

Researchers discover the first evidence of Neanderthal cannibalism in northern Europe

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The highly fragmented Neanderthal collection of the third cave at Goyet represents at least five individuals. Dating indicates that the ones marked with an asterisk go back to between 40,500 and 45,500 years ago. Scale=3cm Credit: Asier Gómez-Olivencia et al.

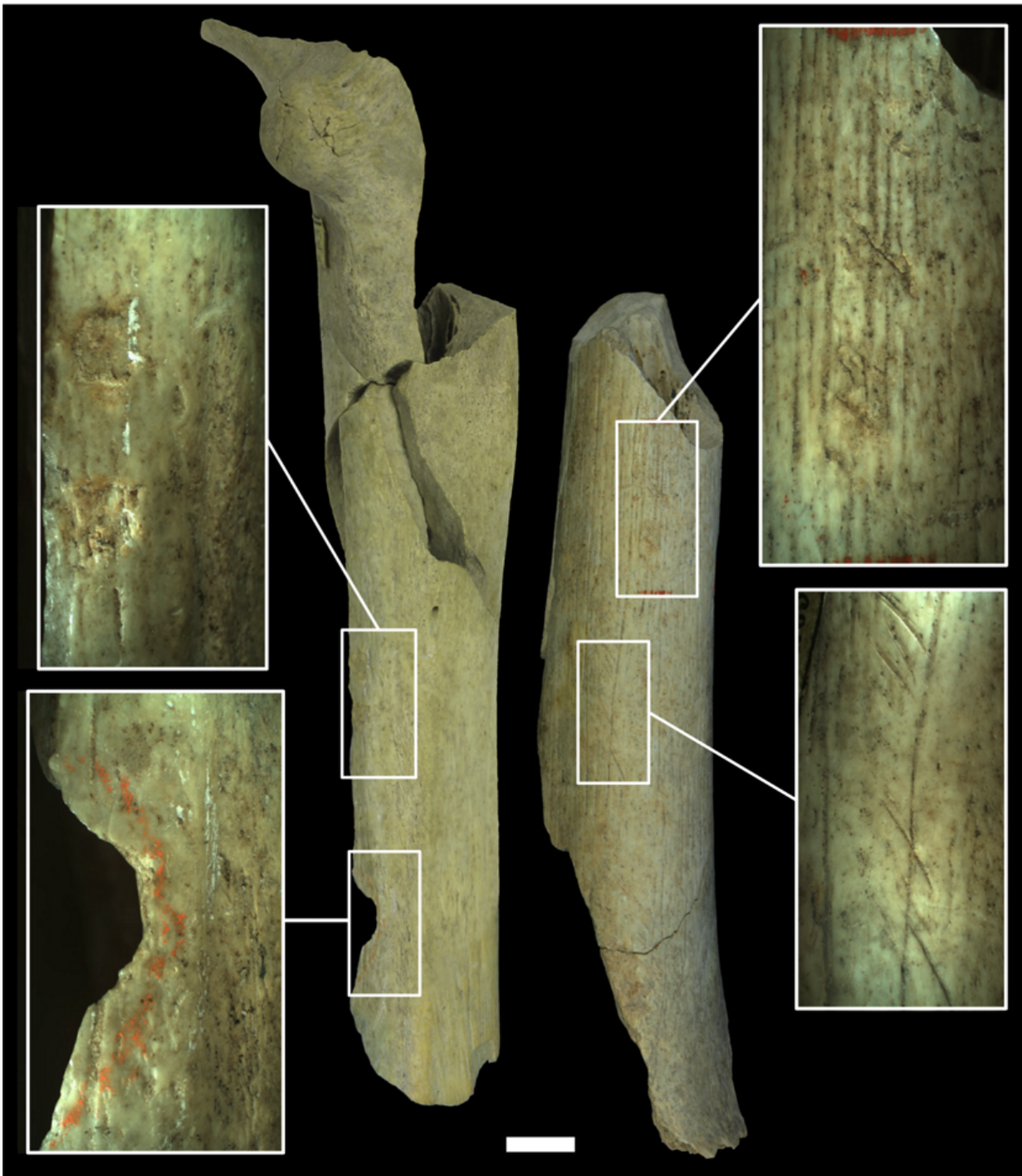
These remains display a large proportion of cut marks caused by stone tools when the meat was cut, and the bones display fractures as a result of having been broken to extract the marrow. Some bones were also used as tools for shaping stone tools. The Ikerbasque researcher Asier Gómez-Olivencia, who is currently working at the UPV/EHU-University of the Basque Country, has collaborated in this work published in the prestigious journal *Scientific Reports*.

