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tead it the way The 'extinct' human

One theory believes that the Neanderthals and modern humans cohabited as recently as 26,000 years ago. M S S Murthy looks at the questions of extinction that arise from that.

In June 2006 anthropologists around the world met in Bonn, Germany on the occasion of the 150th anniversary of the discovery of the fossils of an extinct human species - Homo neanderthalensis and to evaluate what it has taught us about the evolution of modern man.

Most organisms inhabiting the Earth today are represented by more than one species. Even among the modern chimps two species are alive- the Common Chimpanzee and the Bonobos. It may come as a surprise to many of us that all the people inhabiting this planet today belong to only one species - Homo sapiens, irrespective of their skin colour, geographical location, etc. We are popularly referred to as modern humans. No other human species is alive

But it has not been so all along the history of modern man. There was a time when he cohabitated with at least one more human species in Europe and

In the long journey of human evolution beginning in Africa six to seven million years, anthropologists have identified 12 to 15 species of the genus Homo. Evolution of modern man has not been a linear path. There could have been several branches, some of which did not leave any Affordable Flight Solutions descendents at all.

If so where did modern man evolve and who was his immediate ancestor?

Some anthropologists believe that the species Homo erectus was the direct ancestor of later humans, including Homo sapiens. Homo heidelbergensis, who shared an ancestor with Homo erectus, might have migrated from Africa to Europe around 800,000 years ago.

This is supported by the discovery of a 500,000 year old fossil jaw belonging to this species in

Heidelberg, Germany. While this species gave rise to Homo neanderthalensis in Europe, its African counterpart gave rise to Homo sapiens around 200,000 years ago.

Fossil and DNA evidences suggest that Homo sapiens also started migrating out of Africa about 100,000 years ago and colonised the entire globe over the next several centuries. Hence, when modern man arrived in Western Asia and Europe about 40,000 years ago, his first cousins the Homo neanderthalensis were already there to welcome him!

This became evident after the German anthropologist Johann Karl Fuhlrott discovered in 1856 human skullcap and partial skeleton in a cave in Neander valley near Düsseldorf, Germany. Though it looked anatomically close to modern man, certain features were distinctly different. Later many more fossils with similar features were found in many areas of Europe and Asia.

After a careful study of these fossils anthropologists opined that they represented a new species of the genus Homo and called it Homo neanderthalensis. Neanderthals' locations are now known to have spanned from Spain to Siberia.

Clive Finlayson of the Gibraltar Museum in Portugal who has dated Neanderthal artifacts such as tools, food items, etc. concludes that that they lived up to as recent as 24,000 to 28,000 years.

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Economy & Business This means that modern humans and Neanderthals cohabitated in the same geographical region for several thousands of years. If so how did he look like? For Information and How did he live? How did he become extinct?

> And most importantly, what was modern man's role in Neanderthal's extinction? Anthropologists are trying to piece together available evidences to answer these questions.

How did they look?

Based on fossil remains of skull and skeleton anthropologists have been able to reconstruct a Neanderthal. Neanderthal male stood about 1.65m tall, weighed about 64 kg: the female about 1.53 to 1.57m tall and 50 kg. He walked upright without slough or bent knees. He had a large braincase (the cavity in which brain sits) - about 1500 cc (modern man's is about 1300 cc).

Early 20th century anthropologists pictured him as a brute, slope-browed, dark skinned, dark haired cave man, unknown to technological innovations, art, speech and language.

But reanalysis of those and other more recently discovered artifacts reveal that he was innovative, made fine tools like razor sharp knives from flint, and made fire wherever and whenever he wanted. He hunted the same way as modern man did those days and even prepared animal hides to wear as

Culturally, he buried the dead (which other non-human primates do not do) with symbolic rituals, which reflected an awareness of life and death.

Analysis of DNA fragments recovered from fossil bones and teeth have suggested that they possibly had a wide range of skin and hair colour ranging from red-yellow to black-brown and might have spoken a rudimentary language.

It is believed that if a Neanderthal, dressed up in modern clothing, is sitting next to you, you will never realise he is different!

The extinction

The most haunting question is what caused his extinction?

Some speculate that modern man with his higher cognitive ability, and advanced art, language, speech and technology outhunted and annihilated the Neanderthals to extinction.

It is also possible that the faster multiplying modern man interbred with the already dwindling Neanderthals, who got assimilated with the bigger population. More definitive answers may evolve when scientists at the Max Plank Institute for Evolutionary Anthropology, Germany complete the analysis of the entire genome of Neanderthals, which is about the same size as of modern humans, by next year.

Climate, the culprit?

Meanwhile Francisco Jimenz-Espejo, a palaeometrologist at the University of Granada in Spain says that a very harsh period existed about 26,000 years ago - the time of the Neanderthal's extinction.

This climate change might be one of the causes of their extinction, because "Neanderthals struggled with climate changes more than modern humans" during that time.

That said, the changing climate, the global warming - do these ring a warning bell to the Homo sapiens themselves?





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