Analysis of Pompeii's Garbage Suggests the Ancient Romans Recycled, Too

The city's residents sorted waste materials for reuse in future projects, according to new research

before Mount Vesuvius blanketed Pompeii in volcanic ash, one local's trash could have easily become another's building materials. As Dalya Alberge reports for the Guardian, archaeologists working in the ancient city have found evidence of a recycling program in which Pompeiians piled garbage at the city's walls and sorted it for reuse in new projects.

The researchers, led by Tulane University archaeologist Allison Emmerson, analyzed soil samples recovered from trash excavated in and around the city. The soil on the rubbish varied depending on where it was thrown out: Cesspits left traces of organic soil, while litter dumped in the street or piled up outside of the city's walls was covered in sandy deposits.

"The difference in soil allows us to see whether the garbage had been generated in the place where it was found, or gathered from elsewhere to be reused and recycled," Emmerson—set to detail her research in Life and Death in the Roman Suburb, out next month from Oxford University Press—tells the Guardian.

Emmerson and her colleagues found signs of the same sandy soil present in garbage mounds inside of several Pompeiian buildings' walls. These structures' cores were made of reused materials ranging from crumbled tiles to amphorae and lumps of mortar and plaster. The walls' outer surfaces were covered in a layer of plaster that hid the "mess of materials" found within, according to Emmerson.

This evidence suggests "[t]he piles outside the walls weren't material that's been dumped to get rid of it," the archaeologist tells the Guardian. "They're outside the walls being collected and sorted to

be resold inside the walls."

The team's findings refute a previous theory about the garbage piles' origins. Per a 2012 press release from the University of Cincinnati, 19th-century archaeologists suspected the piles represented rubble cleared out of Pompeii after an earthquake rattled the city in 62 A.D.—17 years before the volcanic eruption that killed some 2,000 of the city's 12,000 inhabitants. The majority of the mounds were actually removed by archaeologists during the 20th century, reports the Guardian.

"As I was working outside Pompeii, I saw that the city extended into developed neighborhoods outside the walls ... [s]o it didn't make sense to me that these suburbs were also being used as landfills," says Emmerson to the Guardian.

Emmerson argues that the ancient Romans viewed suburban garbage mounds differently than modern humans think of landfills. Rather than "corralling waste in areas far removed from normal life," she writes in the abstract for a talk titled "Another Man's Treasure? The Life and Afterlife of Pompeii's Waste," these sites "developed in the busiest areas of the suburb, which could serve as staging grounds for processes of recycling and reuse."

Speaking with the Guardian, Emmerson adds, "For the most part, we don't care what happens to our trash, as long as it's taken away. What I've found in Pompeii is an entirely different priority, that waste was being collected and sorted for recycling."

Emmerson's previous research has shown that residents of Pompeii had a much closer relationship with trash than humans today. Trash littered Pompeii's streets and was even found piled inside of and on top of the city's tombs. Nineteenth-century archaeologists took these mounds as a sign that the 62 A.D. earthquake made the city fall into disrepair, but Emmerson, then at the University of

Cincinnati, challenged this view by highlighting evidence suggesting the city was in a “period of rejuvenation” by 79 A.D.

Pompeiians had a different relationship with death and cleanliness than 19th-century archaeologists thought, according to the archaeologist.

“We tend to assume things like that are universal, but attitudes toward sanitation are very culturally defined, and it looks like in Pompeii attitudes were very different than ours,” she told Live Science’s Wynne Parry in 2012.

Tombs, for example, were built not in secluded, respectful spaces, but in high-traffic parts of the city. The goal was to ensure that the deceased would be remembered—a strategy that had the unfortunate side effect of placing people’s resting places directly in the path of the city’s litter-leaving inhabitants.

Per the press release, Emmerson and her colleagues once excavated a room in which two cesspits filled with animal bones, olive pits and other assorted waste stood alongside a cistern, or tank used for storing drinking and washing water.

“The Pompeiians lived much closer to their garbage than most of us would find acceptable,” Emmerson tells the Guardian, “not because the city lacked infrastructure and they didn’t bother to manage trash, but because their systems of urban management were organized around different principles.”