

Neanderthals wouldn't have eaten their sprouts either

12 August 2009, by Denholm Barnetson



Visitors at the Museum for Prehistory in Eyzies-de-Tayac look at a reconstruction of a Neanderthal man. Spanish researchers say they have found that a gene in modern humans that makes some people dislike a bitter chemical called phenylthiocarbamide, or PTC, was also present in Neanderthals hundreds of thousands of years ago.

Spanish researchers say they're a step closer to resolving a "mystery of evolution" -- why some people like Brussels sprouts but others hate them.

They have found that a gene in modern humans that makes some people dislike a bitter chemical called phenylthiocarbamide, or PTC, was also present in Neanderthals hundreds of thousands of years ago.

The scientists made the discovery after recovering and sequencing a fragment of the TAS2R38 gene taken from 48,000-year-old Neanderthal bones found at a site in El Sidron, in northern Spain, they said in a report released Wednesday by the Spanish National Research Council (CSIC).

"This indicates that variation in bitter taste perception predates the divergence of the lineages leading to Neanderthals and modern humans," they said.

Substances similar to PTC give a bitter taste to green vegetables such as Brussels sprouts, broccoli and cabbage as well as some fruits.

But they are also present in some poisonous plants, so having a distaste for it makes evolutionary sense.

"The sense of bitter taste protects us from ingesting toxic substances," the report said.

What intrigued the researchers most is that Neanderthals also possessed a recessive variant of the TAS2R38 gene which made some of them unable to taste PTC -- an inability they share with around one third of modern humans.

"This feature ... is a mystery of [evolution](#)," said the report.

"These (bitter) compounds can be toxic if ingested in large quantities and it is therefore difficult to understand the evolutionary existence of individuals who cannot detect them."

The report's lead author, Carles Lalueza Fox of the University of Barcelona, speculated that such people may be "able to detect some other compound not yet identified."

This would have given them some genetic advantage and explain the reason for the continuation of the variant gene.

Neanderthals and modern humans shared a common [ancestor](#) from which they diverged about 300,000 years ago.

Excavations since 2000 at the site at El Sidron, in the Asturias region, have so far recovered the skeletal remains of at least 10 Neanderthal individuals.

The squat, low-browed [Neanderthals](#) lived in parts

of Europe, Central Asia and the Middle East for around 170,000 years but traces of them disappear some 28,000 years ago, their last known refuge being Gibraltar.

Why they died out is a matter of furious debate because they existed alongside modern man.

The CSIS research was published in the British Royal Society's Biology Letters.

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