

Testing of red textile found in Israeli cave shows it was from the Middle Bronze Age

July 22 2024, by Bob Yirka



Credit: *Journal of Archaeological Science: Reports* (2024). DOI: 10.1016/j.jasrep.2024.104673

A team of archaeologists affiliated with several institutions in Israel has tested a sample of red fabric found in a cave in Israel in 2016 and reports that it is from the Bronze Age. Their paper is [published](#) in *Journal of Archaeological Science: Reports*.

In 2016, a different team of archaeologists digging in Israel's Cave of Skulls, located in the Judean Desert, uncovered a postage-size sample of ancient woven fabric. It caught their eye because of its bright red coloring, which, the new team notes, would have been precious due to the difficulty in obtaining the dye with which it had been colored. In this new effort, the researchers analyzed the cloth to learn more about it and its history.

Testing of the material showed it had been made and colored sometime between 1954 and 1767 BC; the dye was made from crushed female scale insects. The finding represents the oldest example of a dyed textile made using a crushed insect.

These insects still live today on the Kermes oak tree. But the females only produce their bright red color for a short period of time, just one month, in the summer. The bugs are also small, making them difficult to find and catch. Therefore, many of them had to be captured to create enough dye to color a single garment.

But because the red color they produced was so bright, the [bugs](#) and their dye were highly valued. Thus, the piece of woven cloth found in the [cave](#) must have once belonged to someone who was wealthy.

The researchers found that the species of insect used to create the dye was not native to Israel—instead, it was from a scale insect of the type *Kermes vermilio*, which lives on kermes oak trees along the southern Mediterranean and parts of central Europe. Because of that, the cloth offers evidence of trading between people living in Israel more than 3,800 years ago and people in parts of Europe.

More information: Naama Sukenik et al, Early evidence of an archaeological dyed textile using scale-insects: The Cave of Skulls, Israel, *Journal of Archaeological Science: Reports* (2024). [DOI:](#)

[10.1016/j.jasrep.2024.104673](https://phys.org/news/2024-07-red-textile-israeli-cave-middle.html)

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