3. Denmark's History

3.0 Pleistocene

The name Pleistocene comes from Greek as Pleistos means "most" and kainos means "new". In everyday language, the period is often called "Ice Age".

Pleistocene began in 2,588 million years ago with start of the pre-Tegelen glaciation, and lasted until the end of the Weichsel glaciation in Europe maybe about 15,000 to 12,000 years ago. In modern times it has been agreed that this glaciation age ended 11,700 years ago - that is in Greenland.



The traditional division of the Pleistocene

We know a lot about the last glaciation, the Weichsel glaciation, but quite a little about earlier glacial and interglacial periods. The problem is that during each subsequent glaciation enormous glaciers have destroyed most traces of the past. It was thought initially that Cromer was one long interglacial, but it has been found that the period contains three glacial periods and three interglacial; therefore, it is now called for the Cromer complex. Also, the Bavel glaciation is now called the Bavel complex, because it has been found to contain several glacial and interglacial periods.

The names of the periods come mainly from European locations, where findings have been made. For example: Cromer is a town in Norfolk in England; Holstein comes self-evident from the German state of Holstein, where findings from this interglacial period have been made; The Weichsel glaciation is called so because the ice finally stopped at the river Weichsel in Poland; and so on.



Based on findings and measurements from around the world some have calculated the development in surface level in the world seas from last glacial maximum to the present. Their calculation shows that surface level during the Weichsel ice age was 120 meters lower than today's level. As the amount of water in the world probably is fairly constant, one can assume that also during previous glaciations sea levels have been may be 80 to 120 m lower than today. From Wikipedia.



Traces of a continuous alternation between glacial periods (isotopic frequencies with even numbers) and interglacial periods (isotopic frequencies with odd numbers) are preserved in sediments in the seabed. The marine oxygen isotope curve indicates fluctuations in climate during the past some 850,000 years back in time. It can be seen that for example, the Saale glaciation also contains several shorter glacial periods, interstadials and interglacial.

Successions from the seabed are far more complete than successions from land because these last ones are highly vulnerable to erosion

It is important to realize that the Pleistocene was not one single long glaciation, but rather a series of glacial periods interrupted by interglacials. Moreover, we must face that today we are living in such an interglacial period; in a relatively few thousand years the glaciers will most likely return and can transform everything in Denmark, including houses, cars, bridges and ports to end-moraines somewhere in northern Germany.

The previous interglacial period is called the Eemian after the river Eem in the Netherlands; it lasted about 16,000 years. The interglacial that we now live in has so far lasted may be 12,000 years in Northern Europe. Many believe that glaciations are caused by certain astronomical conditions, which return periodically, in this case, it cannot last many thousand years before the heat again will be turned off.

As the glaciers on both the North and South Pole were building up during Pleistocene, they tied up big amounts of water, and sea level fell dramatically. It is reasonable to assume that a large part of the area, which is now Denmark, was dry land in long periods until it became covered by ice.

from subsequent glaciers and the weather. Source: Geoviden 2005, nr. 2.

It is assumed that the Scandinavian ice sheet first reached Denmark in the Middle Pleistocene during the period known as Cromer complex. Until then the area has been characterized by temperate deciduous forest during interglacials and tundra during the glaciations. However, it is just an assumption, as several subsequent glaciers probably have removed very most of the traces.

3.1 Denmark in Pleistocene

Denmark is created by glaciations. One glaciation after another scraped soil, stone, gravel and organic material of the Scandinavian Peninsula and the Baltic seabed and dumped it at the glacier edge in Europe's northern seas. Precisely because the Danish country consists of soil and not of naked rock, the country is so incredibly green and fertile.



Tundra landscape in Alaska - in summer. Wikipedia.

For long periods during the Pleistocene glacial periods Denmark has been free of ice, and the landscape has been tundra without trees with an animal and plant life, which was adapted to these cold conditions. The ground was frozen to great depths, but in summer the topsoil thawed, leading to extensive land leveling. The water around Denmark was cold with drifting icebergs like at Greenland today.

Only in a relatively short periods of time, parts of the country were covered by the Scandinavian Ice shield.



Original forest on Mols - the Danish landscape might have looked like this during interglacials. Foto Lokalavisen.

In the somewhat warmer interglacial periods existed light open temperate forests as we know them in the present. The marine oxygen isotope curve above suggests that the temperatures of the interglacials were very similar to today's temperature..

The oldest Danish finding of remains of land mammals comes from Cromer complex. It is a fragment of a frontal bone from a stag with the inner part of the left antler, which has been found in a lake deposit at Herning.

In a lake deposit near Fredericia has been found a spool and an elbow bone from a small wild horse from the Holstein interglacial.



Denmark at the beginning of the Eemian interglacial. Geoviden 2005, nr. 2

During glaciations hardy herbs and low shrubs of dwarf birch and willow were growing in the tundra landscape. Mammoths, woolly rhinoceros, reindeer and musk oxen were roaming the landscape. The soil was frozen in many meters' depth year-round, and only in the short summers, the very top layer thawed.

At the beginning of the Eemian interglacial birch and pine grew in Denmark. Later, oak and hazel became dominant. The climate was much warmer than today; along European rivers lived hippos as far north as the Thames in England. At the end of the period, it again became colder and forests came to consist of spruce and pine.

