

Mandrin cave: unprecedented discoveries

(summary)

The extinction of the Neanderthals, the one species which dominated the Eurasian continent prior to the arrival of Homo Sapiens is one of the most puzzling topic of archeology. Why did they disappear? What were the connections between these two species? Did Sapiens help sweeping away the Neanderthals from the Earth surface? Through one of the rarest and exclusive archeological discovery of the XXI century this documentary will shed a new light upon these questions.

The remains of one of the latest Neanderthal have been unearthed in 2015 in the Mandrin Cave (Rhône Valley - France) by the team of French archaeologist Ludovic Slimak. According to the archeological evidence surrounding this discovery, this Neanderthal lived very near to newly arrived Sapiens... Probably they met! This Neanderthal opens up an unprecedented window on the relationship between Neanderthals and Homo Sapiens.

An international team of scientists investigates this case with the state of the art technics to explore the largest genome ever of a late Neanderthal, to reveal the environment he has shared with another human species...

This scientific adventure will shed a new light on the prehistoric encounter between Neanderthals and Homo Sapiens!





A World Premiere

LLudovic Slimak and the CNRS have granted us the exclusivity of this discovery, which is a milestone in the history of archeology and in our knowledge of Hominids. Our team has been following this research since 2017. The breadth of the results and their imminent publication in Science allow us today to reveal to the audience a very rich story and a great narrative.

Only a dozen of complete skeletons of Neanderthals have been discovered since the 19th century. In France, the last one was discovered more than forty years ago. That is why Ludovic Slimak's discovery is exceptionally rare.

The Mandrin Cave is also an exceptional site which has been meticulously excavated for 25 years. The archaeological context is thus extremely reliable, contrary to the sites excavated in the 19th and early 20th centuries. Thousands of fossils and tools have been found there, tracing 100,000 years of human presence. Different Hominids succeeded each other in the cave: classical Neanderthals, then Homo Sapiens pioneers, then a group of later Neanderthals which finally vanished while the modern Homo sapiens Aurignacians settled in the region, leaving spectacular traces as the Chauvet Cave, a few kilometers from the Mandrin Cave.





のだ。この人たちはその後、別のネアンデルタール人たちに取って代わられた。こ れは文字どおり、歴史書を書き換えるものだ」

ORÍGENES DE LA HUMANIDAD

Hallados en Francia los restos de Homo sapiens más antiguos de Europa

Erde | Umwelt

Koexistenz von Neandertaler und Homo sapiens

9. Februar 2022 Diesen Artikel merken Meine Merkliste anzeigen



At the beginning of 2022, Ludovic Slimak published in Science Advances the first part of his research on the Mandrin Cave concerning the Neronians, these Homo sapiens who occupied the Mandrin Cave in -54,000 chasing the Neanderthals who occupied this territory for tens of thousands of years. This major discovery proves that Homo sapiens began colonizing Europe 10,000 years earlier than previously thought and that he mastered archery 40,000 years earlier than the date previously accepted for the invention of this technology!

Ludovic Slimak's research is also exceptional because of the DNA traces. Genetic studies of X and Y chromosomes of that last Neanderthal allow to decipher his genome. Compared with that of other known Eurasian Neanderthals, this study permits to identify a new lineage never seen before, called « Mediterranean Neanderthals ».

The technologies implemented by Ludovic Slimak's team allow very precise and very reliable dating, which makes it possible to tell, for the first time, with scientific evidence, the story of the Neanderthal encounter with Homo Sapiens, while this moment has so far been the subject of speculation. Also, the study of soot on the walls of the cave proves that it was occupied the same year by both the later Neanderthal and by Homo sapiens.

The film will be thrilling not only thanks to this unprecedented research but also thanks to the way of illustrating it, with 3D sequences to reconstruct the aspect of this last Neanderthal and its environment.





