

Day Two

Day 1: Where they were

Day 2: Where they went

Day 3: How they spoke

World Clans

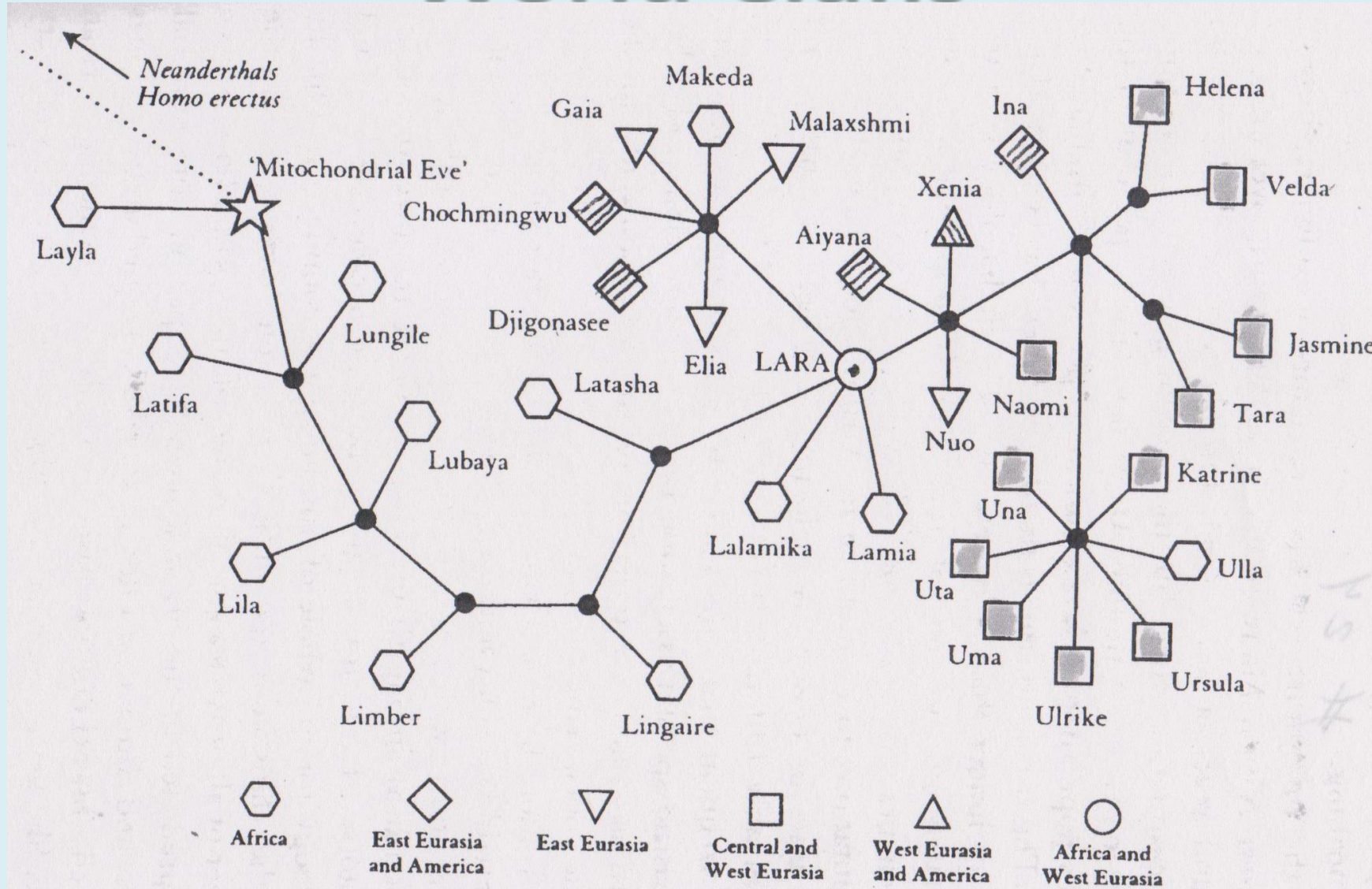
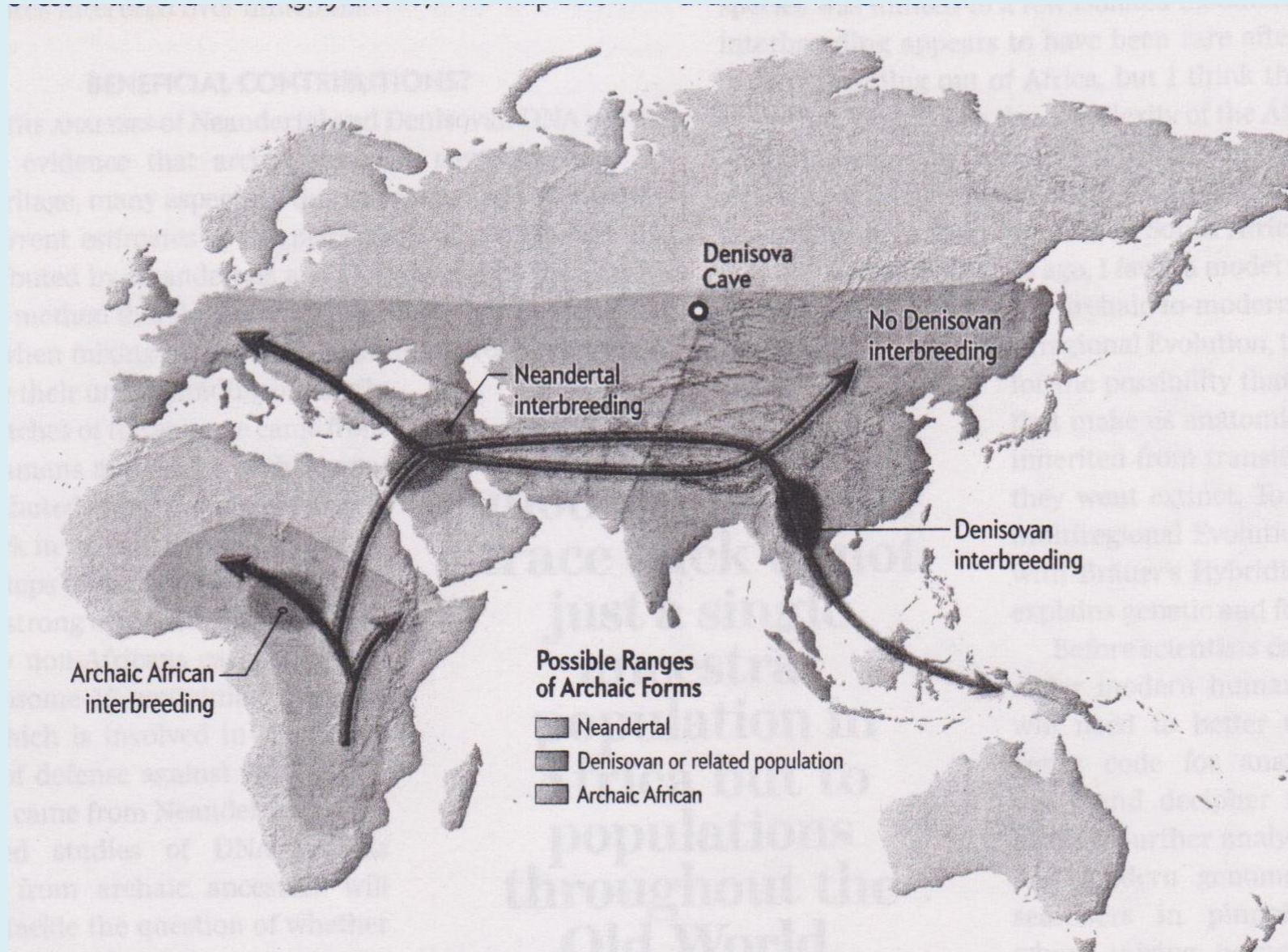