During most of the Weichsel glaciation, Denmark was an open tundra. Only about 18,000 years ago the glaciers from the north and east reached the main static line in Jutland, where the ice front remained relatively fixed for a longer period. It runs from Bovbjerg at the western coast over Hald near Viborg and from there against south to Padborg.



Denmark at end of the last ice age, which was the Weichsel glaciation. Geoviden 2005, nr. 2

West of the main static line you will find the hill islands, which are the highest remains of the landscape from the Saale glaciation, which during the entire Weichsel glaciation was exposed to frost damage, spring floods, land leveling and leaching. From the meltwater gates in the ice front the low-lying parts of the landscape were flooded with meltwater and buried in sand and gravel; thereby the great heaths were formed. The largest of these is Karup Pain, Grindsted Heath Plain and Tinglev Heath Plain. North and east of the main static line, the young moraine landscape was created by the Weichselglaciation. It contains many different types of landscape. In the glacier fronts, ice front hills or lateral moraines were formed, for example, Tolne Bakker in Thy, Mols Bjerge and Odsherred Hills. Some of these have been created as the glaciations during repeated thrusts have pushed along material in front of them; others are built up by glacial deposits along a stationary ice front. In front of the ice, local minor meltwater plains were formed including Tirstrup Heath Plain on Djursland and Bregninge Heath Plain in Western Sjælland.



The maximum extension of the ice during the last three glaciations Elster, Saale and Weichel. From Woldstedts "Das Eiszeitalter - Grundlinien einer Geologie des Quartaers I-III".

Especially in the summer, meltwater flowed toward the glacier front in large channels under the ice. This formed long, deep and steep subglacial stream trenches. The landscapes around Tystrup Lake and Furesøen on Zealand are classical examples of subglacial stream trenches. In Jutland are the Eastern Jutland fjords considered as subglacial stream trenches, that is Mariager Fjord, Vejle Fjord, Kolding Fjord, Aabenraa Fjord and Flensburg Fjord. But by now an increasing number geologists believe that the trenches already existed before the last ice age, and the Weichsel ice just generated an additional erosion.

3.2 The Pleistocene Mega-fauna



Woolly mammoth model Royal Victoria Museum Canada, Wikipedia.

It is often so that animals that live in cold regions become larger than similar animals living in hot countries; perhaps because the relationship between surface and volume is more advantageous in terms of heat loss. Thus, Polar bears are larger than their cousins, the brown and black bears. In Pleistocene, it was rather cold, and maybe, therefore, the Pleistocene mega-fauna emerged.

Such animals as the woolly mammoth, forest elephant, aurochs, cave lion, cave bear, giant Irish deer, woolly rhinoceros and elasmotherium, a giant rhinoceros, are all examples of the Pleistocene megafauna in Eurasia. These species are all extinct; today Eurasia's largest land mammal is the European bison, the Wisent.







A skull with tusks from a forest elephant. José-Manuel Benito Wikimedia<u>.</u>

The best-known Pleistocene species is the woolly mammoth, which lived on the Eurasian steppe during the Saale and Weichsel ice ages, that is, from about 150,000 years ago to 10,000 years ago. However, a dwarf species survived until 1,700 f.Kr. (the start of the Danish Bronze Age) on the island of Wrangel in The Polar Sea.

A Cro Magnon cave painting of aurochs in the Lascaux cave in France. Wikipedia.

In Denmark about 130 teeth, bones and parts of tusks from mammoths have been found; the youngest findings are about 13,500 years old.

It is not rare to find elephant remains in Denmark, but it is almost always molars or fragments of tusks, whereas only a very few findings of actual bones are known, and therefore often nothing certain can be said about where and when the elephants lived.

A Cro Magnon cave painting of a cave lion in the Chauvet cave in France, Wikipedia.

In a gravel pit at Myrup Banke near Næstved a tarsometatarsal from an elephant, most likely mammoth, was found in 1977. The animal lived during that part of the Weichel glaciation, where Denmark was not covered by ice

The forest elephant was up to 4 m tall and had long, slightly upward-curved tusks, the legs were a little longer than present-day elephants. It lived in Europe during the Holstein and Eemian interglacials and perhaps in some of the previous interglacial periods - in Denmark, the findings are from the Eemian only. It was closely related to present-day Indian elephant. Animal bones from Eemian, among others from forest elephants, bison, giant deer, fallow deer and red deer, were found in gravel pits at Seest in Kolding's western outskirts in 1950-78.



A woolly rhinoceros reconstructed by Remie Bakker, 2010.

An aurochs bull is estimated to have been up to 1.8 m. high, while an aurochs cow only was about 1.45 m. We can observe on the south European cave paintings that aurochs bulls' fur was brown-black with a light stripe down the spine, and the cows were reddish brown. The horns were long, thick and curved forward.

The earliest picture of people in Denmark is a drawing scratched into an aurochs bone. The bone, which was found in a bog at Jystrup near Ringsted, is about 10,000 years old.



Cave lions in a Pleistocene landscape. Paintet by Alan Turner. Wikipedia.

