

150 years Neanderthal Man, more than just another anniversary

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When I was asked to write a contribution for the Hatada Website, I was in trouble because there are so many cultural topics in Germany and in my area where it is worth writing about. I did not want to write about what is found in the popular travel books about Germany as the "musts" such as Schloss Neuschwanstein in the South (<http://www.neuschwanstein.de>), or Heidelberg, the "Oktoberfest" in Munich. Since I live in the north-western part of Germany, in the Rheinland, near Cologne and Duesseldorf (which houses probably the highest density of Japanese people outside Japan and where there is the centre of Aikido in Germany), it was here where I decided to look for an interesting story.

But what might be interesting for the friends of the Hatada-website? There is Beethoven's birth-house in Bonn, the former capital (<http://www.beethoven-haus-bonn.de>). Robert Schumann, another famous composer, born in Zwickau, 1810, but he spent many years in Duesseldorf, and recently, 29.07.2006, was the 150th anniversary of his passing away in Bonn-Endenich (Schumann-House, Bonn-Endenich, Sebastianstr. 182); there is Cologne with its mighty Gothic cathedral and its Roman history (<http://wdr.de/domcam>), there is Aachen (or Aix-la-Chapelle as the French call it; <http://www.aachen-tourist.de>), in the corner where Belgium and the Netherlands meet Germany, most popular place of Charles the Great around the year 800, hence in some sense a first German capital (only in 1871 Berlin became the first "official" capital of Germany) with its marvellous cathedral consisting of the octagonal Romanic chapel as core (built by Charles the Great) and the later attached Gothic chorus which is Europe's largest "glass house" with its huge coloured windows. Aachen is also the home of the Rheinisch-Westfaelische Technische Hochschule, the well-known RWTH (<http://www.rwth-aachen.de>), where I have studied and where famous scientists and engineers like Theodor von Karman (engineer), Helmut Zahn (protein chemist) or Josef Meixner (physicist) were professors. The RWTH has the sigillum of Charles the Great as its coat of arms.

There are the Romans in Germany, who have left an impressive heritage along the river Rhein (English: Rhine) in names of cities like Koblenz (Confluentes = where the rivers Mosel and Rhein merge), Cologne (Colonia Agrippinensis), Neuss (Novesium) opposite of Duesseldorf, or Xanten (Colonia Ulpia Traiana) (<http://www.xanten.de>; <http://www.apx.lvr.de>), a settlement on the lower Rhine from which the Roman General Publius Quinctilius Varus had set out with three legions (the XVII, XVIII, and the XIX, a total of about 20,000 men) from the local military camp Castra Vetera in the year 9 to be annihilated with all his troops by Arminius in the battle of the Teutoburger forest (4 days and 3 nights) that has recently been localised at Bramsche-Kalkriese near Osnabrueck.

There are unique masterpieces of engineering very close to my hometown, Wuppertal: the Muengstener Bridge (<http://www.muengstener-bruecke.de>), an early (1897) iron railway bridge 107 meters high and 480 m wide, constructed like the Tour Eiffel, the famous Schwebebahn (hanging train or suspending train, see: <http://www.schwebebahn.de> or <http://home.telebel.de/pebosba>, or http://de.wikipedia.org/wiki/Wuppertaler_schwebebahn) that was built around the year 1900 that had only three accidents (none of them caused by the technique or the construction). One of the accidents was caused 21st May 1950 by a baby-elephant, Tuffi by name, who jumped out of the train and fell down into the river Wupper – a true story! (<http://en.wikipedia.org/wiki/Tuffi>). So what to do? Finally, I decided to write about a famous inhabitant of this area, well-known all over the world, the first true European: Neanderthal man (*homo neanderthalensis*). A relative but obviously not a predecessor of the modern man (*homo sapiens sapiens*). Neanderthal man was first identified exactly 150 years ago, 1856, by a high school teacher from Wuppertal (Wuppertal was at that time split into two villages, Elberfeld and Barmen). In fact, parts of the skeleton of this species had been already found in Engis, Belgium, 1829 or 1830, and in Gibraltar 1848. In the year 1863 the name *homo neanderthalensis* was created by William King in a lecture on a meeting of the British Association for the Advancement of Science. After that lecture the zoologist Busk

remembered the existence of the skull that had been found in Gibraltar and it was shown that the bones belonged to the same type of species.

