

**49,000 year-old Neanderthal bones were discovered by chance in a remote, mountainous region of Northern Spain. It was an unparalleled find, which may help solve the biggest Neanderthal mystery of all: why homo sapiens is here today and the Neanderthals are not.**

**T**he Neanderthals' dark Secret' takes us deep inside the forbidding subterranean cave system called El Sidrón, where explorations are ongoing. Here, palaeontologist Antonio Rosas and archaeologist Marco de La Rasilla are in their 11<sup>th</sup> year of excavations. Bones from at least 12 people and 400 stone tool fragments have so far been recovered.

Mystery surrounds the El Sidrón site. The bones are buried 20 metres below ground, and almost a quarter of a kilometre from the tunnel entrance. How did they get here? The bones are not weathered and there are only few teeth marks from wild animal scavengers. But there are other signs that tell a shocking story of how this group of six adults, three teenagers, two

children and a baby may have met their death. Some bones have deep cuts, long bones are cracked and skulls crushed—distinct signs of cannibalism. Was it a result of ritual or hunger? Rosas and de La Rasilla are adamant that Neanderthals were not bloodthirsty brutes. Will this investigation challenge their views?

What happened here 49,000 years ago takes us on a much bigger journey—from El Sidrón to the other end of the Iberian Peninsula where scientists are excavating beneath the seas off Gibraltar in search of Neanderthal sites. Here we meet evolutionary biologist Clive Finlayson. He believes he knows why the Neanderthals went extinct. But like so many other theories Finlayson's has no hard evidence. El Sidrón may change this.

At the Institute of Evolutionary Biology in Barcelona, we meet Carles Lalueza-Fox, one of the world's leading geneticists involved in cracking the Neanderthal genome. Carles has identified mitochondrial DNA, passed from mothers to their children, in the El Sidrón individuals. He has found that seven of the group came from the same lineage, proving the group were related. This is the first Neanderthal family ever to be found!

His discoveries are bringing forth tantalising clues. Could the fate of this Neanderthal family help to reveal the fate of their kind?



SCIENCE



# THE NEANDERTHALS' DARK SECRET

1 x 53 min.

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HD, 5.1 and Stereo

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