MEETING WITH REMARKABLE HOMINIDS

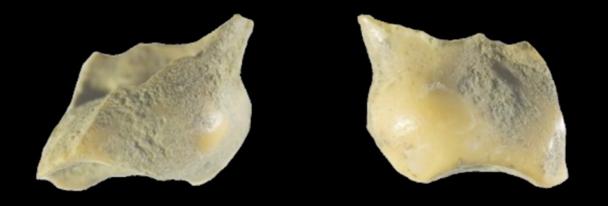
Mandrin Cave in SE France is an archaeological treasure trove, positioned in the middle of France's Rhone River Valley and overlooking its vast plains. Mandrin Cave was only discovered 30 years ago, evading earlier archaeologists in this region, so its soil shelters undisturbed layers full of tools, artefacts, and bones, dating from 110,000 to 5,000 years ago. The whole area itself is a rich depository of Palaeolithic remains, revealing a Prehistoric narrative of nomadic Neanderthals who used the caves for 80,000 years, and waves of their incoming near relatives: Homo Sapiens.

During the seasonal dig of summer 2015, the archaeological team led by Ludovic Slimak found something extraordinary: a set of teeth and jaw bones that looked human. The bones from both hands were then discovered, alongside sections of the skull. A story started to emerge of a male, thrown or buried into the pit at the cave's mouth. But who was he? At first sight he seemed to be of Neanderthal origin. An analysis of the soil in which he was found indicated that he lived around 48,000 years ago, when his species was dying out across the globe, and he is among the last Neanderthals to be found in Eurasia. Carbon dates of the bones are backing this up.

A European collaboration between scientists and archaeologists will bring the individual back to life to help illuminate one of the greatest mysteries of human evolution: what was the relationship between Neanderthals and Sapiens?

The body was found broken up in a multitude of pieces, some smaller than a millimetre. Archaeologists aim to retrieve all of the body from the ground, and samples of his bones will travel to a series of research labs across Europe. At the end of this string of investigations scientists will piece together the puzzle that is Thorin.

The questions that the film will aim to resolve are: Who (and what) was this individual? How old was he when he died, when and how did he die? How did the Sapiens and Neanderthals live side by side, and what happened in that seminal moment of prehistoric encounter? With the discovery of 4 different cultures which succeeded each other in the Mandrin cave (first the classical Neanderthals, then the Neronian Homo sapiens, then the Mediterranean Neanderthals and finally the Aurignacian Homo sapiens), Ludovic Slimak brings the proof of a new scenario replacement of Neanderthal by Homo sapiens which was not sudden but lasted more than 10000 years.





THE SCIENCE

Head group archaeologist, Ludovic Slimak is over-seeing all science work. The results of the Neronian Homo sapiens research were published in February 2022 in Science Advances1. The results of the research on Mediterranean Neanderthals will be published in the first half of 2023 (article submitted to Science).

So far, the upper part of the corpse has been revealed: the skull fragments, 34 teeth and jaw. Also, an entire hand, and the lower part of the arm have been excavated. What did this happen? Radiocarbon Dating The Radiocarbon Accelerator Unit at the University of Oxford, led by world expert Tom Higham, will carbon date the bones in order to give this Neanderthal Specimen's life very precise time-frame. The team is able to date just one single amino-acid from the skeleton fossil floor (a world first!). Emerging multi-cross dating has shown the Neanderthal specimen to centre around 48,000 years ago... this is one of the very last Neanderthals of southern Europe. Further dating has demonstrated that these lingering Neanderthals were living at a time when pioneering Modern Peoples were already in the Mandrin cave.





(cinematography)

3D scaning of the recovered skeleton is programmed and reconstitution of various aspects of the Neanderthal specimen, such as the skull remains, jaw, hand etc. 3D imaging will reveal the individual himself, including the position of his body after death, and what he would have looked like.

We will produce a 3D laser scan of the cave that will enable us to build up the story of its prehistoric habitation, including millennia of nomadic Neanderthals, the arrival of the first Sapiens, the reappearance of Neanderthals and their final disappearance coinciding with the universal domination by Homo Sapiens. The cave scan will create a graphic tool that enables us to piece together the evidence and place the individual's life and death within it. This is a unique opportunity to forensically investigate one of the most important and mysterious moments in human history – when the world of Neanderthals came to an end, when we stopped cohabiting with our older ancestors and the age of Homo Sapiens began.

(Writer & Director)

Pascal Cuissot

For over two decades, Pascal Cuissot worked as a film maker, script writer, editor and script doctor on around 30 documentary movies or documentary series in the fields of history and science, always trying to find the best match between knowledge and story-telling. He also wrote and directed for Arte 52 minutes documentaries on the prehistory of motion pictures Stone Age Cinema which collected awards all around the world, like Meeting Neanderthalble - 90' - 2021



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