

# The neanderthal man in retrospect



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We have always been fascinated by Darwin and his theories of evolution. With so many “schools of thought” of how the earth came into existence, it seemed impossible to narrow down our choices, analyze each theory, and prove everything that it postulates. It was a clear indication that the search for our ancestors, and the “missing link” will continue until an answer is sought. But, will we ever find out? For now, that remains to be seen.

The Neanderthal man is believed to be one of the “missing links” in our ancestry. Like the Cro-Magnon man, Peking man, and Java man, this “species” became extinct 32,000 years ago. The purpose of this paper is to familiarize the reader with the Neanderthal man and the possible theories that might have led to his extinction.

The remains of the Neanderthal man, also known as *Homo (sapiens) neanderthalensis*, was discovered in 1856 by workers quarrying for limestone in Neander Valley, Dusseldorf, Germany. These fossils were also found in other parts of Europe and Asia. They were considered a subspecies of humans because upon examination, they had features that are almost similar with humans, except for heavy brow ridges, a long low skull, and a robust skeleton (Foley, 2002).

Neanderthals were shorter than the modern man, and as previously stated, had prominent brow ridges. Aside from that, they had low, sloping foreheads, a chinless and heavy, forward-jutting jaw, extremely large front teeth, wider shoulders and pelvis, more conical rib cage, and shorter forearms and lower legs (Columbia Encyclopedia, 2005). Some scientists, majority of which are paleoanthropologists, claim that these were not a subspecies of humans

because of their more “ primitive” appearance. According to Stringer and Gamble (1993), the Neanderthals are a late form of Homo erectus or a descendant of that species.

It was believed that the Neanderthals have been living in Europe 200, 000 years before the Homo sapiens arrived (BBC News, 2007). In van der Dennen’s Book Review Essay on Neanderthal Man (2005), he stated that:

This was the first evidence of a distinct (and now extinct) species or subspecies of human, Homo (sapiens) neanderthalensis, that lived during the later part of the Pleistocene epoch, more familiarly known as the Ice Age, some 200, 000 to 30, 000 years ago.

During 1917, Emil Bachler, in one of his excavations in the mountains of Switzerland, found no fossils of the Neanderthals (Van der Dennen, 2005). However, Mousterian tools and the remains of many cave bears were in abundance. Mousterian tools were most closely associated with Neanderthals. Bachler also felt that the bones and the tools were part of a ritual, and believed that the Neanderthals practice some sort of “ bear cult” (Van der Dennen, 2005). This led to the notion that the Neanderthals, like humans, had some form of communication and “ culture”.

When the fossil of this subspecies was studied by world-renowned pathologist and anatomist, Rudolf Virchow, he found out that the remains had evidence of rickets and osteoporosis, and he attributed this to the ape-like appearance of Neanderthals. Rickets and Osteoporosis is a manifestation of Vitamin D deficiency. Francis Ivanhoe (1970) in his paper supported

Virchow's statement and postulated that the disease causes skeletal deformities and enlargement of the liver and spleen (Thompson, 2002).

This maybe true because in the Pleistocene epoch, more commonly referred to as the "Ice Age", sunlight was a rarity. Vitamin D, in itself is stored in an inactive form and in order for it to be utilized by the body, it needs to be converted to its active form by UV rays (good source, sunlight). Therefore, it is not surprising that a number of fossils recovered during this era had evidence of bone deformities.

However, Trinkaus and Shipman (1992), claimed that Neanderthal features are not caused by these bone diseases and argued that the bones of the 1st Neanderthal, were about 50% thicker than the average modern man. Klein (1989), supported this idea by comparing the long bones of Neanderthals and those of rickets' victims. He claimed that both of their long bones are more curved than normal but rickets causes a sideways curvature of the femur, while Neanderthal femurs curve backwards.

If Neanderthals are more human than ape, then it should follow that these subspecies should have survived today. Surprisingly, this is not the case.

One of the earliest theories of the extinction believe that the "Ice Age" era, with its harsh climate, could have killed the Neanderthals. It points out that during this period, it was not only the climate that affected them, but the scarcity of resources were a factor as well. However, Professor Katerina Harvati, a palaeoanthropologist from the Max Planck Institute for Evolutionary Biology, Germany, said: "The more controversial date of circa 24,000 years ago, places the last Neanderthals just before a major climate shift that would

have been characterised by a large expansion of ice sheets and the onset of cold conditions in northern Europe” (Morrelle, 2007).

Another theory is the “ candelabra model” or “ multiregional evolution” theory. According to Trinkaus and Shipman (1992):

“ Though the evidence in different regions of the Old World records genuinely different events, nowhere is there evidence for violent confrontations between Neandertals and modern humans (myths notwithstanding). The mosaic of local evolution, migration, admixture, absorption, or local extinction of Neandertals was a complex process that occurred over the last 10, 000 years” (p. 416).

But, Tattersall (2005), in his book, had another theory. He is convinced that the extinction of Homo neanderthalensis was brought about by the arrival of the more intelligent and more adaptable Homo sapiens, and that the latter killed the race of the former. On his book he wrote:

“ It is vanishingly unlikely, however, that peaceful assimilation was an overall option, with groups of the two kinds of humans [the resident Homo neanderthalensis and the invading Homo sapiens or Cro-Magnons] exchanging members when they met and going their separate ways, or joining forces. More likely, perhaps, if intermixing is to be considered at all, is a scenario of well-equipped and cunning Homo sapiens descending on Neanderthal groups, killing the males - through strategy and guile, certainly not through strength - and abducting the females”(p. 202).

However, there was no evidence of large scale killings (Richards, 1987), and the theory of “ Biological displacement” was proposed. It states that the Neanderthals and modern man (Cro-Magnons), coexisted and lived side by side. But, due to the fact that humans are much more intelligent than these subspecies, they might have indirectly led to the extinction of Neanderthals by driving them away from their territories. These led to occasional violence between the groups, but, as expected the humans won, driving them to places with insufficient resources for sustenance. Ironically, the very species that are studying these Neanderthals are the cause of their extinction.

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