Figure 7

WORLD CLANS AND WHERE THEY ARE FOUND

Inbreeding



“B” Blood Type

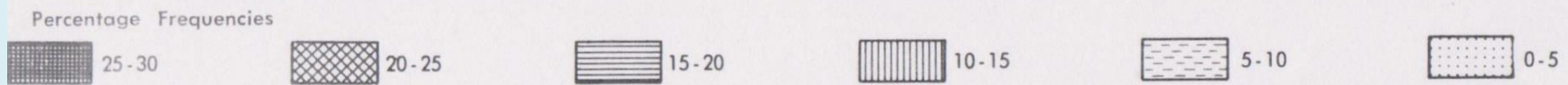
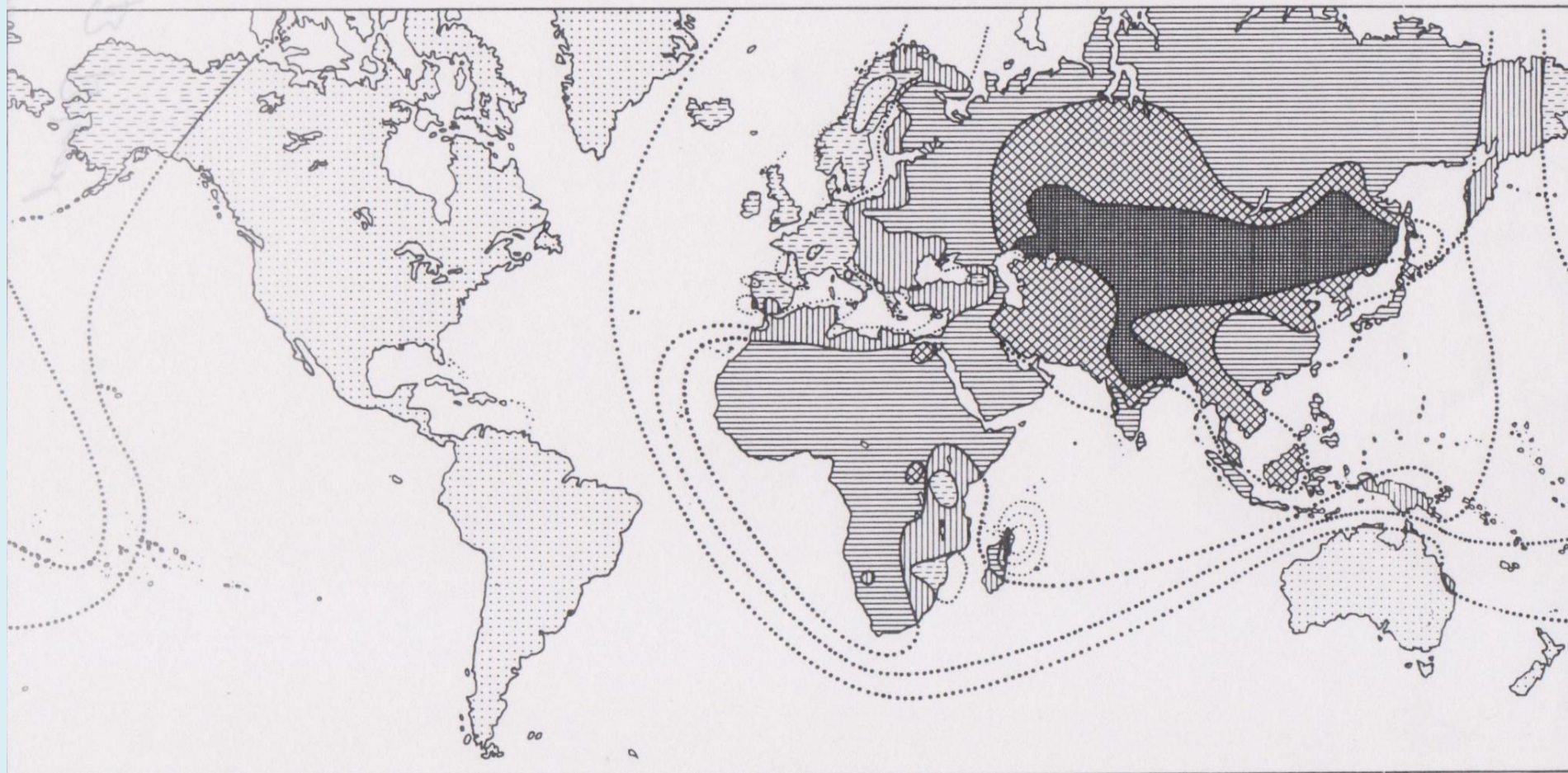
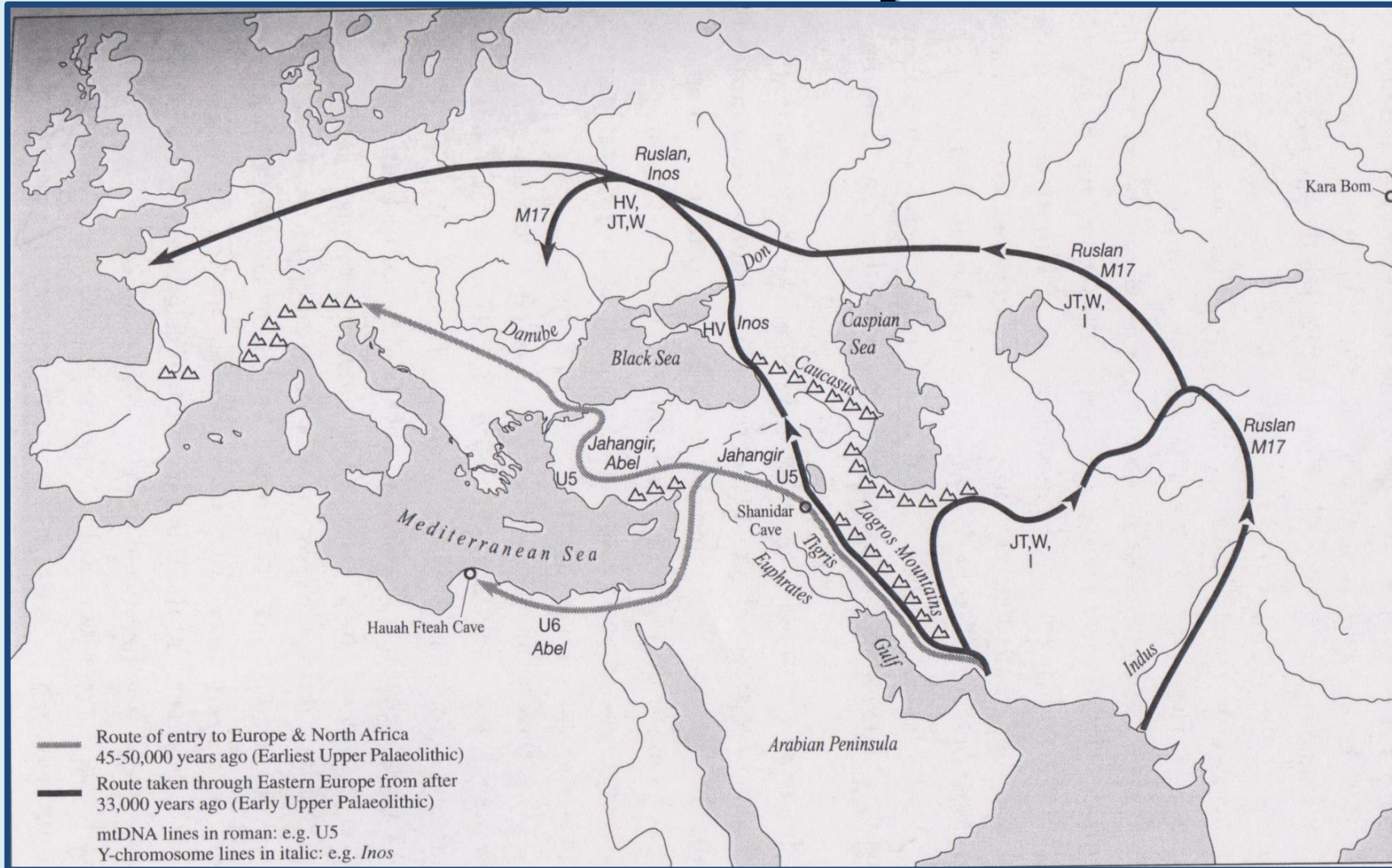


FIG. 40 The distribution of the blood-group allele *B* before European colonization (after A. E. Mourant, 1954).