The Neanderthals displayed great variability in their behaviour, including in their relationship with the dead. There is evidence on different sites (e.g. Chapelle-aux-Saints in France, and Sima de las Palomas on the Iberian Peninsula) that the Neanderthals buried the dead. Other sites show that the Neanderthals ate the meat and broke the bones of their fellow Neanderthals for food. Evidence of this cannibal behaviour has been discovered at various sites in France (e.g., Moula-Guercy, Les Pradelles) and on the Iberian Peninsula (Zafarraya, El Sidrón).

However, there are very few sites with Neanderthal remains north of latitude 50°, as only two of these sites have provided information on possible funerary treatment. Researchers have found partial skeletons in Feldhofer (Germany) and in Spy (Belgium), and these remains, together with the context in which they were found, allows researchers to deduce that they were interred. In fact, the excavation notes on the Spy II individual indicate that it was a complete skeleton found in a contracted position.

A new study, led by Dr H el ene Rougier, along with UPV/EHU researcher Asier G omez-Olivencia, has discovered the largest number of Neanderthal human remains in northern Europe, not only in terms of the number of remains but also in terms of the number of individuals represented, a total of five: four adolescents or adults and one child. The site is the Troisi eme cavern in Goyet (Belgium).

A third of the Neanderthal remains at this site display cut marks, and many bear percussion marks caused when the bones were crushed to extract the marrow. The comparison of the Neanderthal remains with other remains of fauna recovered on the site (horses and reindeer) suggests that the three species were consumed in a similar way. This discovery expands the range of known Neanderthal behaviour in Northern Europe with respect to the dead.



The different categories of anthropogenic modifications found on Neanderthal bones at Goyet. Femur I (left) displays signs of having been used as a percussor for shaping stone, and femur III (right) bears cut marks indicating the processing of remains during butchery activities. Femur III also bears signs of retouching

left behind after being used to retouch the edges of stone tools. Scale = 1 cm.
Credit: Asier Gómez-Olivencia et al.

What is more, five human Neanderthal remains display signs of having been used as soft percussors to shape stone. The Neanderthals used boulders to shape stone tools and also used bone in some cases to sharpen the cutting edges (one example closer to home can be found in the bone retouchers, mainly belonging to deer, recovered on the Azlor site in Dima, Bizkaia). So far, there are three sites in which the Neanderthals are known to have used the bones of a fellow Neanderthal to shape [stone tools](#): a femur fragment in the case of Krapina in Croatia and Les Pradelles, and a skull fragment at La Quina in France. Goyet has provided 5 sets of human remains used as retouchers, which almost doubles the record known so far on a single site.

It is also possible to date this collection of Neanderthal remains. The researchers determined that these Neanderthals lived between 40,500 and 45,500 years ago. The exceptional preservation of the collection has also enabled the mitochondrial DNA of these remains to be recovered. Compared with DNA from other Neanderthals, it reveals that genetically, the Neanderthals at Goyet resembled those of Feldhofer (Germany), Vindija (Croatia) and El Sidrón (Asturias, Spain). This great genetic uniformity, notwithstanding the geographical distances, indicates that the Neanderthal population that inhabited Europe was small.

More information: Hélène Rougier et al. Neandertal cannibalism and Neandertal bones used as tools in Northern Europe, *Scientific Reports* (2016). [DOI: 10.1038/srep29005](https://doi.org/10.1038/srep29005)

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