Neandertal is a valley about 10 km east of Duesseldorf named after the 17th century poet Joachim Neander who liked this lovely valley very much.

So, it became Neander's Tal. "Tal" means "valley" and one might note that the scientific name is (usually) written with "th". The reason is that around the year 1900 there was a reform of German orthography and many words written with "th" like Thurm (tower), Thuere (door) lost their "h". Interestingly not the word Thron (= throne). The reason is that at that time Germany had an Emperor, William II, and he did not want to sit on a throne without "h", so it remained in place by higher order. However, if you want to visit that site today and the nice museum there, you have to look for "Neandertal"-without "h". In "neanderthal man" it remained by scientific consequence or tradition.

The Neandertal in former times was a lovely valley with forests, meadows and a creek much loved by artist who came from the nearby Duesseldorf to paint the landscape-it was the romantic age of the 19th century. The name of the creek is "Duessel" and consequently the name of the village at the statuary of the creek with the Rhine was called Duesseldorf, no longer a "Dorf" (= village) these days. However, this area east of Duesseldorf is rich in limestone because there is a Devonian coral reef, 400 million years old, and the limestone was – and is – very popular in building trade, so there was a stone quarry. At a site called Kleine Feldhofer Grotte (cave) some quarry workers found weird bones and thought they might belong to a bear or – the Napoleon War was not long ago – they were bones of some rheumatic soldier of the beaten Napoleon army. It was C. Fuhlrott, the high school teacher who immediately realised the importance of the bones, the calotte of a skull and some other bones, see fig. 1. A street in Wuppertal is named after Fuhlrott.

The bones were not found *in situ* – means they were not found in their natural, undisturbed position, therefore, an exact dating of the remains was not yet accomplished. The age is assumed to be 40,000 to 100,000 years (neopleistocean, Weichsel-glacial). The huge limestone rock that housed the cave where the bones were found is long gone – completely gone. The original site is now a meadow with marks and information one can obtain from tables and earphone that can be borrowed at the near-by Neandertal Museum. Fig. 2 and 3 show how the original site looks today. Geographical coordinates: 51°13'38,93"



Figure 1: The bones of the historic *homo neanderthalensis* in the Museum in the Neandertal, Germany

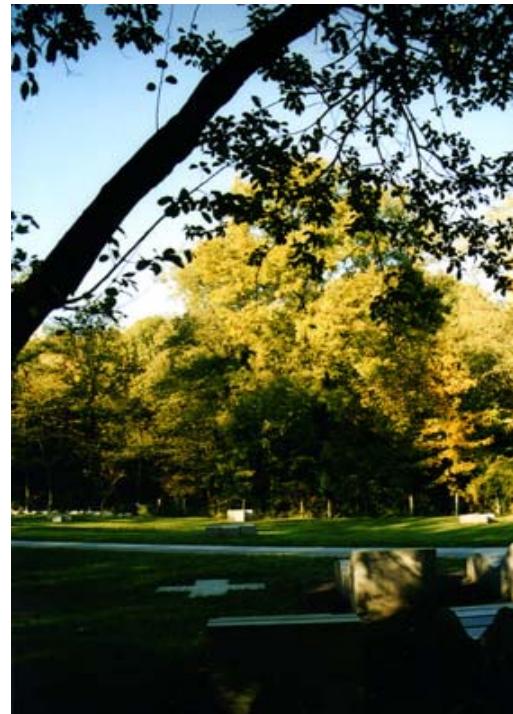


Figure 2: View of the site where the Feldhofer Grotte was, bearing northwest. Imagine a huge rock in the centre of the picture with the cave about 20 m above ground level.

North, 6°56'43,22"East.