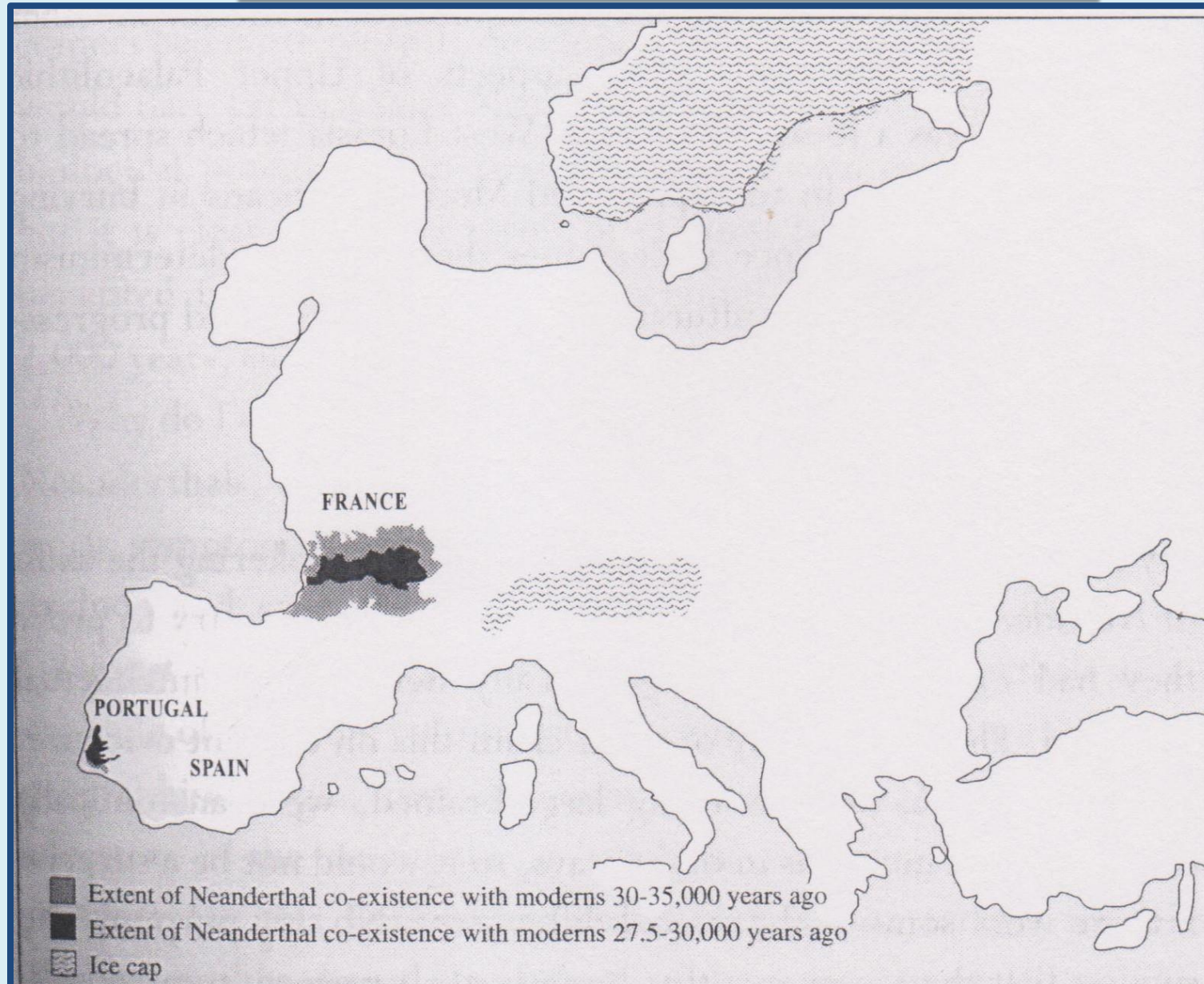
Neanderthal Territory



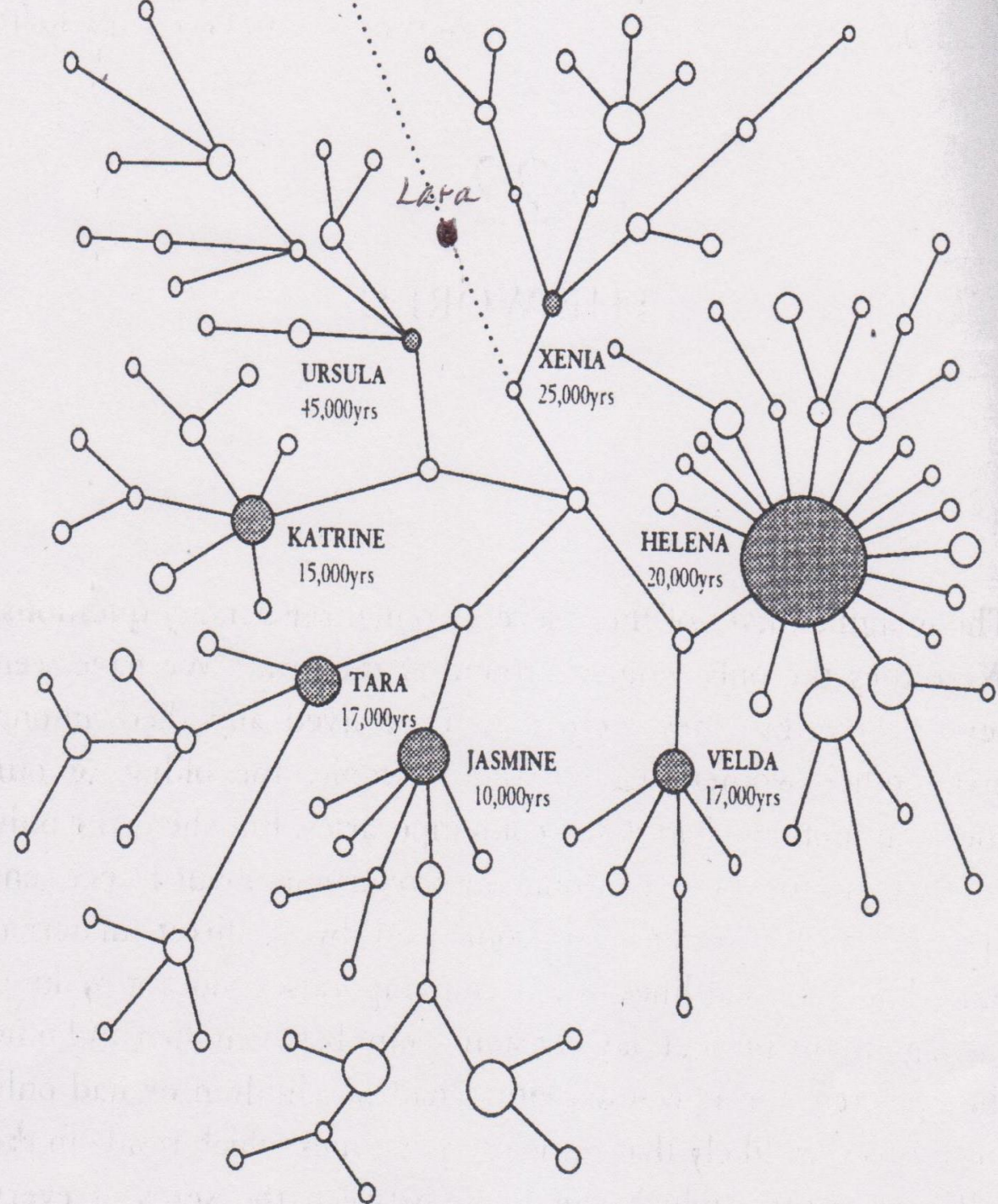
Into Europe



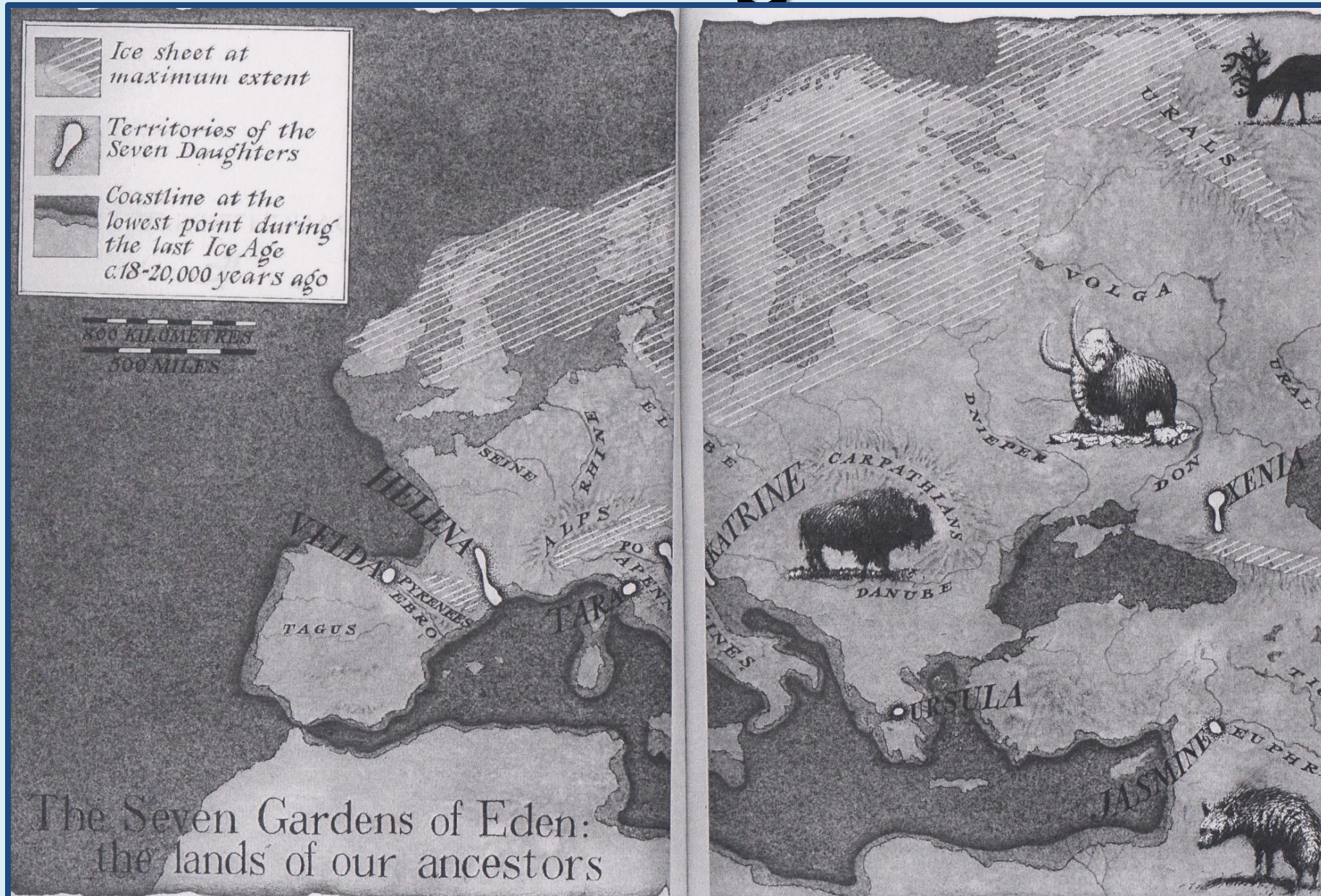
Last Neanderthals



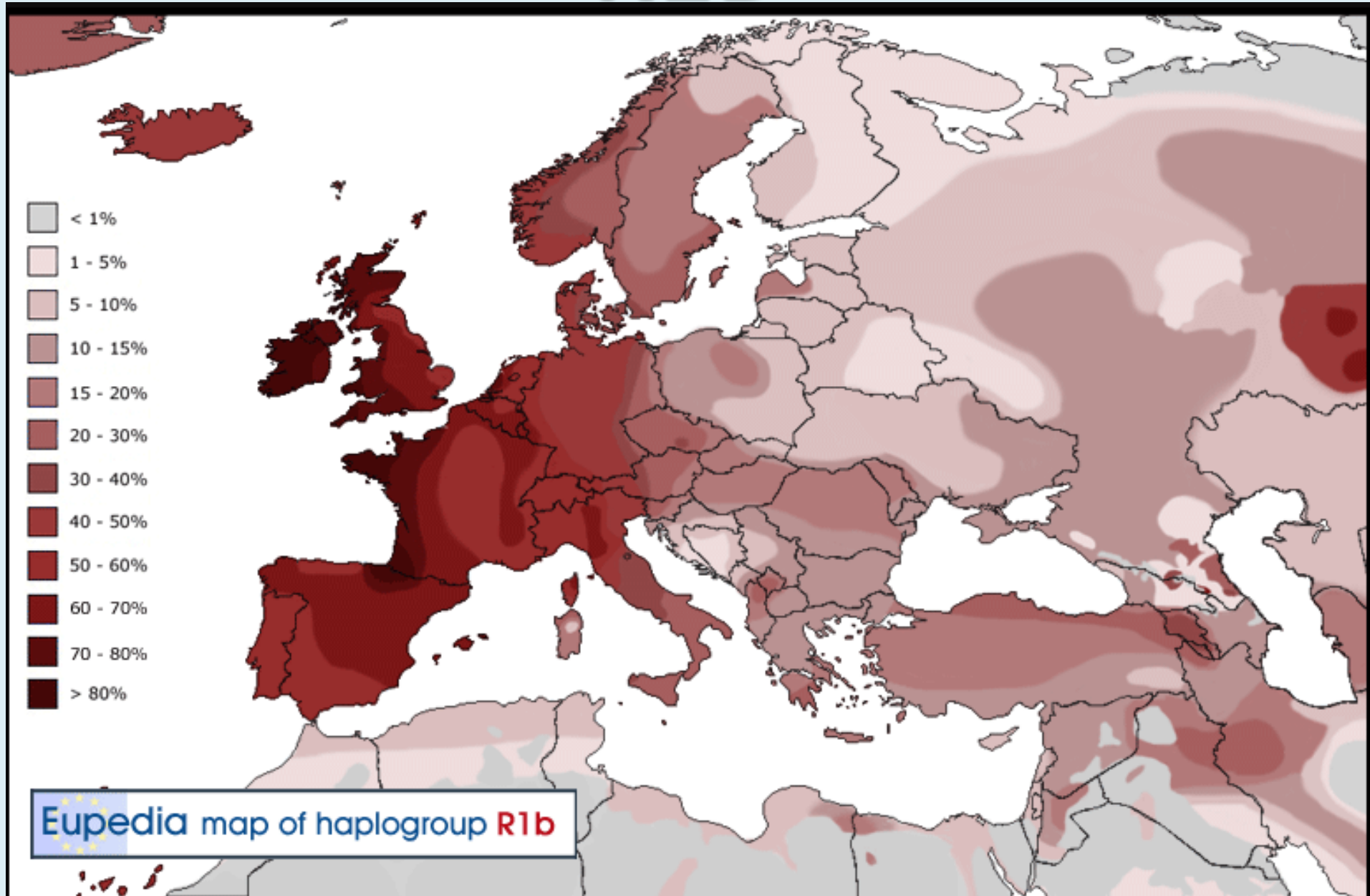
Seven Daughters



Refuge



R1B

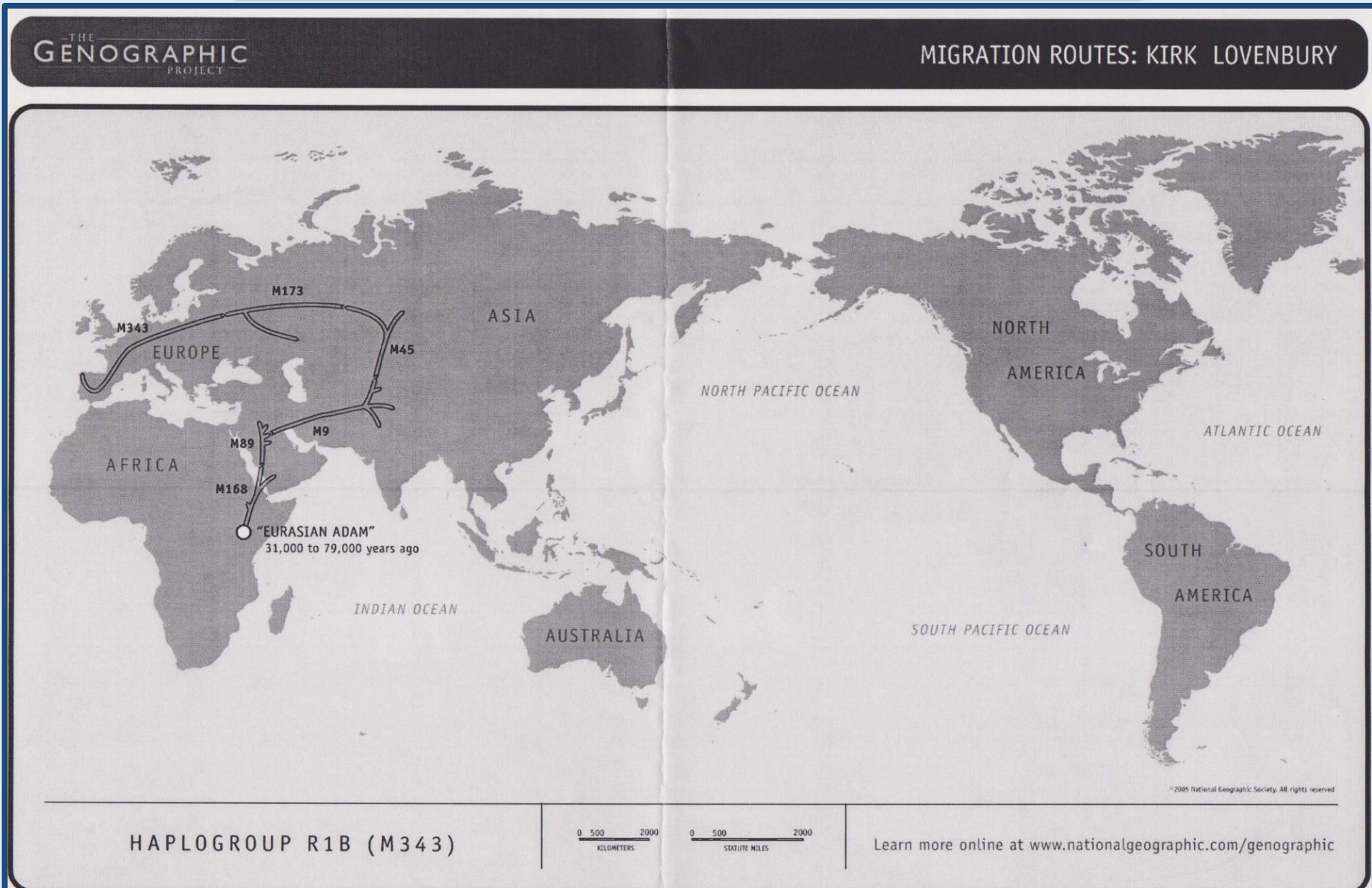




The National Geographic documentary reports on recent mtDNA work. The program reveals how these mummies might have looked during their lifetime. Researchers found haplogroup markers from Europe, Siberia, Mongolia, Tibet and India. The Beauty of Loulan, Chertchen Man, and the Boy have East Asian ancestry. The Shaman has a lineage frequently seen in the



