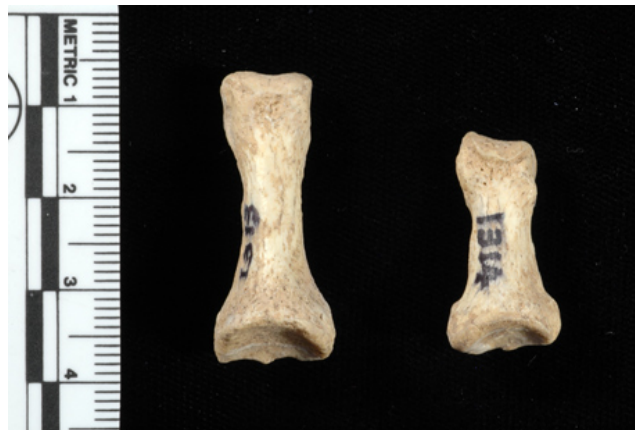


Humans Wore Shoes 40,000 Years Ago, Fossil Suggests

Scott Norris

Humans were wearing shoes at least 10,000 years earlier than previously thought, according to a new study.

The evidence comes from a 40,000-year-old human fossil with delicate toe bones indicative of habitual shoe-wearing, experts say.



A previous study of **anatomical** changes in toe bone structure had dated the use of shoes to about 30,000 years ago.

Now the dainty-toed fossil from China suggests that at least some humans were sporting protective footwear 10,000 years further back, during a time when both modern humans and Neandertals occupied portions of Europe and Asia.

Study author Erik Trinkaus, a paleoanthropologist at Washington University in St. Louis, Missouri, said the scarcity of toe bone fossils makes it hard to determine when habitual shoe-wearing became widespread.

However, he noted, even Neandertals may have been **strapping** on sandals.

"Earlier humans, including Neanderthals, show [some] evidence of occasionally wearing shoes," Trinkaus said.

Regular shoe use may have become common by 40,000 years ago, but "we still have no [additional] evidence from that time period—one way or the other," the scientist said.

The study by Trinkaus and Chinese co-author Hong Shang appears in the July issue of the *Journal of Archaeological Science*.

Tale of the Toes

In a previous study, Trinkaus found that shoe-wearing and barefoot human groups show characteristic differences in the size and strength of their middle toe bones.

Consistent shoe use results in a more delicate bone structure, because footwear reduces the force on middle toes during walking.

In his latest study, this anatomical evidence allowed Trinkaus to date the origin of shoes to a period long before the oldest known shoe remains.

Elizabeth Semmelhack curates the Bata Shoe Museum in Toronto, Canada. She said given what we know about the effects of shoe-wearing, Trinkaus' approach makes perfect sense.

"The simple act of wearing shoes alters the structure of our feet," Semmelhack said.

"It's interesting that [Trinkaus] is looking at these prehistoric remains and coming to the same conclusions."