Imagine a huge rock with the cave entrance in about 20 m height above the present ground level. So, the original site is really gone. The more surprising is it that a recent careful revision of the area (1998) resulted in the discovery of the (lost) original location and the identification of the sites that were called "Kleine Feldhofer Grotte" and "Feldhofer Kirche" early in the 19th century. The two archeologists Juergen Tissen and Ralf Schmitz were even able to identify the rubble from these sites and detected some missing parts of the historical 1856 discovery: 20 parts including a molar, ribs, vertebrae, toe-bones. They even found a yen-sized bone splinter that fits exactly into the 1856 left knee joint. There is also hope that some new stone artefacts from the site will provide additional information about the age of the skeleton.

In those days of Neanderthal man, the lovely valley must have looked entirely different, like a tundra with the ice of the glaciers only a few hundred or even less kilometres to the north. About 20,000 years ago the glaciers reached their most southern position about the latitude of Essen, 50 km to the north. On the left (western) bank of the Rhine one can still see the left-overs of this glacial: the terminal moraines between Xanten and Sonsbeck. These were the times when the river Thames was a tributary stream of the Rhine, large parts of what is now the North Sea were dry land and the British Islands were integral part of the continent that could be reached without wetting the feet.

Who was *homo neanderthalensis*? There is no evidence that he/she was our ancestor. Rather a cousin, a branch of the tree of evolution that was an offspring (about 400,000 years ago) from *homo ergaster* (*homo erectus*) who moved into Europe from Africa. *Homo neanderthalensis*, however, is no African. He is European, some relicts were found in the Near East. He was the only human (and humanoid) inhabitant of Europe until modern man – the Cro-Magnon type - arrived in Europe from Africa about 40,000 years ago. The "classical" Neanderthal man is known since about 90,000 years ago and he coexisted with the Cro-magnon (*homo sapiens*) in Europe for about 10,000 years before he disappeared for still unknown reasons about 30,000 years back.

Neanderthal man was more compact and bulky compared with modern man, reconstructions may provide an idea how they might have looked like, and modern computer-assisted face reconstruction is surprisingly accurate, see fig. 4.

This new picture of Neanderthal man is much different from the rude, almost pre-hominid ideas of



Figure 3: View of the site of the Feldhofer Grotte bearing southeast. The site is marked by the red-and-white sticks.



Figure 4: Diorama of a camp of *homo neanderthalensis* with the bodies shaped and the faces according to the most recent knowledge and computer-assisted modelling techniques. The model is displayed in the Neandertal Museum.

19th century artists who created sculptures like the one in fig. 5.

Today we know that *homo neandertalensis* was different from us, however a very close relative who had ideas about an afterlife, who showed social behaviour, was skilled in creating stone as well as bone tools and even small pieces of decoration were occasionally found, but he appears not to have taken part in the artistic explosion that has led to the magnificent paintings of the Magdalenien and earlier, see for example the cave of Lascaux or Chauvet (<http://www.culture.gouv.fr/culture/arcnat/lascaux/en/> resp.: http://www.culture.gouv.fr/culture/arcnat/c_hauvet/en/). However, we do not really know "which was the egg and which the hen" and why these things have happened.

Neanderthal man stands for the period of the Acheuleen and Mousterien when in the style of the stone tools some aesthetic understanding is obvious. Also different natural colours were used and occasionally small pieces of art were found. It appears to be almost sure that he was able to speak, to communicate that is without doubt. In a sense he was a modern human being. Maybe we would not identify one standing next to us - modern dressed - in a metro train in Paris. It might be a good idea to visit the original site, in the evening of a day in autumn, when there is no-one else. It will always be a special place there, even if it looks completely different today. It is also worth to visit the Neandertal Museum (<http://www.neanderthal.de>) and dive into that spiral of time that it is, from the idea and also from the architectonic presentation. Where do we come from, fig.6, who was the person whose bones we are looking at and what is our destination, fig.7?

P.S.: Just a few days ago (August 10, 2006), archeologists have identified an about 120,000 years old (micoquienne) neanderthalian camp with the ground-plan of a hut near Cologne in a brown-coal open-cast.

**Story by Michael Hess
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Figure 5: The real homo neanderthalensis was certainly far from this crude sculpture. The helically wound architecture of the Neandertal Museum is visible in the background. The architecture is supposed to reflect the spiral of time that the visitor follows inside this snail-shell shaped building.



Figure 6: Face to face with 30,000 years or more



Figure 7: It was a long way to go...