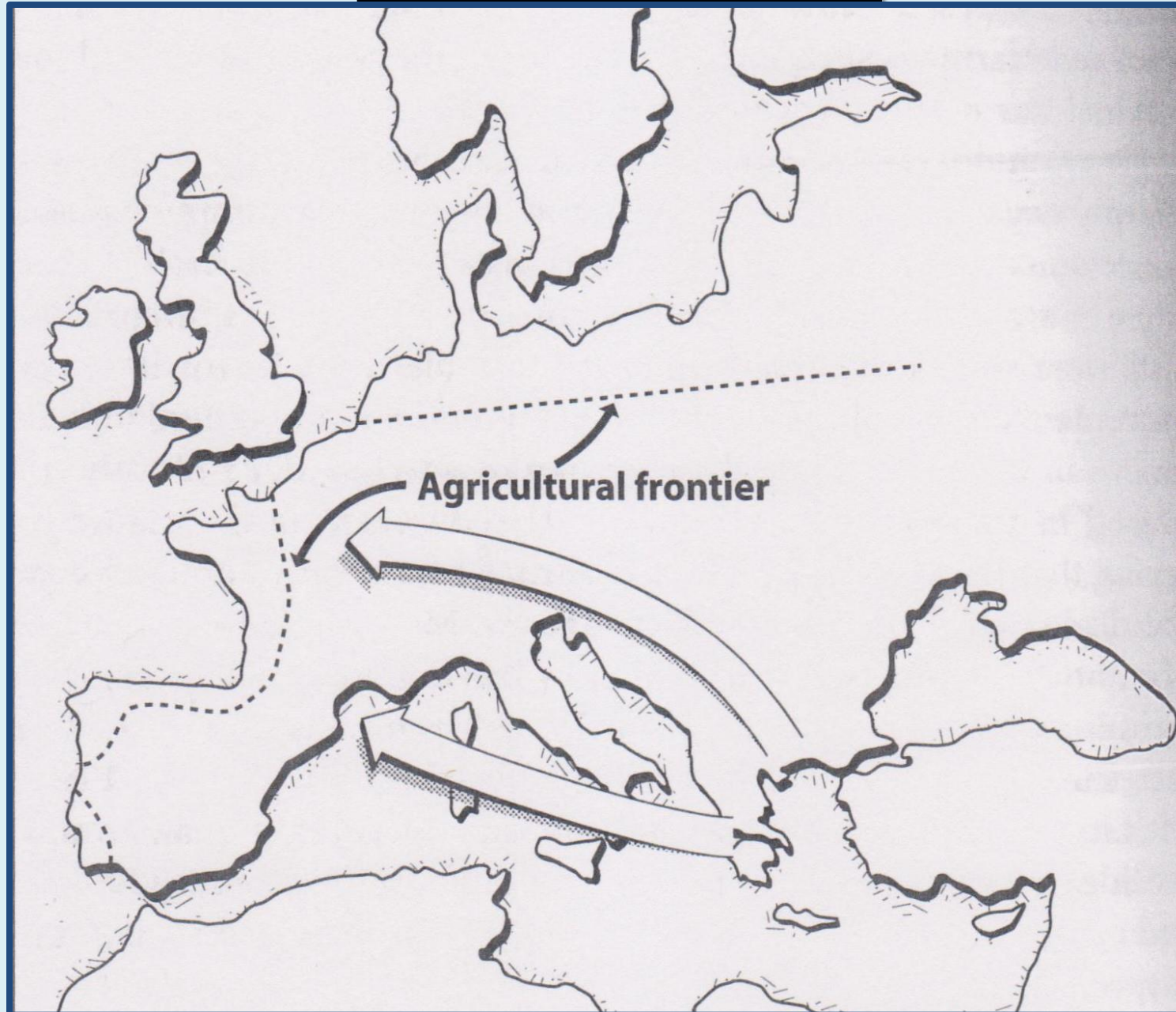
Kirk's Y-Chromosome



Jasmine



Agriculture



Stonehenge

RIGHT From the 5th to 3rd millennium BCE, many prehistoric societies across Europe expressed their beliefs through the construction of massive stone monuments. The labor invested in these megalithic tombs and stone circles was enormous, and archaeological investigation has shown that many of the monuments in their present form are the result of long and often complex developmental histories. The earliest tombs are at Hoëdic and Tévéc off the Brittany coast (c.5800 BCE).

- area of megalithic monument building, 5800–2000 BCE
- megalithic tomb
- stone circle or alignment
- hypogeum
- other burial site

0 400 km
0 300 mi



Farming



ABOVE Farming expanded east from the Levant to beyond the Iranian plateau and the oases of Central Asia at the same time as it spread into Europe. There is evidence of farming and local domestication of animals at Mehrgarh (Pakistan) before 6000 BCE, when farming communities were also present at Djeitun and neighboring oases in Turkmenistan. In both areas, rectangular mud-brick houses constituted the primary domestic architecture of small hamlets.

ABOVE Agriculture moved into Europe along two paths out of the Balkans, one going west across the islands and peninsulas of the Mediterranean, the other north along the major rivers of central Europe.

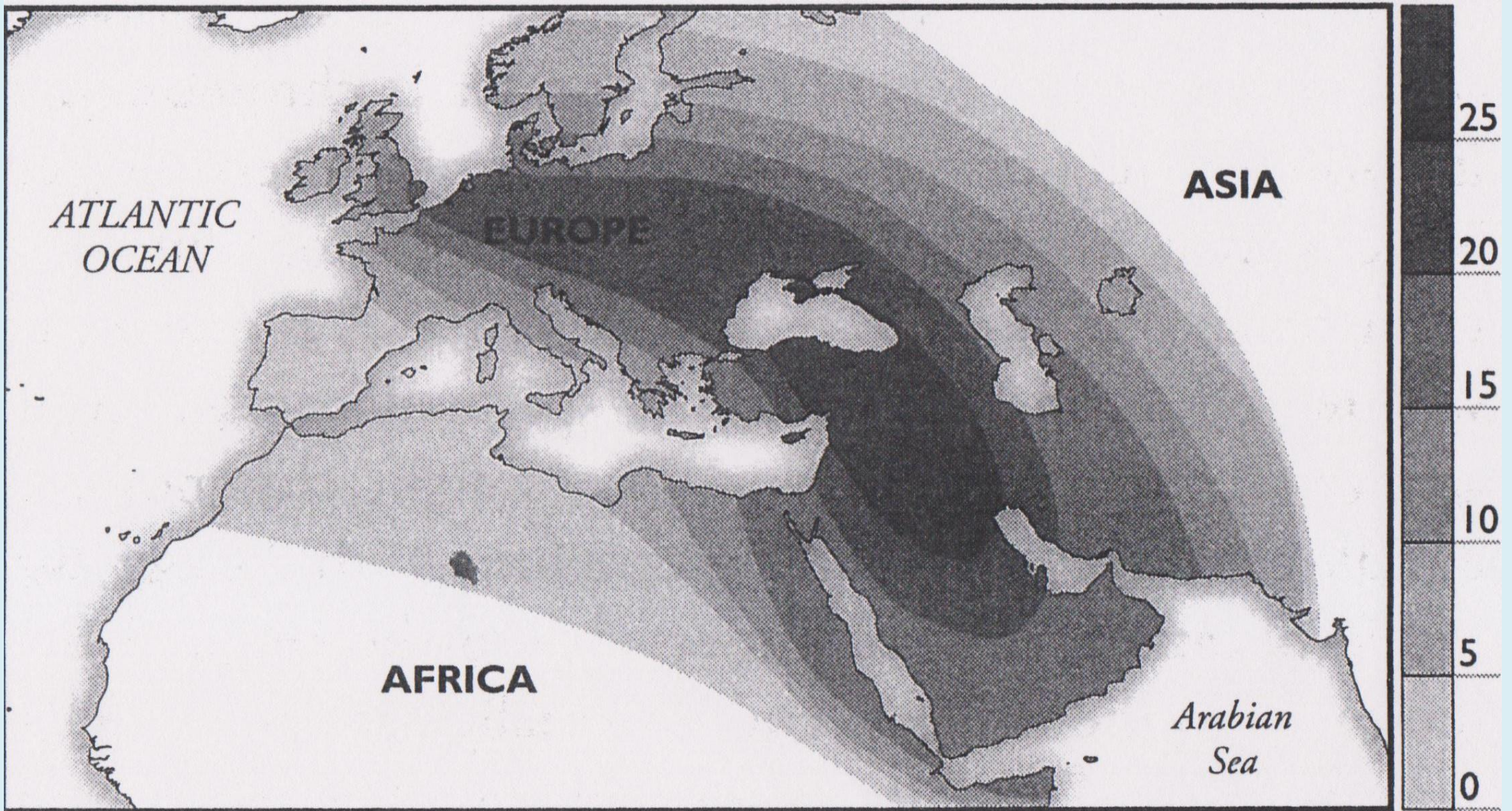
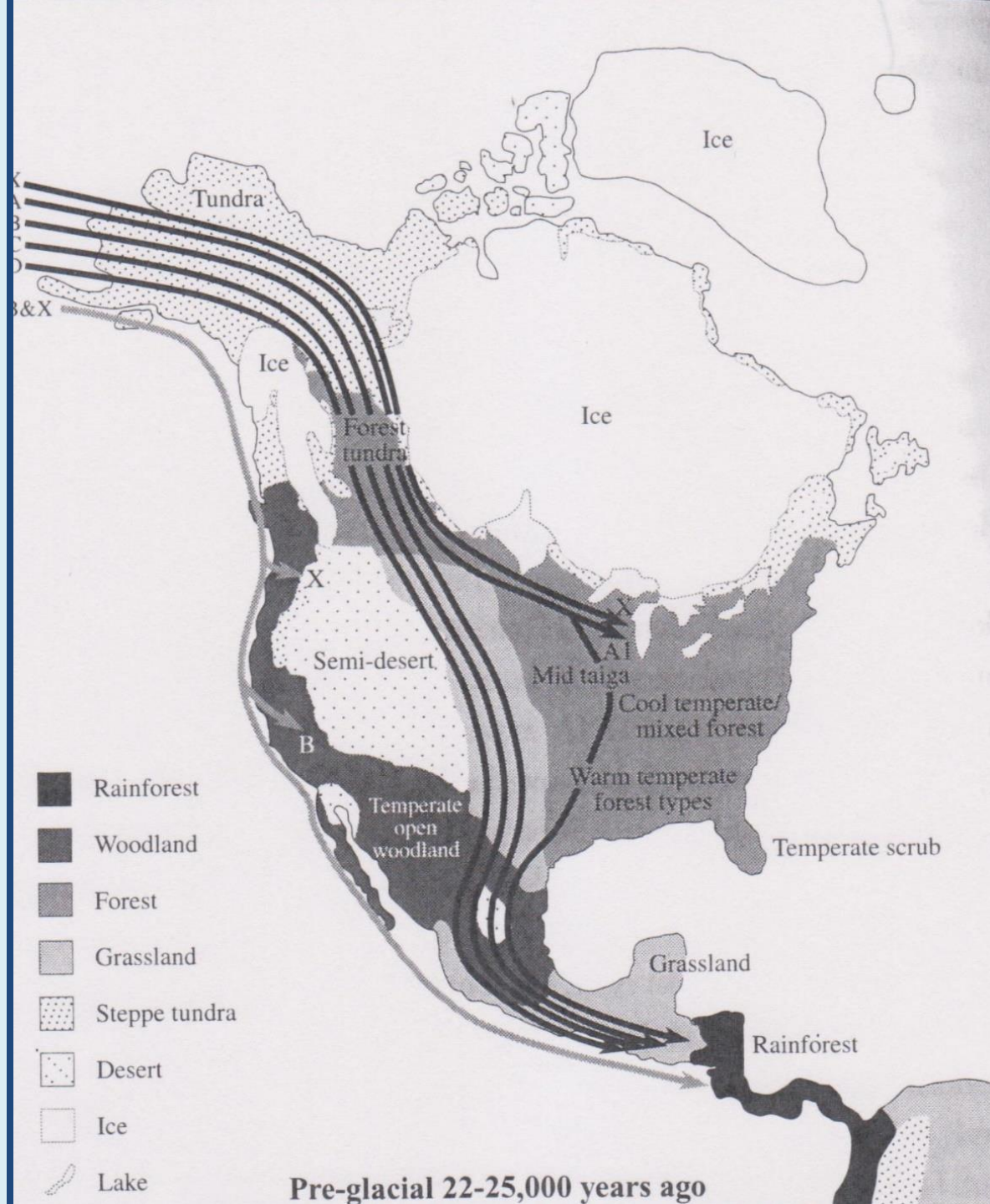
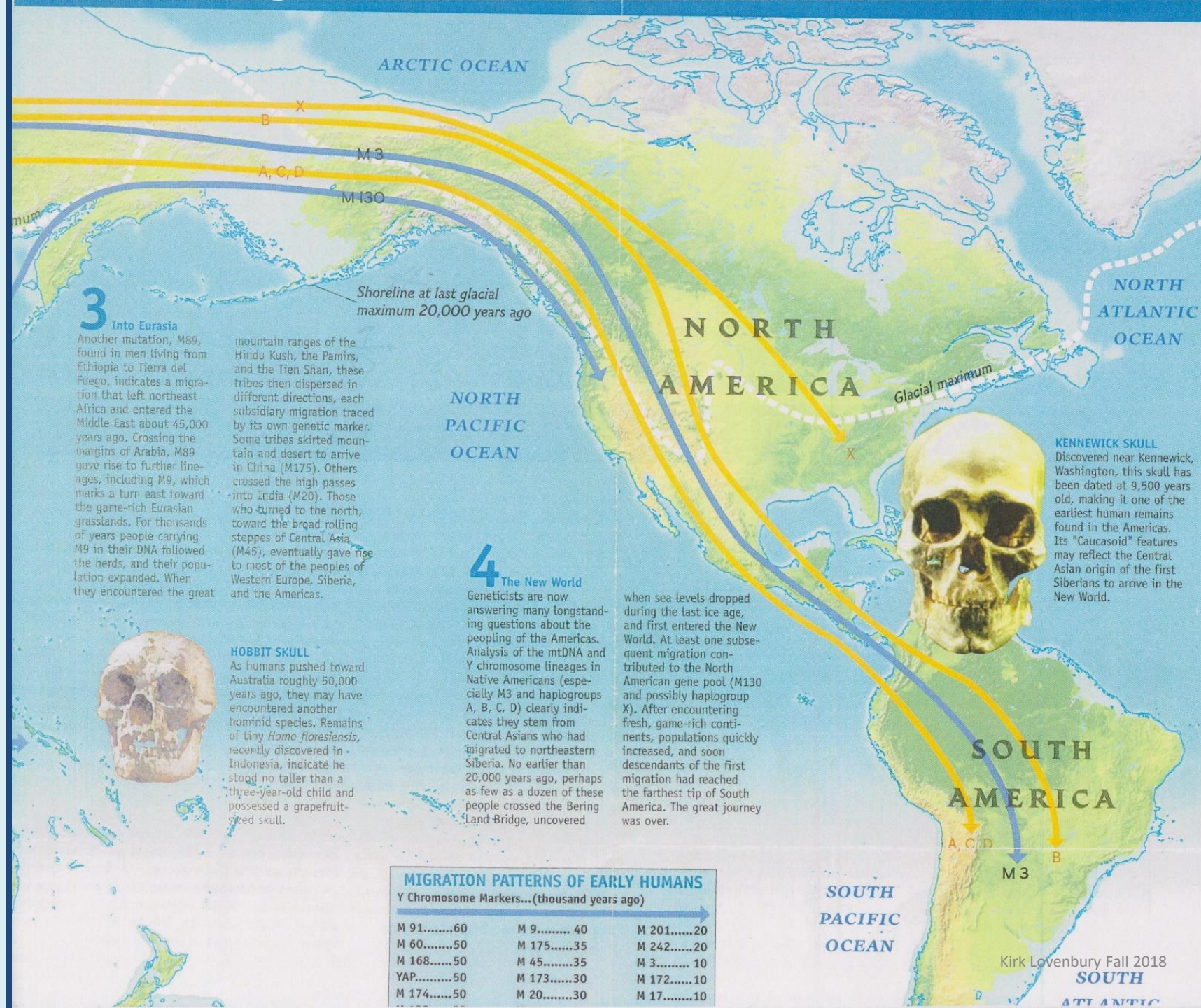


