lebanon
Early Upper Paleolithic
Layers XXV-XXI

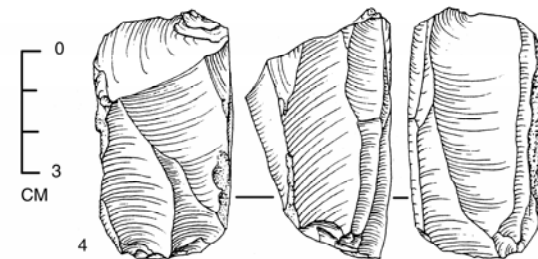
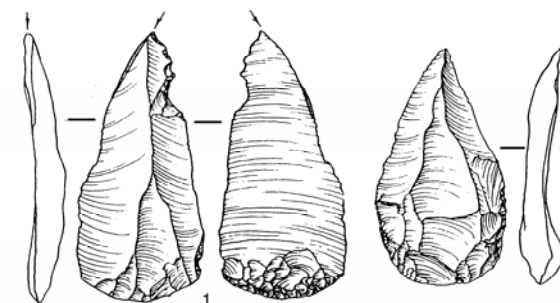
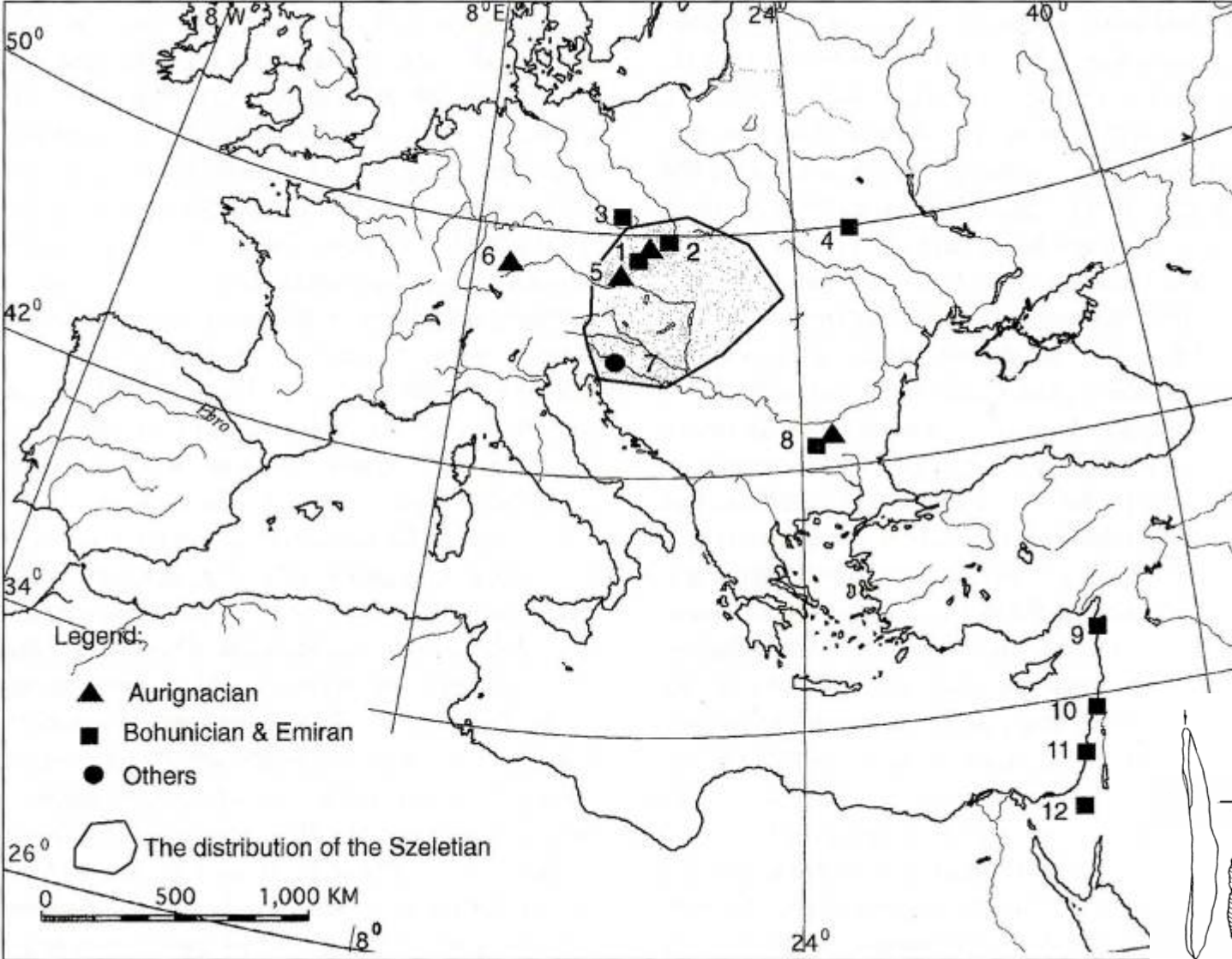


The suggested scenario

-Groups of Modern humans walked from the Levant into Europe and split the Neanderthal territories causing extinction by reduced population size, competition for resources, and physical conflicts.

