

Date and olive pits dispel mystery of King Solomon's mines

The copper mines at Timna were long thought to have been operated by Egyptians in the 13th century B.C.E., but organic remains now show that they reached their prime during the reign of King Solomon, three centuries later.

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It took 10 date pits and one olive pit to come to the conclusion that the heyday of the copper mines at Timna, near Eilat, was indeed during the reign of King Solomon, in the 10th century B.C.E.

The samples, which were dug up by a Tel Aviv University team headed by archaeologist Erez Ben Yosef, were sent to Oxford for a carbon-14 dating test. The results proved that the site wasn't populated during the 13th century B.C.E., as previously thought, and that its peak of activity was actually some three centuries later.

But King Solomon had in all likelihood no connection to the mines, although they are called after him. The site at Timna, says Ben Yosef, resembles the copper refinery in Faynan, in Jordan, which probably means that the mines were operated by the Edomites, who lived on the eastern bank of the Jordan River, and not the illustrious king of ancient Israel.

In recent decades scientific consensus has been that the mines were operated by the Egyptian Empire that ruled the area in the 13th century B.C.E. This notion was the result of excavations carried out at Timna by the pioneering Israeli archaeologist Beno Rothenberg, who discovered in 1969 a small and beautifully preserved Egyptian temple. Until then, it had been universally accepted that King Solomon operated the mines. The current mission turned the tables again and set the operation date of the mines back to the era of King Solomon - but the king's degree of involvement is yet undetermined. Ben Yosef says that he could not dismiss the possibility that the Edomite kingdom was subjugated, to some extent, to the Judean Kingdom, through a representative sent from Jerusalem, as stated in the second Book of Samuel.

The excavated area is known as "Slaves' Hill," as the American archaeologist Nelson Glick, the first to preside over excavations at Timna, called it. He believed that a wall built around the hill was meant to prevent the slaves working in the mines from escaping. The recent excavations seem to refute this thesis as well, revealing an unprecedented wealth of organic findings - fabrics, ropes, seeds (including wheat, barley, pistachio, grapes, dates and olives), and animal bones - that were preserved in excellent condition due to the extremely dry climate in the area. The bones and food remnants, explains Lidar Sapir-Hen, an archaeozoologist at Tel Aviv University, suggest that the workers were better fed than most residents of the region at the time. "This also conforms with other findings from other sites that prove that copper diggers were considered important craftsmen, almost priests, who knew how to produce new material: metal from stone," Ben Yosef says.

Ben Yosef is also set to refute an archaeological convention whereby only civilizations that left architecturally impressive structures could be considered as sufficiently developed to establish and maintain an economic and engineering operation of the scope of the Timna mines. "It was a society that mostly lived in tents, but still had impressive military power, since it was necessary to protect the copper mines," he says.

The findings also allow researchers to determine that the mines were abandoned at around the end of the 10th century B.C.E. Ben Yosef believes that the mining operations were stopped as a result of a military invasion by King Shishak of Egypt, in 925 B.C.E. Still, copper production continued, using different, more advanced technology, for another century or so. In the 9th century B.C.E. all production was halted for a long period, probably due to the import of cheaper and higher-quality copper from Cyprus.