

## Summary 10: Reversing the Diaspora

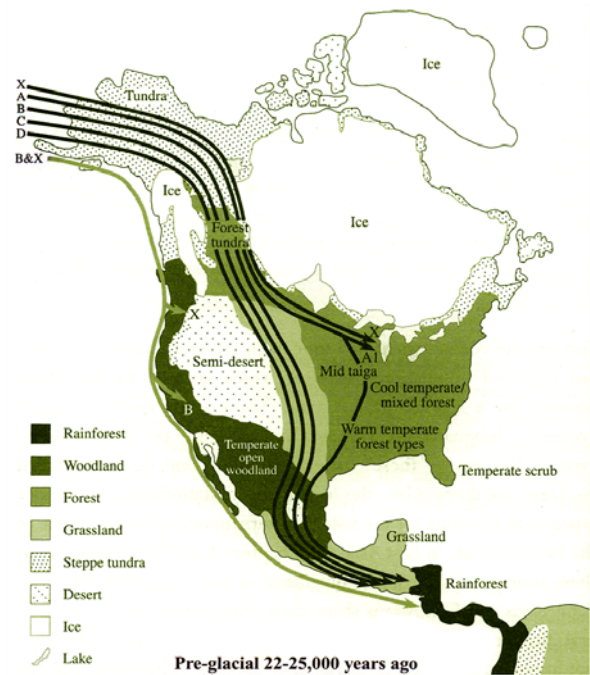
If the gentlemen archaeologists of the early 19th Century thought only of Before– and After– Noah's Flood, modern geneticists seem to consider the world Before– and After– the LGM. All things considered, the Ice turned out to be a very big punctuation point in human history, but it did not bring the world to a stop. Some paleoanthropologists argue that it was at these times the greatest cultural advances were made. However, when the Ice came upon them during the LGM, most human beings had no alternative but to seek warmer climes or to perish. Those who were able to relocate, did so by reversing the pattern their ancestors had always adopted and simply back-tracked downstream in the river valleys or, in the case of those who beach-combed for a living, by following the long beach road until they found somewhere to live in at least minimum comfort. First, and briefly, in Europe humans sought refuge in the Ukraine, the northern Balkans and in Northern Spain/Southern France. People who had migrated to Italy after the exodus from Africa (mostly mtHg J, descendents of the original Hg N) just stayed where they were.

The changes the biosphere during the LGM were startling: deserts grew larger, the ice caps and adjoining polar deserts greatly enlarged, rainforest and woodlands shrank, replaced in many places with grassland or scrub. The pattern of alternating stadials and inter-stadials stopped and the world grew steadily colder. More and more of the world's water was permanently frozen into ice so that sea levels dropped while the ice caps grew. In some parts, the ice was up to 5 km thick. The huge mass of the ice also caused the land beneath it to sink while in reaction, areas of the seabed rose. Sea level was anything up to 120 meters lower than it is today.... Northwestern Europe fared rather worse than most places on earth and much of it, including most of Britain and adjoining Doggerland, became uninhabitable. Asia was better off because much of North and Central Asia were ice-free. The Himalayas and Tibetan Plateau turned to ice or polar desert although surprisingly, there is some evidence of human occupation even during that time. The southern hemisphere was not as affected as the northern hemisphere: in sub-Saharan Africa the Kalahari Desert expanded while in Australia the great central desert expanded to include up to 85% of the continent. And everywhere, because humidity was so low, very cold, dry winds blew almost continuously making life even in the refugia most uncomfortable.

North America suffered badly during the LGM. Two-thirds of the continent was covered by two huge ice-caps. The largest, the Laurentide Ice Sheet, occupied what we know as Hudson's Bay and connected with the Greenland Ice Sheet. To the west was the smaller Cordilleran Ice Sheet above the Canadian Rockies. Alaska to the north was virtually ice-free and was at that time, connected to Siberia by a land-bridge known as Beringia which, like Doggerland, has since sunk beneath the waves as the weight of the ice sheets was lifted.

We are not dealing with the peopling of the Americas in this course but briefly it now appears the Americas were settled maybe 33 KYA by people taking several routes into these continents. The four through Beringia fit well with both the genetic and the anthropological evidence. Genetically, there are 4 genetic founder types in the Americas, identified as A, B, C and D which appear to be descended from sister clades on the other, Asian side of the Bering Straits. Haplogroups A,C and D were all estimated to be very old, ranging from 41 to 20 KYA, suggesting that the Americas were populated before the LGM, during one of the previous glaciations which opened the Beringia land bridge. Group B was both younger and absent from Siberia. It has been suggested it was the group responsible for the Clovis culture or alternatively, along with the rather mysterious group X, was the origin of the disputed Kennewick Man supposed to have had European ancestors.

In East Asia people had found their way before the LGM into the hinterland by following the great waterways, including the Mekong, Yangtzi and Yellow Rivers and discovered the great grasslands of Central Asia. However, as the LGM deepened, the line of permafrost advanced southwards to about the 50<sup>th</sup> parallel and much of the terrain turned to desert. Some people clung on in the permafrost zone where the pickings apparently were still considerable. Also, parts of Japan (then a peninsula) and the coastal regions opposite on what is now mainland East Asia retained forest cover. It is important to remember



there, as well as in the south, the drop in sea level exposed large areas of land for people to colonise. Also, much of the previously fertile land in a band around the 40<sup>th</sup> parallel, turned to desert reducing populations considerably and producing genetic bottlenecks. These deserts then became barriers separating South and Southeast Asia from Central and Northern Eurasia and isolating local populations from one another. In the face of advancing deserts and other inhospitable conditions, people retreated back down those self-same river valleys their distant ancestors had followed generations before, bringing with them of course, the genetic changes which had

happened to them during the thousands of years they hunted woolly mammoths and developed the increasingly sophisticated cultures of the Steppes.

As to when the Chinese began to look like Chinese, there is scant evidence. Their characteristic epicanthial fold, more gracile bodies, lack of skin pigmentation and the Sinodont tooth formation are all shared by Amerinds, so whenever the changes occurred, it must have been before the end of the LGM 10 KYA. Oppenheimer contends that by the end of the LGM there were three different human groups in Asia: the southern Semang-type peoples of Southeast Asia whose ancestors had beachcombed their way from Africa; there were the Northern Mongoloids coming down from the North; and there were the Southern Mongoloids who had been living on the Pacific coast since their ancestors chose to remain there when others extended up the great rivers to the Central Asian steppe. He suggests that these Southern Mongoloids probably looked much like modern-day Aboriginal Malays and had features in common with the modern Malay-type people. Often referred to as "Sundadont" peoples, it is probable some of their distant relatives pushed off in canoes and headed east to become the modern Polynesians and other residents of the Pacific Rim.