Cave Lions were up to 25% larger than modern lions; they had longer legs and was built for high endurance. They probably caught their prey by fast running in the same way as cheetahs do today. It is unlike modern lions, who like to sneak up on their prey. Cave lions probably did not live in caves, but preferred open coniferous forests, forest steppe and forest-tundra

where they hunted medium and large herbivores. Fossil footsteps of cave lion appear together with traces of reindeer and show that the cave lion had great cold tolerance.

Cave bear has its name because most fossils have been found in caves, which obviously suggests that it spent more time in caves than the contemporary brown Bear, which only uses caves for

hibernating. In some caves, a thick layer of bones has been found, which mainly originated from cave bear. Death during winter hibernation seems to have been a common end of life for cave bears.



A Cro Magnon cave painting of a cave bear in the Chauvet cave in France. Foto Ministere de la culture.

It was built as the regular brown bear, maybe a little bigger, but not much. The males weighed 400-500 kg, while females weighed 225-250 kg. Teeth from the cave bear are typically more worn than present bears', and its set of teeth was also somewhat different from contemporary bears.

This suggests that it to a greater extent than contemporary brown bears ate plant food.



Left: The skeleton of Irish red deer in the Museum of Natural History in Dublin. Photo:Wikipedia.

Right: The frozen baby mammoth Dima on the finding location. It was found by bulldozer driver A. Logachev during peat cutting at Kolyma River in eastern Siberia in 1977.

Irish giant deer is also named giant moose. Although it is called "Irish" it has no special connection to Ireland. It lived during late Pleistocene throughout Eurasia from Ireland to Lake Baikal in Central Asia.

It is the largest deer, who ever lived; it had a shoulder height of around 2.1 m, and it had the largest antlers of any known deer, they could be 3.65 m from tip to tip and weigh up to 40 kg. In the Museum of Natural History in Dublin, a significant collection of skeletons of giant deer are on display.

Throughout South Scandinavia, a total of 23 finds of fossils from the Irish Giant Deer have been made, of which 4 on the island of Fyn, the latest in Nakkebølle by gardening worker Torben Larsen in 2006. Moreover, bones of the deer have been found in Seest near Kolding.



Dutch fishermen have got a mammoth head in their trawl from the North Sea bottom - it is brought ashore in Zeehaven. Photo Daily Mail

Woolly rhinoceros was larger than the contemporary African rhinoceros. It could be up to 4 m. long and have a shoulder height of up to 2 m. It had two horns, the foremost could be up to 1 m long. It is believed that it has been used to sweep the snow away from

vegetation so that it could eat in the winter, but probably also to attract females. It had a thick, long fur, small ears, short, thick legs and a stocky body and was thus well adapted to life on the tundra in a similar manner as the contemporary Greenland musk ox.



Left: In 2007, a nearly complete mummy of a woolly rhinoceros was discovered in the permafrost in a gold mine at the lower part of the Kolyma River in North-Eastern Siberia 8 km east of Chersky. The left part of the body was covered by skin, including skin on the head and ears, front and hind legs were preserved. The skull with two horns and lower jaw were also preserved. However, most of the internal organs were lost, except intestines, stomach, and its content. A piece of rib was dated to around 39,140 years before present. Right: Four important findings of woolly rhinoceroses in Siberia.

There were several species of Pleistocene rhinoceros, including a giant rhinoceros with only one horn called Elasmotherium.

In the 1940's H. G. Larsen found a tooth from a woolly rhinoceros in a consignment lignite from Søby south of Herning. Bones from several animals including Merck's rhinoceros were found at Seest near Kolding in 1950-78.

A tarsometatarsal bone from a bison that are older than 40,000 years was found in a gravel pit at Rolfsted west of Nyborg.

The 10-year-old Martin Nielsen found in Vejrhøj gravel pit a tibia of a wild horse that lived in Denmark during the middle part of the last ice age about.

3.3 Prehistoric Humans in the Pleistocene

Homo erectus developed in Africa about 1.8 million years ago. The exodus from Africa was initially directed towards Asia. Both Peking man and Java is man attributed to Homo erectus. The timing of the migration out of Africa is unknown. Most researchers agree, however, that it took place more than one million years ago, but there is still debate about how much earlier than this, it may has started. Recently, a Homo erectus mandible has been found in Georgia, which is said to be 1.6 million years old.



The Peking man, who is attributed to Homo erectus. Photo Creation Wiki.

Homo erectus represents the evolutionary link between the more primitive and ape-like Homo habilis and modern human types. They used fire and primitive stone tools. Their drop-shaped "Acheulian" hand-ax was found in 1.4 million old layers in Olduvai Gorge in Africa.

They were higher than their predecessors, Homo Habilis was ranging up to 1.8 m, their brain volume was greater and their face was flatter, with marked eyebrow arches. The nose represented the first appearance of the typical human external nose with nostrils facing down. There are indications that they had very strong muscles and routinely experienced strenuous physical exertion.



Drop-shaped hand axe from Boxgrove in England. Wikipedia..

Homo erectus males, that is men, were 20 - 30% larger than females. At Homo habilis and other early African races, the difference between males and females was much bigger, males could be twice as large as females. It is believed that a very large size difference between males and females indicates a corresponding intense masculine rivalry for females, which then would exclude genuine cooperation between men. And following the less difference in size between the sexes at erectus it indicates the beginning of a real cooperation between men, which is a precondition for civilization and culture.