Figure 1. *Frequency distribution of mitochondrial haplogroup J*

Pre- Glacier



Kennewick Man



3 Into Eurasia
Another mutation, M89, found in men living from Ethiopia to Tierra del Fuego, indicates a migration that left northeast Africa and entered the Middle East about 45,000 years ago. Crossing the margins of Arabia, M89 gave rise to further lineages, including M9, which marks a turn east toward the game-rich Eurasian grasslands. For thousands of years people carrying M9 in their DNA followed the herds, and their population expanded. When they encountered the great

mountain ranges of the Hindu Kush, the Pamirs, and the Tien Shan, these tribes then dispersed in different directions, each subsidiary migration traced by its own genetic marker. Some tribes skirted mountain and desert to arrive in China (M175). Others crossed the high passes into India (M20). Those who turned to the north, toward the broad rolling steppes of Central Asia (M45), eventually gave rise to most of the peoples of Western Europe, Siberia, and the Americas.



HOBBIT SKULL
As humans pushed toward Australia roughly 50,000 years ago, they may have encountered another hominid species. Remains of tiny *Homo floresiensis*, recently discovered in Indonesia, indicate he stood no taller than a three-year-old child and possessed a grapefruit-sized skull.

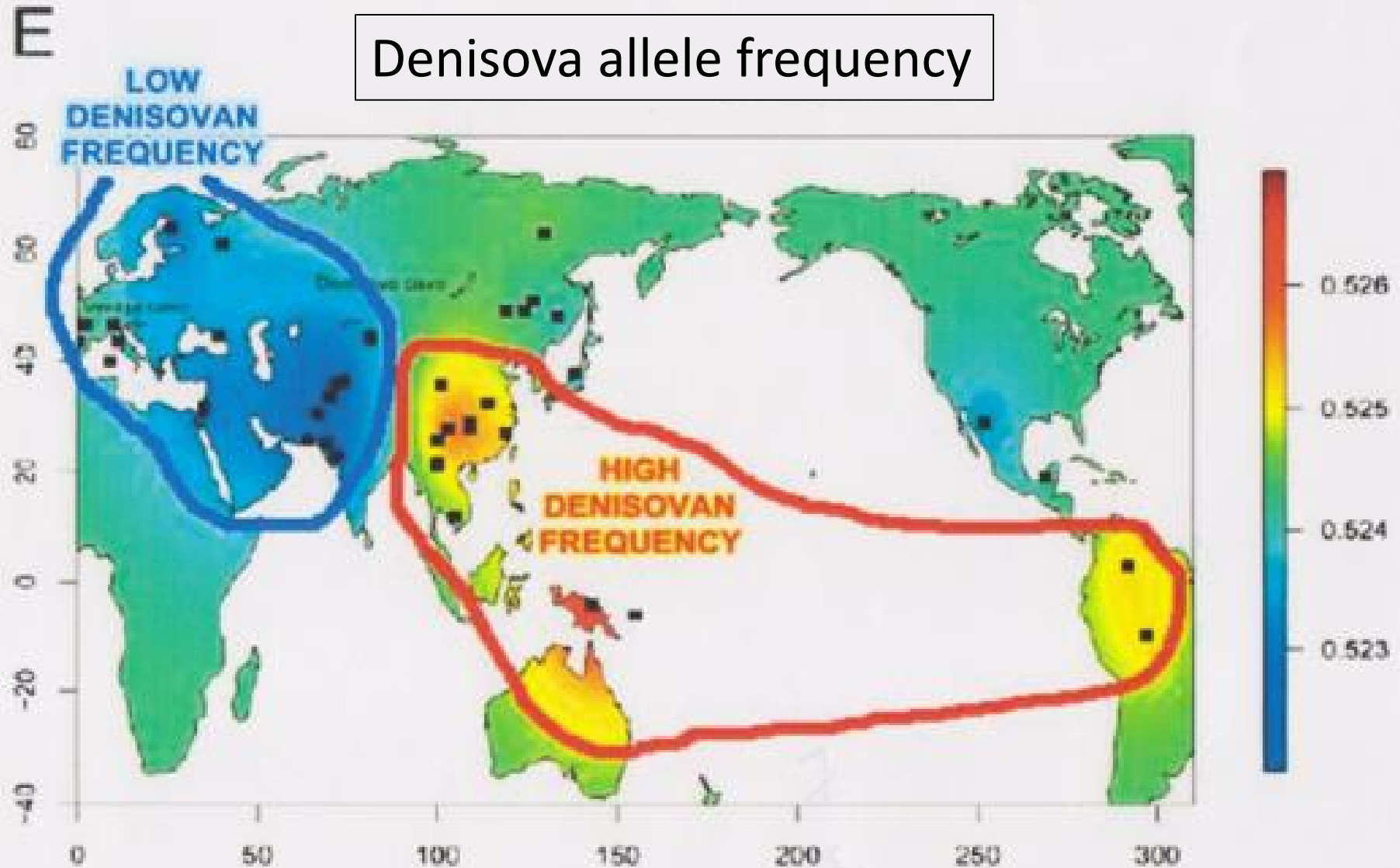
4 The New World
Geneticists are now answering many longstanding questions about the peopling of the Americas. Analysis of the mtDNA and Y chromosome lineages in Native Americans (especially M3 and haplogroups A, B, C, D) clearly indicates they stem from Central Asians who had migrated to northeastern Siberia. No earlier than 20,000 years ago, perhaps as few as a dozen of these people crossed the Bering Land Bridge, uncovered

