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Climate Change, Not Humans, Trounced **Neanderthals** By By Dave Mosher LiveScience Staff Writer



posted: 04 May 2007 10:11 am ET

Neanderthals disappeared from Earth more than 20,000 years ago, but figuring out why continues to challenge anthropologists. One team of scientists, however, now says they have evidence to back climate change as the main culprit.

The Iberian Peninsula, better known as present-day Spain and

Portugal, was one of the last Neanderthal refuges. Many scientists

have thought that out-hunting by Homo sapiens and interbreeding with them brought Neanderthals to their demise, but climate change has also been proposed.

Francisco Jiménez-Espejo, a paleoclimatologist at the University of Granada in Spain, says a lack of evidence has left climate change weakly supported—until now. "We put data behind the theory," he said, filling in a large gap in European climate records when Neanderthals faded out of existence.

The scientists' study is detailed in a recent issue of Quaternary Science Reviews.

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Cold spell

To figure out the temperature, water supply, and windiness of Iberia from 20,000 to 40,000 years ago, the scientists looked at sediments on the ocean floor off Spain and Portugal. Because wind or water erode rocky minerals differently, the pebbles and fragments wash into the sea in different ratios, creating a steady track record of land conditions at the bottom of the ocean.

The scientists also focused on barite, a compound gathered by marine animals. The more barite in sediment, the more lively the oceans were at the time. "When we found big drops in marine productivity, we knew there were big changes in climatic condition in Iberia," Jiménez-Espejo says.

The study reveals three rough climatic periods for Neanderthals, with the last and harshest period starting about 26,000 years ago. "The last event was very, very cold and dry," Jiménez-Espejo says, "and other than 250,000 years ago, such a harsh climate was never reached before."

Other reasons

But is climate change the only reason Neanderthals died out?

"We're not saying that," Jiménez-Espejo said. "What we are saying: Neanderthals struggled with climate change more than modern humans, and during the period of their extinction, very unfavorable climatic conditions were present."

To reach North America, humans eventually migrated across Siberia and learned to survive in the icy regions.

But "Neanderthals couldn't make the trip," Jiménez-Espejo said. This fact, the team believes, highlights the weakness of Neanderthals to cold, open environments—as Iberia would have been at the time of their extinction.

Other scientists think less game for Neanderthals to hunt—and not having modern humans' skills to hunt them—probably sealed our humanoid cousin's demise. Yet others believe Neanderthals never went extinct and instead interbred their genes into our own, as recent skeletal evidence might suggest.

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