Homo erectus has long been regarded as the direct ancestor of Homo sapiens. Recently, however, this assumption has been questioned. Specifically, some researchers have suggested that several species of hominids from the Middle Pleistocene, which traditionally have been attributed to Homo erectus, actually represent different species of Homo, not just one. They think that the genetic diversification in the Pleistocene was larger than we usually imagine. Homo erectus will after their proposals only be defined from discoveries in Asia and will be a species that became extinct half a million years ago. The other findings - of erectus - will represent breeds similar to the Asian Homo erectus of African origin.



Reconstruction of Homo erectus in Kenya's National Museum

There are no conclusive findings, for example, of skeletal parts, proving that Antecessor or Heidelbergenis have lived in Denmark. But it is known that both Bavel and Cromer periods were not consistent ice ages, as it was assumed in the past, they contained several interglacial periods (For Cromer see chart above showing marine oxygen isotope curve). Each interglacial period lasted typically 10-15,000 years; it should give them ample time to make their way to Denmark. Moreover, according to

the chart, it is likely that several of Cromer interglacial periods were warmer than the present.



Oversigt over forhistoriske menneske racers eksistens i Europa og Mellemøsten i forhold til den ældre inddeling af istiderne. De ældste fund, som kan henregnes til Cro Magnon er fra Mellemøsten for omkring115.000 år siden. Imidlertid, det ældste Cro Magnon fund i Europa er fra kun 45.000 år siden.

In 1970 at Vejstrup Skov near Christiansfeld the brothers Niels and Aage Boysen found shaped flint stones in a gravel layer in 8-9 m depth. The finding was made in layers that can be attributed to the Holstein-glacial or perhaps an interstadial period in the subsequent Saale glaciation. This indicates that Homo heidelbergensis really lived in Denmark.



Figur, som forestiller Homom Heidelbergensis I Forschungsmuseum Schoningen. Photo Der Loewe

The ultimate "out of Africa" theory of human evolution, assumes that modern humans, that is Homo sapiens (Cro Magnon), was ready-made in Africa and then departed out into the world 100.000-50.000 years ago and completely displaced all

other human races that had previously developed from Homo Erectus, that is Homo Neanderthalis in Europe, Homo Denisova in Central Asia, various species of Homo in South Asia represented by the Java man and Peking man and all the races and species that did not come to our knowledge.



Reconstruction of Homo Erectus. Foto Youtube

The alternative "multiregional hypothesis" says that Homo sapiens originated from the worldwide migration of Homo erectus out of Africa perhaps 1.6 to 1.0 million years ago. They evolved initially in

geographically distinct populations that later occasionally mixed genes with each other in different ways.



Homo erectus adult man, Sangiran, Java, Indonesia. Photo Don Hitchcock – Don's Map



3.4 Homo Antecessor

Homo races in Pleistocene

Homo antecessor is believed by many to be the link between Homo erectus, who emigrated from Africa, and Homo heidelbergensis. They lived from 1.2.-0.8 million years ago. There have been no findings of the race in Africa, which suggests that they are not emigrated from there but developed in Europe.

The most important archaeological site for antecessor is Gran Dolina in the Atapuerca Mountains in Spain. In 1994 and 1995, more than 80 bone fragments from six individuals were found by Spanish archaeologists. Also, about 200 stone tools, including a roughly chopped flint knife, and about 300 animal bones were found on the site. The bones have been dated to 780,000 years ago.

Several other places in Europe supposed remains of Homo antecessor have been found that is a molar found in the Sima del Elefante in Spain, a molar and flint tools found in Pakefield near Lowestoft in Suffolk England and stone tools in Happisburgh Norfolk England, believed to be 950,000 years old.



Skull of Homo Antecessor. Foto Wikipedia

The middle of the face was very similar to that of modern man, skeleton and bones were more robust, although smaller than bones of Homo erectus. Their average brain volume was 1.000 cm3 (present people have around 1,350 cm3). They were 1.6 to 1.8 m tall and are believed to have weighed about 90 kg.

As antecessor also have been found in England, it must be assumed that the race has been living in France

too, and most likely throughout Western Europe. It is assumed that England and France were then connected by dry land. They had many thousands of years and several interglacial periods to spread in; it's easy to imagine that some antesessors also hunted on those marshy islands in the northern Sea, which later should become Denmark. Though it has never been proved. During the excavation in Gran Dolina scientists found an apparent waste heap, containing discarded stone tools and bones of consumed animals, such as cave bears, wolves, foxes, mammoths, lynx and many more. Also, bones of Homo antecessor individuals were found in the pile.

"Marks on the bones from a sharp object and other signs of peeling of meat and sinews indicate that the bodies of these persons were treated in a consistent systematic way, which they also used on other mammal bodies: skinning, gutting, cutting and cutting off limbs, cutting off the regular meat, cleaning the bones of sinew and connective tissue and extraction of marrow", the scientists



reported. Sima de Los Huenos Homini

Sima de Los Huenos Hominin. Photo Archaeology Wiki

The excavators added that the slaughter technique, which they had identified on the place, "shows that their intention was maximum utilization of the carcasses in order to get meat, marrow and nutrients. After the meal human and nonhuman remains were thrown into a corner together with waste stone tools."