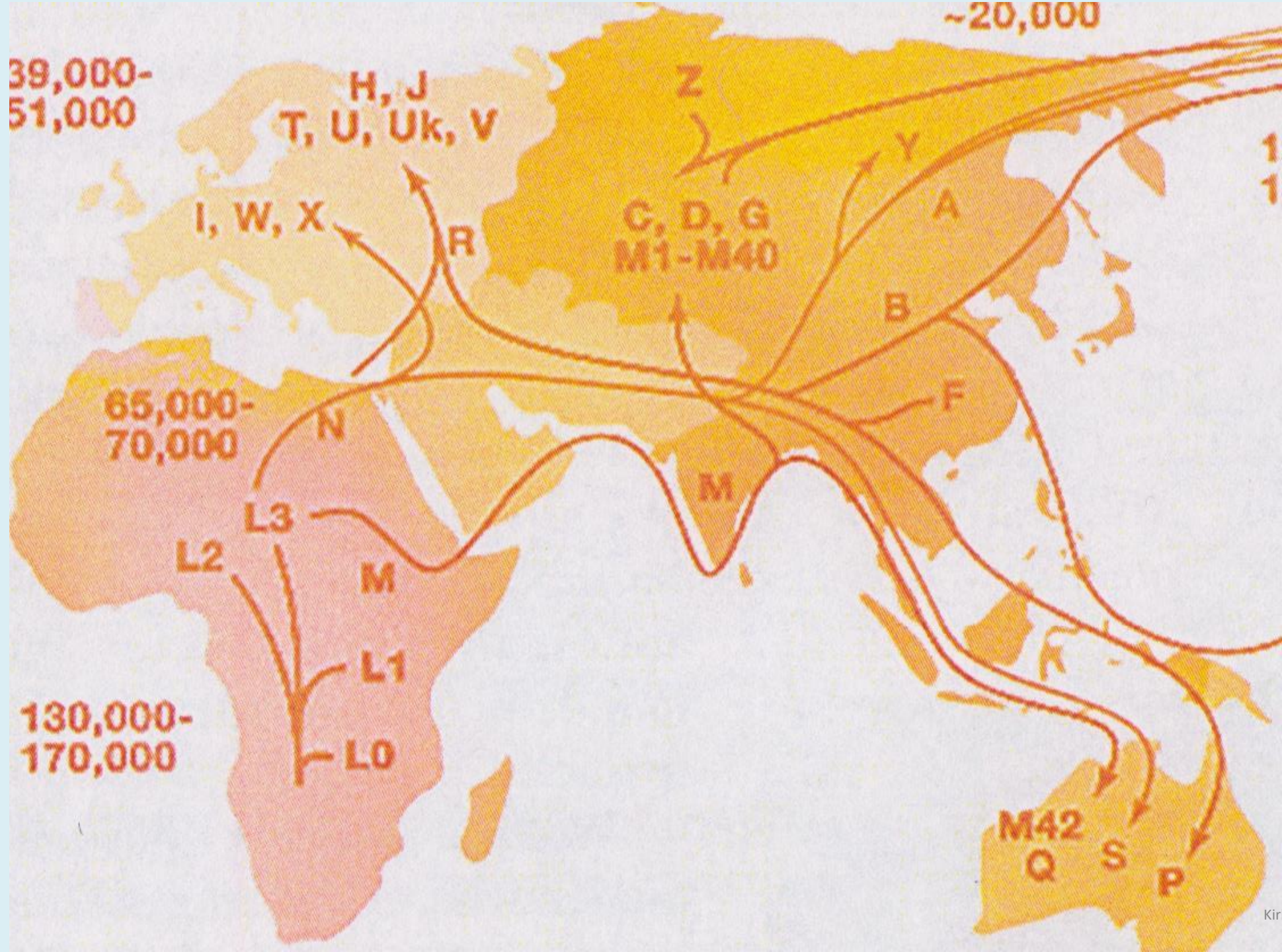
when sea levels dropped during the last ice age, and first entered the New World. At least one subsequent migration contributed to the North American gene pool (M130 and possibly haplogroup X). After encountering fresh, game-rich continents, populations quickly increased, and soon descendants of the first migration had reached the farthest tip of South America. The great journey was over.

KENNEWICK SKULL
Discovered near Kennewick, Washington, this skull has been dated at 9,500 years old, making it one of the earliest human remains found in the Americas. Its "Caucasoid" features may reflect the Central Asian origin of the first Siberians to arrive in the New World.

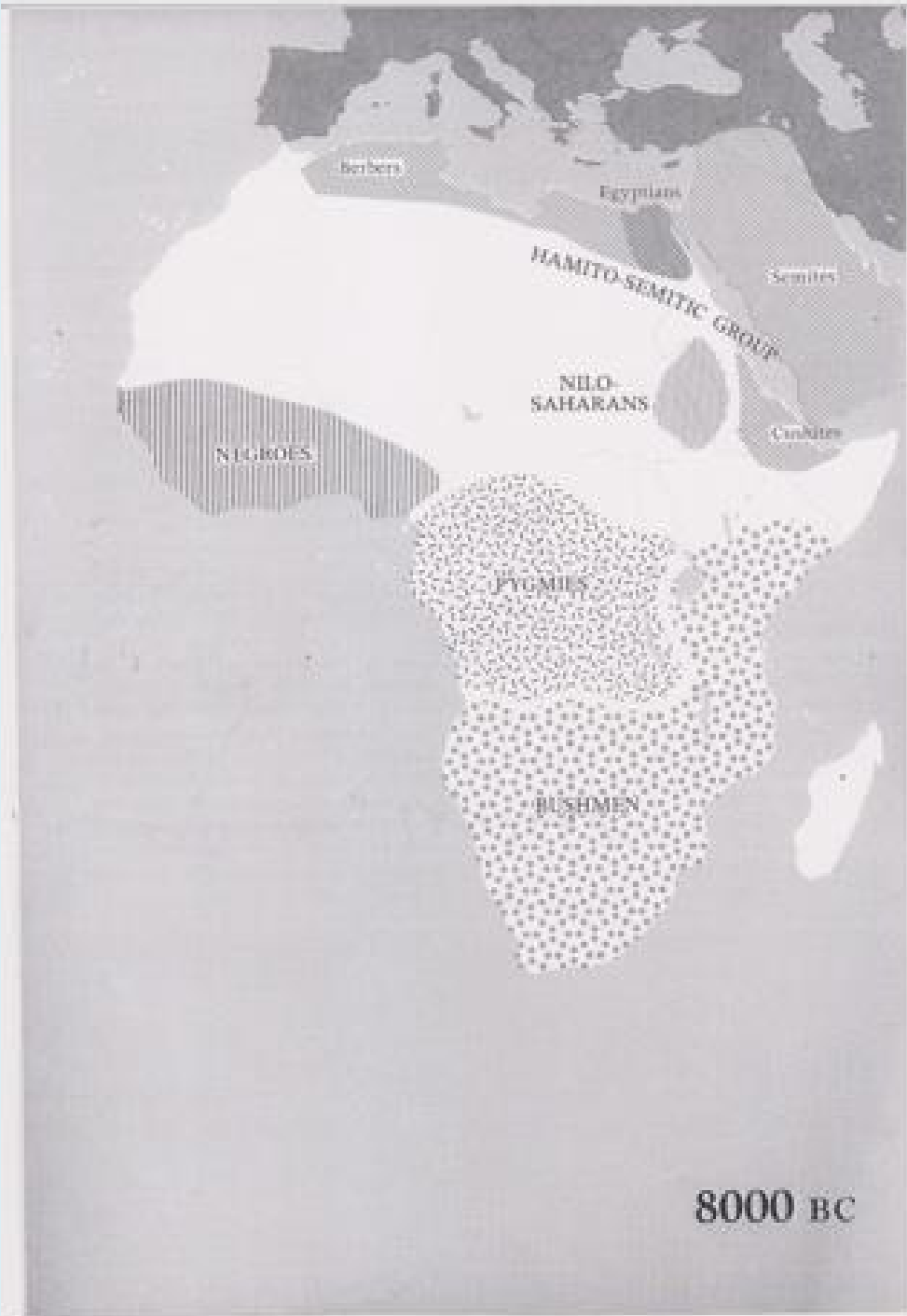
MIGRATION PATTERNS OF EARLY HUMANS		
Y Chromosome Markers... (thousand years ago)		
M 91.....60	M 9..... 40	M 201.....20
M 60.....50	M 175.....35	M 242.....20
M 168.....50	M 45.....35	M 3..... 10
YAP.....50	M 173.....30	M 172.....10
M 174.....50	M 20.....30	M 17.....10

