

A child's striped sock from ancient Egypt has stood the test of time

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A 1,700-year-old child's left-foot sock discovered in Egypt. Photo courtesy of the British Museum.

Scientists are fascinated by another long-hidden piece of Egyptian art. This time, though, it's not a giant pyramid or a mummy's sarcophagus. It's a child's striped sock.

This sock was thrown out around A.D. 200 or 300. This was during the time that the Roman Empire controlled Egypt.

The sock was fished out of a trash landfill in 1913 or 1914. It was found when archaeologists dug up Antinoopolis, an Egyptian city. The sock later ended up in the British Museum in London, England.

Previous research told scientists the age of the sock. Still, not much else was known about it. Little is known about its matching partner. Perhaps the other missing sock is buried in some other ancient laundry pile.

Now, new research is unraveling the sock's secrets. Scientists at the British Museum are trying to better understand how ancient Egyptians made their clothing. The group decided to analyze the

dyes in the sock. They also looked at several other textiles dating between about A.D. 250 and 800.

A Sock Of Many Colors

The scientists wanted to be careful not to touch the sock too much. They didn't want to damage the fabric.

They used a tool called multispectral imaging. It can simply scan the surface of old objects.

Certain colors may have broken down to the point that they cannot be seen by the human eye. Still, multispectral imaging can see tiny color traces. It can read the radiation of colors in the sock. Then it combines them into a single image. Think of it as a camera that can see invisible ink.

Sure enough, research revealed that the sock contained seven colors of wool yarn. They were woven together in a complex, stripy pattern. Just three natural dyes were used to create the different color combinations on the sock, says Joanne Dyer a scientist at the British Museum. She led the study, which appears in PLOS ONE, a magazine for scientists. Red came from madder roots, blue from woad leaves and yellow from weld flowers, she said.

In the study, she and her team explain that they also could see how the colors were mixed to create green, purple and orange. In some cases, fibers of different colors were spun together. In others, individual yarns went through several dye baths.

Sock Gives Insight Into The Time Period

This amount of detail is pretty striking, considering that ancient sock is both "tiny" and "fragile," Dyer said. Because of its size and appearance, the scientists believe it may have been worn on a child's left foot. The sock tells us more than just about fashion from long ago. Analyzing its construction tells us much about the time period in which it warmed tiny feet. During this time, Egypt experienced great disruptions. In A.D. 641, Muslims — followers of the Islam religion — took over Egypt.

Events like this affect trade and availability of materials, Dyer said. This can be seen in the makeup of what people were wearing, and how they made clothes.

It appears that socks have been around for even longer than this one from Egypt. Early humans from thousands of years ago used socks. Yet their socks were just animal pelts or skins meant to be wrapped around their feet. They may not look much like the ones in your sock drawer.

The ancient Egyptians used a single-needle looping method to create their socks. The approach could be used to separate the big toe and four other toes in the sock. This allowed the socks to be worn with sandals.

Quiz

- 1 Where did Egyptians get the colors for the dye they used to make the sock? How do you know?
- (A) They used other old materials; The group decided to analyze the dyes in the sock. They also looked at several other textiles dating between about A.D. 250 and 800.
- (B) They got dyes from a store; Just three natural dyes were used to create the different color combinations on the sock, says Joanne Dyer, a scientist at the British Museum.
- (C) They created the dyes from plants; Red came from madder roots, blue from woad leaves and yellow from weld flowers, she said.
- (D) They used paint; In the study, she and her team explain that they also could see how the colors were mixed to create green, purple and orange.
- 2 Read the selection from the section "Sock Gives Insight Into The Time Period."
- This amount of detail is pretty striking, considering that ancient sock is both "tiny" and "fragile," Dyer said. Because of its size and appearance, the scientists believe it may have been worn on a child's left foot. The sock tells us more than just about fashion from long ago. Analyzing its construction tells us much about the time period in which it warmed tiny feet. During this time, Egypt experienced great disruptions.*
- Which sentence from the selection supports the conclusion that scientists were surprised by how much they learned from the sock?
- (A) This amount of detail is pretty striking, considering that ancient sock is both "tiny" and "fragile," Dyer said.
- (B) Because of its size and appearance, the scientists believe it may have been worn on a child's left foot.
- (C) The sock tells us more than just about fashion from long ago.
- (D) During this time, Egypt experienced great disruptions.
- 3 If the article were organized using events in order, which selection would come FIRST?
- (A) This sock was thrown out around A.D. 200 or 300. This was during the time that the Roman Empire controlled Egypt.
- (B) It was found when archaeologists dug up Antinopolis, an Egyptian city. The sock later ended up in the British Museum in London, England.
- (C) During this time, Egypt experienced great disruptions. In A.D. 641, Muslims — followers of the Islam religion — took over Egypt.
- (D) Early humans from thousands of years ago used socks. Yet their socks were just animal pelts or skins meant to be wrapped around their feet.
- 4 Read the following paragraph from the section "A Sock Of Many Colors."
- Certain colors may have broken down to the point that they cannot be seen by the human eye. Still, multispectral imaging can see tiny color traces. It can read the radiation of colors in the sock. Then it combines them into a single image. Think of it as a camera that can see invisible ink.*
- Which answer choice describes the structure of this paragraph?
- (A) problem and solution
- (B) cause and effect
- (C) comparison
- (D) question and answer