- Low rate of interbreeding is possible but will be hard to detect genetically.

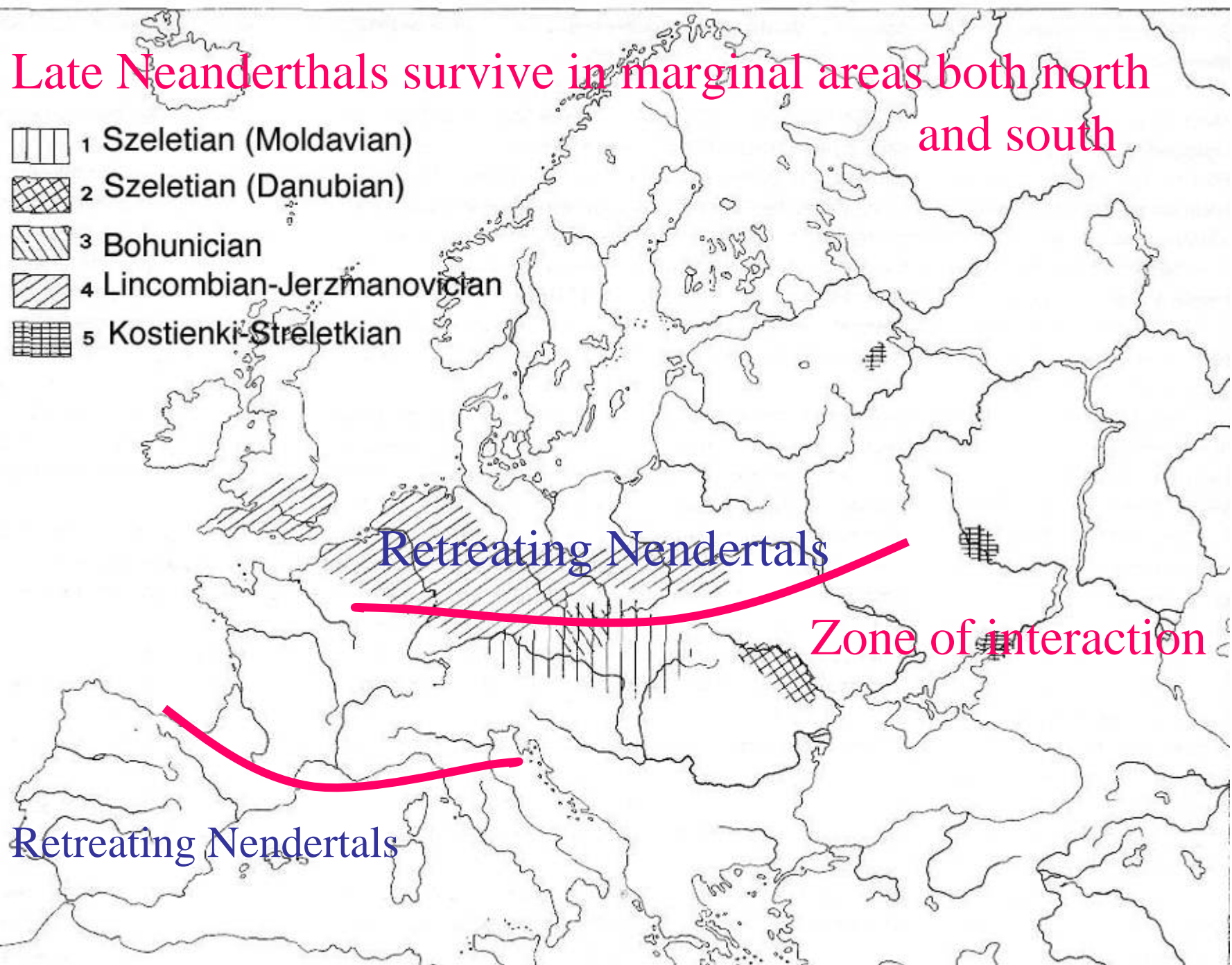




Bohunician -Emiran

Late Neanderthals survive in marginal areas both north and south

- 1 Szeletian (Moldavian)
- 2 Szeletian (Danubian)
- 3 Bohunician
- 4 Lincombian-Jerzmanovician
- 5 Kostienki-Streletkian



