A Silver Lining at Abel Beth Maacah

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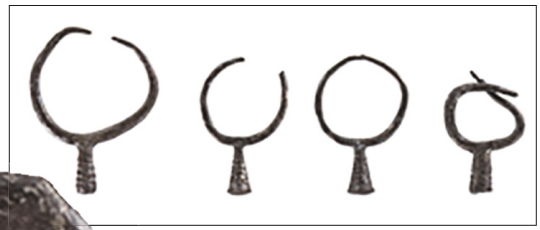
IT WAS ONE OF THOSE RARE MOMENTS that every archaeologist dreams about: A small, rather unobtrusive jug with its neck missing was found on an earthen floor leaning against a wall. It evoked considerable excitement among the team; after all, it was a nearly complete vessel! Jaded supervisors, however, who had seen so much pottery in their time, thought, "OK, another jug ... Nice to have." We resisted the temptation to empty the dirt in the jug on-site and instead sent it to our dig office at Kibbutz Kfar Szold, where we could empty it under controlled conditions.

That evening, while the office hummed with activity—area supervisors working on their daily documentation, team members entering data into computers, assistant supervisors preparing top plans for the next day, music playing in the background and cookie crumbs on the table—our office manager that season, Laurel Tilton of Cornell University, finally found time to extract the dirt that still filled the 13th-century B.C.E. jug.

And then, a small yelp. "Hey, there's something blue inside." Shining a flashlight into the half-emptied jug revealed a packet of bluish rings mixed with the earth. Faience, we guessed, with delight. But then, our majordomo for that season, Shmulik Freirich, who is a trained conservator, had a look and gave an even bigger yelp, telling us that it was not faience after all, but silver! An animated group now gathered around the jug, which was carefully packed and sent off to the Conservation Lab of the Institute of Archaeology of the Hebrew University of Jerusalem—into the trusted hands of its chief conservator, Miriam (Mimi) Lavi, who worked her magic on our hoard.



CLEANED SILVER hoop earrings and a silver ingot shaped like Africa from the hoard at Tel Abel Beth Maacah.

The first step was to extract the fragile packet of earth and silver from the jug. The next step was to separate the silver pieces that had been fused together by corrosion. To do this Mimi had to apply a diluted acid solution. This 'softened' the heavy corrosion and allowed what was left to be delicately removed under a microscope. At this point the silver fragments could be reconstructed with a reversible adhesive. It was now possible to see that the hoard consisted of 12 pieces of silver—mostly jewelry.

There were five hoop earrings with a conical pendant (above), a "string" of twisted metal, the fragment of a lunate (crescent-shaped) earring, three broken earrings or other types of jewelry, an ingot shaped like the continent of Africa (middle) and a piece of hacksilber. The last two items were especially intriguing, as they potentially represent two important aspects of silver hoards in antiquity: the manufacture of silver items from ingots made by pouring molten silver onto a flat surface and then cutting the silver into pieces,

THIS MOSTLY COMPLETE VESSEL (left) was unearthed at Tel Abel Beth Maacah. Inside the jar was a silver cache (also shown), which was fused together by corrosion.

so it could be used as a means of payment in the pre-coinage economy that existed in Canaan at that time.

What is the significance of the Abel Beth Maacah silver hoard? Culturally, the small jug seems to be a local Canaanite imitation of an imported Cypriot jug called a *bilbil*. Chronologically, this is one of the earliest such hoards ever found in Canaan, dating to the end of the Late Bronze Age (end of the 13th century B.C.E.).

The archaeological context—inside a jug sitting on a floor, with no evidence of violent destruction—points to routine deposition, rather than an emergency or catastrophe. The owner of this little cache apparently planned to retrieve it but for some reason never did. The style of the earrings is well known in the Late Bronze Age at sites such as Tell el-Ajjul. However, all of the known parallels are made of gold, not silver. A mold to make an earring of this almost exact same shape was found at nearby Hazor (about 30 mi to the south) in a Late Bronze Age context. Could our earrings have been made there? Did such a cache indicate wealth, or was it something that even a middle-class resident of Abel Beth Maacah could own? Was it some woman's dowry? A family nest egg to barter for land rights or merchandise? Or could it have been an artisan's stash waiting to be worked into other types of fancier jewelry?

The hoard also raises technological questions. Where did the silver come from? Was the raw material imported—or perhaps the items themselves? Who were the artisans, and where did they work?

To answer some of these questions, we carried out bulk chemical and lead isotope analyses (LIA) aimed at discovering the composition and provenance of the silver. The analyses were performed by our archaeometallurgist, Naama Yahalom-Mack at the Institute of Earth Sciences of the Hebrew University (in the laboratory of Professor Yigal Erel). Preliminary results show that the silver was rather pure, containing small amounts of copper (2 percent on average) and minute amounts of lead, bismuth and gold. The ingot in this collection differed slightly from its peers, containing no lead or bismuth, and with a slightly higher gold content. Especially significant is the relatively low copper content of the silver, since the silver in the hoards from Beth Shean, Megiddo and Tell Keisan, dating to the 12th–11th centuries B.C.E., were, in fact, an alloy of copper and silver. It seems that in the Iron Age I, people sometimes "cheated" by alloying the mix and passing it off as pure silver, while the hoard from Abel Beth Maacah contained mostly "the real thing."

There is still much to be learned from our silver hoard.

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