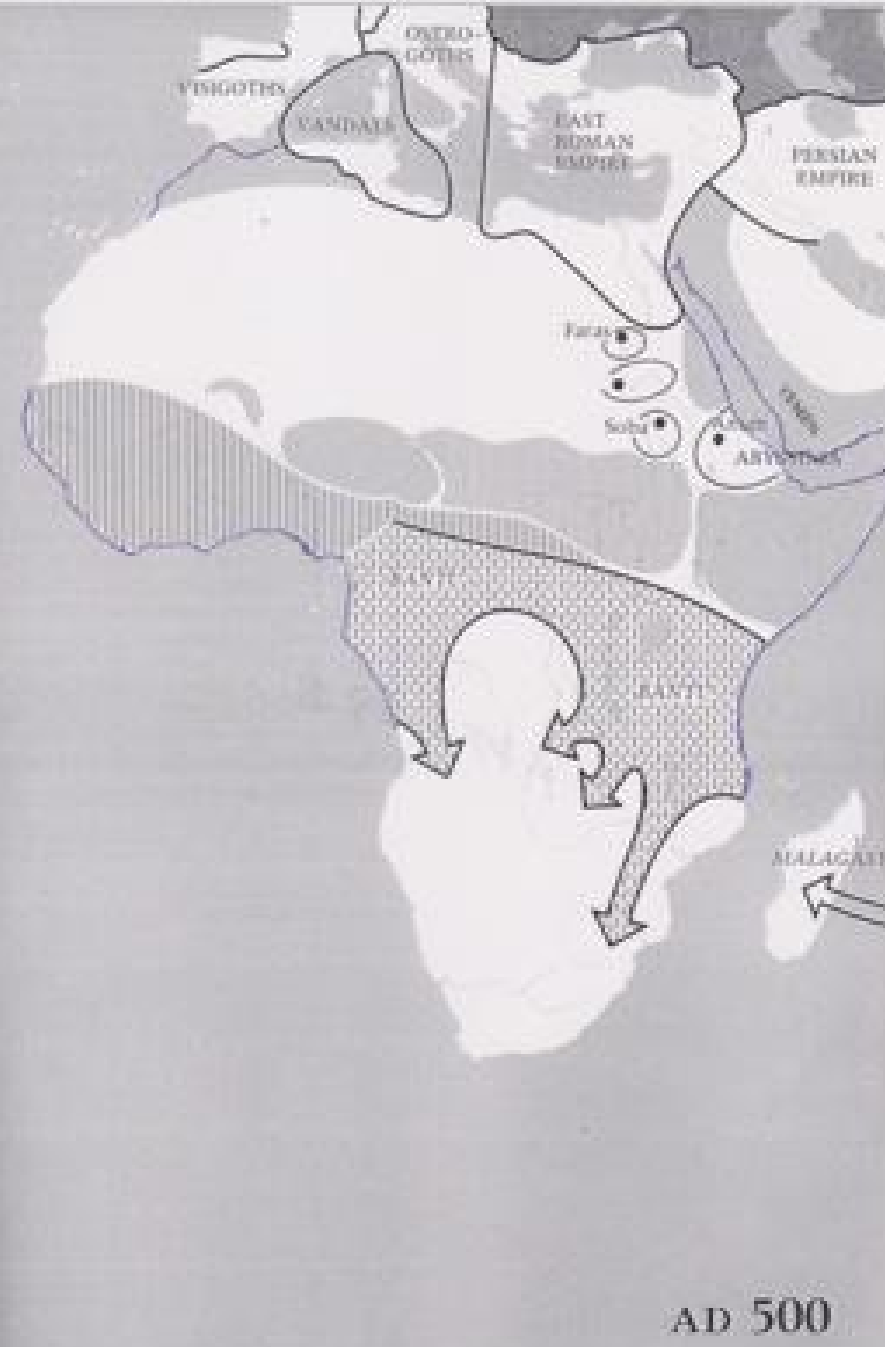
Denisova allele frequency











AD 500

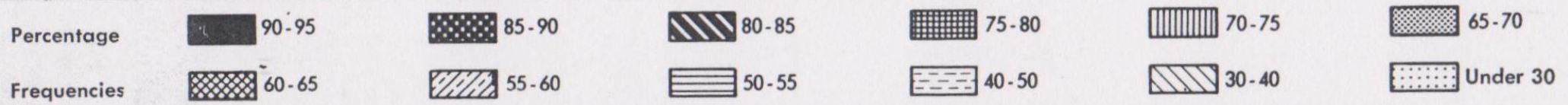
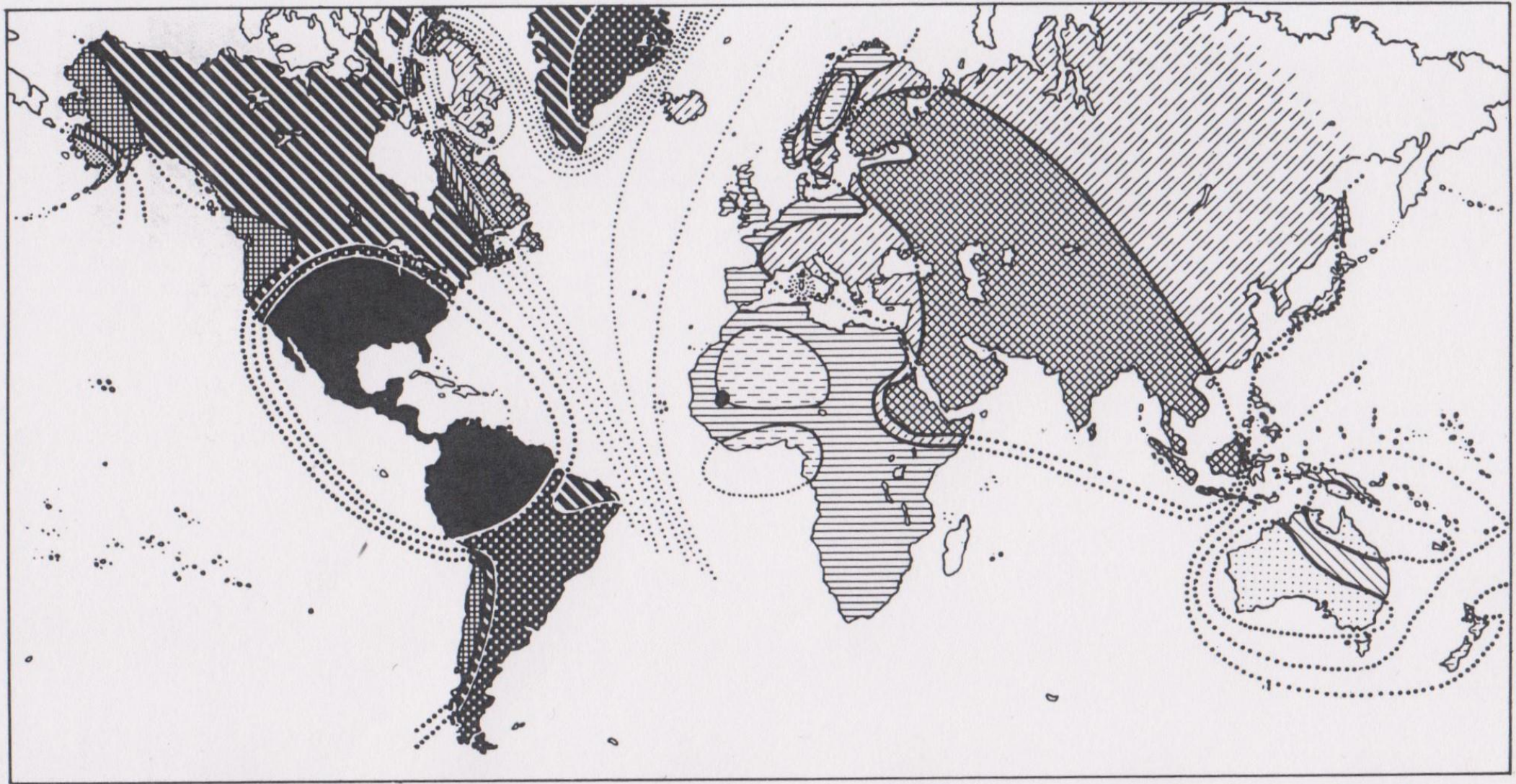


FIG. 41 The distribution of the blood-group allele *M* before European colonization (after A. E. Mourant, 1954).