"Other small animals were treated in the same way", the researchers wrote. "These data indicate that they (Homo antecessor) practiced gastronomic cannibalism".

As further support for this interpretation of the findings, the researchers pointed to that the consumed persons came from a variety of age groups, from small children to young adults.

3.4 Homo Heidelbergensis

Homo heidelbergensis lived in Europe between 600,000 to 400,000 years ago. In 1907 a worker found a jaw and some teeth in a gravel pit near the town Maurer in Germany. The worker gave it to Professor Otto Schoetensack from the University of Heidelberg, who identified and named the finding.

In 1994, British scientists found a human leg bone with hundreds of hand axes in a quarry at Boxgrove. It was dated to be between 524,000 and 478,000 years old and identified as belonging to Homo heidelbergensis. The leg bone had been gnawed by a large predator, which may indicate that the man had been killed by a lion or wolf.

However, ninety percent of the findings of Homo heidelbergensis is done in the Atapuerca Mountains in Spain.



Reconstruktion of Homo Heidelbergensis. Photo Palomar Edu.

The most famous finding-place is the cave Sima de los Huesos, where the excavation team in 1997 found more than 5,500 human bones, which were at least 350,000 years old, including 28 skeletons of Homo heidelbergensis. The human bones were mixed with the bones of cave bears and other predators

"Sima de los Huenos" means "bone pit" and the site is located in the bottom of a 13-meter-deep shaft-like hole. You can reach the place by walking and climbing through the cave system Cueva Mayor.

Among the bones, they also found a hand-ax of red quartz, which they named Excalibur after King Arthur's famous sword. It is reasonable to assume that the ax had a function for funerals or sacrifices on the place.

It is easy to imagine that the cave has been a kind of sacrificial cave, and the hand-ax Excalibur was the sacred weapon that sent the selected victims to another world before being pushed over the edge and down into the hole.



Hand-ax of red quartz found in Sima de los Huesos - Viewed from both sides. The excavators named it Excalibur. Photo Wikimedia

Similar to Homo erectus, Heidelbergensis used some pretty rough stone tools. In northern Germany, near the town Schoeningen, a number of javelins have been found that are believed to have been used by them 400,000 years ago.

Heidelbergensis had a flatter face than erectus, but with very prominent eyebrows. They were about 1.8 m tall and very muscular. They had a brain volume of 1100 -

1400 cm3, which was almost as much as the modern humans' average of 1350 cm3.

Homo heidelbergensis fossils have been found in Spain, Germany and England, and it is therefore reasonable to assume that they have populated Western Europe at least. At Vejstrup Forest near Christiansfeld, the brothers Boyesen found around 1970 in a gravel layer formed flint in layers,

which can be attributed to the Holsten interglacial period or perhaps a mild period in the previous Cromer complex - and thus connected with Homo heidelbergensis.

3.5 Homo Sapiens Neanderthalis

The Neanderthals lived during the last glacial period. They were essentially a European race, but many discoveries have been made in the Middle East and Western Asia.



Map of Neanderthal sites in Europe. Foto Wikimedia Commons



Reconstruction of Neanderthal child based on the three-year-old child found at Eoc de Marsal. Photo Don Hitchcock Don's Map

There have been findings of Neanderthals at more than fifty locations.

They lived from about 400,000 until 28,000 years ago or, who knows, maybe longer. It is extremely long time compared with known historical time.

There is an international practice that the human race, Neanderthal, is spelled with "h" in the last syllable, while the beautiful valley - named after the poet Neander, where the first discovery was made, is spelled Neandertal, without the "h". One of the first findings of Neanderthal fossils was done just in this valley in 1856 and attracted considerable interest. It was proposed to name the new-found race Homo stupidos, but it was not accepted.

It is believed that Neanderthals descended from Homo heidelbergensis



Neanderthal skeleton found in Chapelle-aux-Saints in France. Foto Don Hitchcock donsmaps.com.

The earliest indisputable Neanderthal finding were bones and teeth of an adult woman and a teenager, which were found in Fischer and Kaempfe's quarry near the German town Ehrinsdorf in 1925

They have been dated to about 205.000 years ago. The woman had a brain volume of 1450 cm3.

At Le Moustier in France, a fifteen-year-old boy was found buried with an advanced stone

ax in his hand. At Shanidar in Iran, a beloved deceased was laid to rest in a cave covered with wild flowers 60,000 years ago.

In a cave in Skhul on Mount Carmel in Israel, the remains of seven adults and three children were found between 1929 and 1935, some of whom may have been put to rest by deliberate funerals. Some piles of perforated shells appear to be necklaces that adorned the deceased.



The last sign of life from the Neanderthals are from the 30.000 to 25,000 years ago. A spearhead, which is considered older than 30,000 years, has among other things, been found in Hyaena Den in the United Kingdom.

A Russian artist has produced a typical Neanderthal and typical modern man. Photo today.kg.

Some stone tools, which can be attributed to the Neanderthals have been found in Gorham's Cave in British Gibraltar and have been dated to 25,000 years ago. The skeleton of a boy with what is believed to be both Cro Magnon and Neanderthal features has been found in Abrigo do Lagar Velho in Portugal and dated to 24,500 years ago. Two pieces of Neanderthal skulls from Vindija in Croatia has been dated to the 29.000 - 28.000 years ago. Furthermore, some argue that the Neanderthals from Vindija is less pronounced Neanderthals than findings from previous periods.