Retreating Neanderthals

Zone of interaction

Retreating Neanderthals

Problems with the interpretations of archaeological observations

1. Arcy sur Cure- mixed deposits with Neanderthal isolated teeth

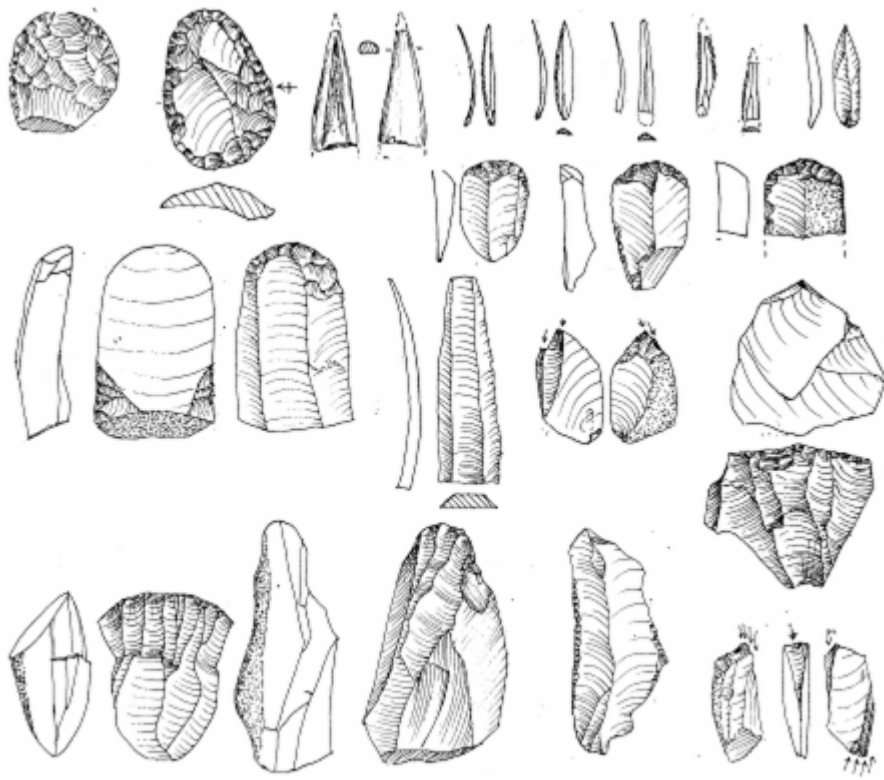
2. St. Cesaire

Secondary burial of a Neanderthal in a Chatelperronian layer was possibly the result of Neanderthals bringing their dead to be buried in their ancestral home

