

# Rare archaeological site reveals 'surprising' Neanderthal behavior at Pyrenees foothills

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ANU archaeologist Dr. Sofia Samper Carro says the insights found at Abric Pizarro challenge widespread beliefs that Neanderthals only hunted large animals. Credit: Sofia Samper Carro

An uncharted area in the foothills of the Southern Pyrenees in Spain is providing insights into a poorly known period of Neanderthal history,

offering clues that could help archaeologists uncover the mystery of their downfall, according to research from The Australian National University (ANU).

The research is published in the [\*Journal of Archaeological Science\*](#).

Abric Pizarro is one of only a few sites worldwide dating from 100,000 to 65,000 years ago during a period called MIS 4. The researchers have gathered hundreds of thousands of artifacts, including [stone tools](#), [animal bones](#) and other evidence, providing significant data about the Neanderthal way of life during that time—largely unknown in human history until now.

The findings reveal Neanderthals were able to adapt to their environment, challenging the archaic humans' reputation as slow-footed cavemen and shedding light on their survival and hunting skills.

Lead author and ANU archaeologist, Dr. Sofia Samper Carro, said that the findings show that Neanderthals knew the best ways to exploit the area and territory and were resilient through harsh climate conditions.

"Our surprising findings at Abric Pizarro show how adaptable Neanderthals were. The animal bones we have recovered indicate that they were successfully exploiting the surrounding fauna, hunting red deer, horses and bison, but also eating freshwater turtles and rabbits, which imply a degree of planning rarely considered for Neanderthals," she said.

According to the researchers, these new insights challenge widespread beliefs that Neanderthals only hunted [large animals](#), such as horses and rhinoceros.

"Through the bones that we are finding, which display cut marks, we

have direct proof that Neanderthals were capable of hunting small animals," Dr. Samper Carro said.

"The bones on this site are very well preserved, and we can see marks of how Neanderthals processed and butchered these animals.

"Our analysis of the stone artifacts also demonstrates variability in the type of tools produced, indicating Neanderthals' capability to exploit the available resources in the area."

Shedding light on this crucial transitional period helps archaeologists edge closer to solving a mystery that has plagued researchers for decades: what drove the Neanderthals to extinction?

According to the researchers, finding sites like Abric Pizarro, from this specific and not well-recorded period, gives information about how Neanderthals lived when [modern humans](#) were not in the area yet and shows that they were thriving.

"The unique site at Abric Pizarro gives a glimpse of Neanderthal behavior in a landscape they had been roaming for hundreds of thousands of years," Dr. Samper Carro said.

"Neanderthals disappeared around 40,000 years ago. Suddenly, we modern humans appear in this region of the Pyrenees, and the Neanderthals disappear. But before that, Neanderthals had been living in Europe for almost 300,000 years.

"They clearly knew what they were doing. They knew the area and how to survive for a long time.

"This is one of the most interesting things about this site, to have this unique information about when Neanderthals were alone and living in

harsh conditions and how they thrived before modern humans appeared."

Thanks to modern excavation techniques, Abric Pizarro and other nearby Neanderthal sites provide fine-grain data to understand Neanderthal behavior.

"We 3D plot every single remain found larger than one to two centimeters. This makes our work slow, and we have been excavating some of these sites for over 20 years, but it turns into a uniquely precise recording of the sites," Dr. Samper Carro said.

"We are interested in how the different data relate to each other, from stone tools to bones and hearths. This more thorough excavation gives archaeologists information on how Neanderthals lived and how long they were in an area.

"It's not only the individual materials that give us clues, but also where exactly they are found in relation to other materials on the site that helps us understand how and when Neanderthals were visiting these sites. Were they settled there or just passing through?"

The research team also included scientists from the Autonomous University of Barcelona (CEPAP-UAB).

**More information:** Sofia C. Samper Carro et al, Living on the edge: Abric Pizarro, a MIS 4 Neanderthal site in the lowermost foothills of the southeastern Pre-Pyrenees (Lleida, Iberian Peninsula), *Journal of Archaeological Science* (2024). [DOI: 10.1016/j.jas.2024.106038](https://doi.org/10.1016/j.jas.2024.106038)

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