Powerful jaws and eyebrows made a Neanderthal man look like a bodybuilder on steroids. The primitive impression created by his receding chin and sloping forehead was reinforced by the sight of the well-developed nose and his powerful teeth. His barrel-shaped body had no significant waist. Huge muscles contributed to his compact appearance. Their leg bones and forearms were shorter than that of modern humans. They were not very tall; men became about 1.65 m and the women were 1.52 m on average.



Left: A Neanderthal flute made from a bear bone found in Divje Babe in Slovenia. Photo Ancient Wisdom Right: The Neanderthal flute compared to a modern flute.

Bone findings made in their caves indicate that they hunted big game. Mostly such animals that lived near the Arctic regions, such as reindeer, bison, elk and mammoth. A spear of wood with flint point found between the ribs in an elephant's skeleton at Lehringen in Germany, and a spearhead, which was found in the spine of a horse at Umm el Tlel in Syria, can both be attributed to the Neanderthal hunters' activities.

They attacked the big game in coordinated small groups with two and a half meter long wooden spears. It was a very dangerous type of hunting. A study of 17 skeletons showed that they had a total of 27 bone damages. Very few individuals became more than thirty years old. Chemical analysis of their

bones has shown that they ate almost exclusively meat.

The so-called Neanderthal flute was found in 1995 in the cave Divje Babe I in western Slovenia, by the Slovenian paleontologist Dr. Ivan Turk. It is estimated to be about 45,000 years old. The flute is



made from a hollow femur from a bear and has four holes, two of which are intact, all four in a straight line with approximately equal diameters. It is broken and cannot play because it is defect. However, by blowing it some musical sounds can be produced, as has been demonstrated by Dr. Turk.

Right: Marrow split deer bones from the Eemian interglacial found in a clay pit near Hollerup in Denmark. .Photo Hollerup – Menneskets oprindelse. Neanderthal findings are mainly from caves and rock overhangs, but especially in Eastern Europe, many discoveries have been done in open country or in river valleys. It is believed that the skeletal remains have been preserved better in caves than in the open countryside.



Rekonstruction of Neanderthal skeleton. We notice his "barrelformed" body. Claire Houck from New York City, USA Wikipedia.

Near Hollerup at Langå in Denmark have been found some deer bones that bear clear signs of being split by humans in order to get the marrow. They are from about 110,000 -130,000 before present, that is from the Eemian interglacial, which lasted about 15,000 years with a temperature higher than in the present.

We can imagine a small group roaming Neanderthals, who in a few days stopped by a lake, to dismember and eat a killed deer, split the bones in order to get the delicious bone marrow, and then finally threw the remains in the lake, where they in 1912 were found in, what is now a clay pit, by the geologist N. Hartz.

A Dutch mussel trawler got a piece of a Neanderthal skull in his trawl in the sea north of the Netherlands. The finding is not yet precisely dated.

Genetic researchers have reported that Neanderthal genes were completely different from modern humans; they were a side branch of human development and no reproduction between Neanderthals and modern humans have taken place.

It is known that modern man and Neanderthal types have inhabited the same areas, at least in the Middle East and France, in 20,000 to 60.000 years. Should we really imagine that there was no "biological contact" during all this time?

Neanderthal stone tools found in Gibraltar - The scrapers and arrowheads of the Neanderthals were not very advanced

Everywhere in the world, where Europeans in recent times have arrived, the men had their pleasure with the native women. Trappers in America lived with their Indian squaws, and neglected slave owners took comfort in the female black slaves. Can it really be true that the Neanderthal women could not be used for anything?

Compared to other of the world's ethnic groups, Europeans are precisely characterized by such features which also Neanderthals had, that is, large nose, eyebrow archs, big eyes, long skull,



Figure 7. Lames osseuries de Biblingsleben (Allemagne) présentant des faisceaux de stries patalléles (d'après Mania et Mania, 2004)

Bone from Neanderthal site Bilzingsleben in Germany showing groups of parallel striations (after Mania and Mania, 2004) Photo Don Hitchcock donsmaps.com

strongly build, white skin and light or red hair. Now, when we come from the same area, wouldn't it be obvious that such common physical features were created by common genes?



Decorated stones from various Neanderthal Sites. They are often but not always straight parallel lines. A champlost, B Chez Pourre-Comte, C Tatat, Hungary, D Temnata Bulgaria. Foto Don Hitchock donsmaps.com

In 2003, a team of geneticists from Italy and Spain compared mitochondrial DNA (mtDNA) from two Cromagnons, who were 23,000 and 25,000 years old, with

Diguré 5, Silex gravé de Champlost, galet sulé de Chez Poursé-Chez Comite (d'après l'homme et Normand, 1993); fotule gravé de Tatal (Hompile; d'après Verble, 1994) et utrivie gravé de Tempata Bulgarie, d'après Crimitos et d., 1993)

four Neandertal specimens that were 29,000 to 42.000 years old and with a large database of modern human mtDNA to shed light on the question of whether modern humans also descended from Neanderthals. Giorgio Bertorelle from University of Ferrara in Italy, said: "Our results make the hypothesis of a "Neanderthal heritage" very unlikely". The group concluded that it is unlikely that Neanderthals contributed to the modern European gene pool.