Another case of a Neanderthal refugium in the foothills of the Caucasus

Dzudzuana cave

The early
Upper Palaeolithic

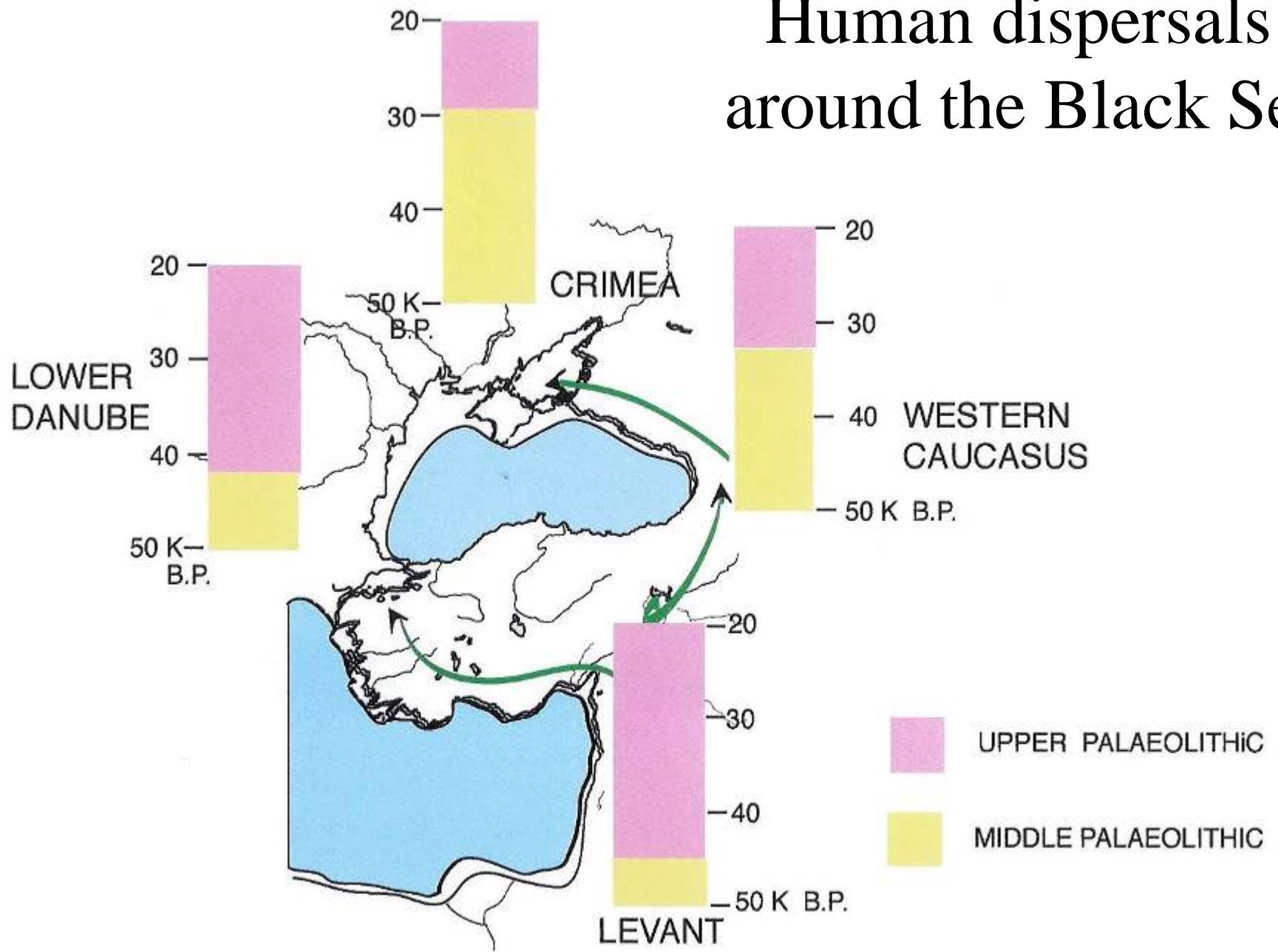


19,000- 23,000 B.P.

27,000/32,000 B.P.

Same stone tools as in Mezmaiskaya
On the northern slopes of the Caucasus

Human dispersals around the Black Sea



Archaeologists who claim that there was a convergence in the production of the same stone tools in different parts of the Old World should face the possibility of

The McDonald's Chrono Model

McDonald Restaurants from
Ohio to Beijing date to 1948- 2000

Radiocarbon dates would be
 1975 ± 30 A.D.

CONCLUSION: All McDonald's Restaurants
emerged contemporaneously across Eurasia

Dynamic changes and chronology for Europe and Western Asia

Western Europe

Eastern Europe
and the Levant

Aurignacian

34 K BP

Aurignacian

36.5 k BP uncalib

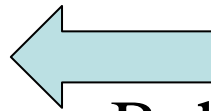


Uluzzian

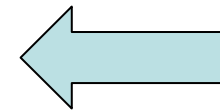
Castelperronian

Bachokirian

Early Ahmarian



Bohunician



Emiran

Mousterian of Acheulian
Tradition

Real "Transitional"

Late Mousterian
of East NE Africa

Several comments and disturbing questions concerning the archaeological evidence for the “Southern Dispersal”

1. The sites in East Africa are are poorly dated by comparison to Western Eurasia where debates continue due to wealth of evidence. In poorly known regions “the less you know- the clearer is the picture”!
2. How do we know that Modern humans did not disperse by coastal navigation skipping India? crossing to New-Guinea & Australia by sea required the use of seacraft some 40,000 years ago.
3. Fishing was developed mainly in the Holocene. Foragers survive on hunting and plant gathering using not only areas that were flooded by the rising sea-level.
4. The argument of ‘poor raw material’ is over exaggerated. Prehistoric artisans found adequate hard rocks such as quartzite and made fine blades. The shapes of the stone tools are the result of an existing mental template.

The colonization of the Americas

By land
(through Beringia)
or by sea
(through coastal
navigation).

The archaeological
evidence was
interpreted as
supporting
the terrestrial
dispersal

The arrival of Asian Squash in the Americas

The Asian seeds,
and the dates of
12 Ka BP for the
Monte Verde site
in southern Chile
tend to support
the hypothesis of
arrival by sea.

CONCLUSIONS

- The dispersal routes of humans can be traced archaeologically but this takes time and very careful archaeological field work.
- The genetic evidence, more easily obtained, can and should motivate archaeologists, to enhance field work, careful dating and prompt publication.