In 2006, two different research teams headed by Richard Green and Edward Rubin published their results after working on the same Neanderthal samples. They were remarkably similar. One group believed that there was a hint of mixing between human and Neanderthal genes, while the other

found none, but both groups acknowledged that their sample was not large enough to give a definitive answer.



Reconstructions of a Neanderthal woman. Foto **covenersleague.com**

In May of 2010, Svante Paabo from the Max Planck Institute published the result of a comprehensive genetic study: "Most modern people have at least 1 to 4 percent genes in common with Neanderthals. However, Papuans from New Guinea and Chinese people have the same percent genes in common with Neanderthals, as Europeans have. " Thus, the group's result cannot be used to prove the existence of racial mixing between Cro Magnon and Neanderthal in Europe during the last Ice Age; Paupans and Chinese have never met the Neanderthals.

One scientific team after another has come to the result that Neanderthals became extinct without setting any significant imprint in modern human genes. We must accept this, although we think that it sounds strange.

The Neanderthals roamed across Europe, already during the last part of the Saale glaciation. In the Eemian interglacial x

Temperatures was a few degrees higher than in the present. They hunted deer and wild horses in Europe's widespread forests, mountains and marshes Thus many thousands of years passed by, much longer time than we can imagine, very much longer than our known history of the world that makes up only a few thousand years. But the Weichsel ice age crept slowly up on them. It became colder - Not so much that it really was noted in a single generation, but gradually they had to move further south, and slowly adapt to the cold.

Archaeologists heard last time from the Neanderthals around 30.000 to 25.000 before present. What happened? Why did they disappear? We can look at the marine isotope curve first in this chapter; Just about 25,000 before present Weichsel glaciation set in the final sprint, and temperatures in Europe sank to new bottom-records. It is certainly true that Neanderthals were cold tolerant, but it may be too much for even the best, and this may have been their end.

3.6 Homo sapiens (Cro Magnon)

Cro Magnon humans are named after their first finding place, namely the Cro Magnon cave in Dordogne in France. In modern times, it has been suggested that the race instead should be called

"Early European Modern Humans" or EEMH because there is not sufficient difference between them and modern man to justify the definition of a special race..

Rekonstruktion of a Cro Magnon mand.

The oldest European discovery of skeletal parts from this modern human type is from the cave "Pestera cu Oase" near the iron gate in the Romanian Danube valley. The cave seems to have been the haunt of bears or hyenas; perhaps the human bones are remains of predators' meals; they have in that case been consumed 45,000 years ago. Another Romanian discovery of a woman's skull in "Pestera Muierilor" has been dated to around 30,000 years ago.



Et typical skull of Cro Magnon type found i Chanchelade i Dordogne Frankrig. Foto Symac Wikipedia

In the actual the Cro Magnon cave in France, the skeletons of a 14-year-old boy, a woman and a man were found. They lived 28,000 years ago.

At Predmosti in Moravia in present Czech Republic skeleton remains, which represented about twenty funerals, was found in late nineteenth century, however, disturbed and disordered mixed up together with animal bones from mainly mammoth but also from fox, reindeer, wild horse, wolf, wolverine and hare. Also, the remains of three dogs, one of which had a mammoth bone in its mouth, were found. Some of the mammoth bones showed signs of having been cooked. However, the initial findings became lost during World War II. The burials took place between

24,000 and 27,000 before present.

In the Paglicci cave in Italy, the skeletons of a boy and a young woman were found along with thousands of animal bones and stone tools. In addition, the cave was decorated with the typical Cro Magnon cave paintings. The two lived about 23,500 years ago.



Rekonstruction of the first Cro Magnon find from 1916. Photo Internet Archive Book Images The American Museum journal Wikipedia

Also, in the Middle East important discoveries of Cro Magnon have been made; thus, Rene Neuville in 1934 in the Qafzeh cave in present-day Israel found the remains of fifteen individuals, including eight children, mixed up with stone scrapers, stone arrowheads and bone fragments from gazelle, wild horse, deer, aurochs and rhinoceroses. They lived about 92.000 to 115.000 years ago.

Compared with the Neanderthal, the skeletons show the same high forehead, upright walking and slim figure, as humans of today. The skulls of the Cro Magnon cave and from Predmosti are characterized by rectangular eye openings. It is impossible to say anything about their skin color; they may have had white, dark or olive skin, we do not know.



Painting with horses, oxen and rhinos in the Chauvet cave. HTO - Self-photographed Wikipedia.

Not long ago the American professor Trent Holliday made a survey of the existing skeletal material. He concluded that the average height of men was between 168 and 170 cm, and the average height of women between 157.6 and 158.4 cm. Formicola and Giannecchini distinguished sharply between early and late Cro Magnon individuals and concluded that early Cro Magnon men were 176.2 cm tall, while late Cro Magnon men only averaged 165.6 cm. Similarly, according to their study, early Cro Magnon women were 162.9 cm high, while later women only were 153.5 cm tall on average.

They produced scrapers, arrowheads and other tools of flint. Animal teeth and shells were found In the Cro Magnon cave with signs that they had been used in necklaces.

Seashells found in Qafzeh cave were pierced and showed evidence that they had been fitted on a string, maybe as a necklace. In a few of the shells remains of ochre were found, which might have been used as body decoration or as part of a funeral ritual.



A painting of an aurochs in the Altamira cave. Museo de Altamira y D. Rodríguez Wikipedia

Analysis of the bones shows that life in Europe during the Weichsel glaciation was difficult. Several of the skeletons have fused vertebrae, which suggests serious injuries; the woman from the Cro Magnon cave had survived some time with a fractured skull, and several skeletons show signs of infections.

"After Altamira everything is decadence." It is

said that Picasso exclaimed when he saw the amazing Cro Magnon cave paintings in the Altamira cave in northern Spain. When the discovery of the cave was published first in 1880, many experts did not believe that prehistoric man has had the intellectual capacity to create any kind of artistic expression.

Sautuola, who discovered the cave, was accused of letting the pictures painted himself. Only in 1902, when similar caves had been discovered elsewhere, the images' authenticity was confirmed. The famous pictures were painted between 16,500 and 14,000 years ago.



Painting of a wild horse in the Lascaux cave. Wikipedia

The paintings in Lascaux is called the prehistoric Sistine Chapel. The cave contains nearly 2,000 figures, which can be divided into animals, human figures and abstract signs. More than 900 can be identified as animals, of which 605 of these have been identified as horses, deer, oxen, bison, lions, a bird, a bear and a rhinoceros. There are no images of reindeer, even though they likely have been

their main food source. There is a human, but pretty simple. The pictures were painted about 15,000 years ago.



A painting with humans in the Magura cave. The middle one is definitely a male. But a completely different style from the French cave paintings. <u>Nk</u> - Own work Wikipedia

The Chauvet cave in southern France was discovered in 1994 and is considered as one of the most important prehistoric caves in the world. It contains the world's oldest cave paintings, that were painted about 32,000 years ago. The cave is unusually big, and the quality of the paintings are extraordinarily good. In addition to great paintings, it

contained the fossils of cave bear, ibex (a kind of mountain goat) and many other now-extinct animals. Footprints of a cave bear and a child were found on the floor of the cave.

The Cosquer cave is located on the coast near Marseille; it was discovered in 1991. The original entrance is located 37 meters below today's sea level. It contains paintings from two periods, namely from both 27,000 and 19,000 years ago. The paintings depict bison, ibex, horses, seals and guillemots.

The Magura cave is situated in the northwestern part of Bulgaria, and it contains paintings from many different eras. The special thing about them is that they show an unusually large number of people, though so simple that you cannot see, how they really looked like.

The paintings in the Font de Gaume cave in France are painted about 27,000 years ago. They are known for being the first examples of polychrome paintings, that means that they are painted in different colors.

Genetic researchers have repeatedly assured us that the Cro Magnons did not mix genes with Neanderthals, and there are only insignificant traces of Neanderthal genes in modern Europeans



Cro Magnon had a rather full woman ideal, maybe it was a hunter's pride that he could provide food for such a woman. The Venus figurines are small female figures of different materials - from left to right: Venus of Hohle Fels, mammoth tusk - Venus of Laussel, rock-relief - Venus of Willendorf, limestone - Venus of Dolni Vestonice, ceramics - Venus of Moravany, mammoth tooth.

It is difficult to understand how the two races could live in the same area through tens of thousands of years without being entirely genetically mixed up. Maybe they really could not have children together, as it has been suggested. Maybe Neanderthals were not so smart in spite of their large brains, after all the lived in Europe over a hundred thousand years, apparently without changing their tools and ways of life significantly; a bit like the Australian aborigines.



Distribution of Cro Magnon sites before the last glacial maximum. Photo Semhur Wikipedia

Although the Cro Magnon was a modern human type - like the modern population - it is possible that they were also not our ancestors. Europe may have been taken over and colonized by several waves of presumably Indo-European peoples,

who came from Eurasia interior. The Cro Magnon was a scattered and small numbered hunting people like the Indians were in America, they may have become marginalized and more or less wiped out as a people.

It has been suggested that the Basques are descendants of the Cro Magnons, because of their

geographical location in an area with many the Cro Magnon findings and their special language that is not Indo-European.

Today, many researchers support the ultimate "out of Africa" theory based on genomics. The theory says that the modern human type evolved in Africa and then departed out into the world about 70,000 years ago and displaced or exterminated all other human races that had previously been developed from Homo Erectus, that is Homo Neanderthalis in Europe, Homo denisova Central Asia, various species of Homo in South Asia represented by the Java and Peking man and all the races and species that did not come to our knowledge. Only the Yeti and Bigfoot seems to have survived until modern times.

3.7 Literature

Wolly rhino discovery in the lower Kolyma River Moulages-Fossiles-Homionides Neanderthal Symbolism

Preceding section: <u>2. Denmarks's History - 2.0 Tertiary</u> Subsequent section: <u>4. Denmarks's History - 4.0 Reindeer Hunter Cultures</u> <u>Dalum Hjallese Debate Club</u> dhdebatklub (snabel a) gmail (punktum) com Bent Hansen 21-10-2023