

Early human hunters had fewer meat-sharing rituals

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This is UA anthropology professor Mary C. Stiner at Qesem Cave, Israel. Stiner analyzes faunal remains for the Qesem Cave Project. Credit: Qesem Cave Project, Tel Aviv University

A University of Arizona anthropologist has discovered that humans living at a Paleolithic cave site in central Israel between 400,000 and 250,000 years ago were as successful at big-game hunting as were later stone-age hunters at the site, but that the earlier humans shared meat differently.

"The Lower Paleolithic (earlier) hunters were skilled hunters of large game animals, as were Upper Paleolithic (later) humans at this site," UA [anthropology](#) professor Mary C. Stiner said.

"This might not seem like a big deal to the uninitiated, but there's a lot of speculation as to whether people of the late Lower Paleolithic were able to hunt at all, or whether they were reduced to just scavenging," Stiner said. "Evidence from Qesem Cave says that just like later Paleolithic humans, the earlier Paleolithic humans focused on harvesting large game. They were really at the top of the food chain."

The Qesem Cave people hunted cooperatively, then carried the highest quality body parts of their prey to the cave, where they cut the meat with stone blade cutting tools and cooked it with fire.

"Qesem" means "surprise." The cave was discovered in hilly limestone terrain about seven miles east of Tel-Aviv not quite nine years ago, during road construction. Stiner was invited by Ran Barkai and Avi Gopher of Tel Aviv University's Institute of Archaeology to participate in the Qesem Cave Project.

Stiner analyzed the pattern of cut marks on bones of deer, aurochs, horse and other big game left at Qesem Cave by hunters of 400,000 to 200,000 years ago. Her novel approach was to analyze the cut marks to understand meat-sharing behaviors between the earlier and later cooperative hunting societies.

And the patterns revealed a striking difference in meat-sharing behaviors: The earlier hunters were less efficient, less organized and less specialized when it came to carving flesh from their prey.

"This is somewhat expected, since the tools they made took considerable skill and locomotor precision to produce," Stiner said.

Random cut marks, and higher numbers of cut marks, made by the earlier hunters show they attached little social ritual or formal rules to sharing meat, Stiner said. Many hands, including unskilled hands, cut meat off the bone during feeding.

By contrast, by later times, by the Middle and Upper Paleolithic, "It's quite clear that meat distribution flowed through the hands of certain butchers," Stiner said. "The tool marks made on bones by the more recent hunters are very regular, very efficient and show much less variation in the postures of the individuals cutting meat from any one bone. Only certain hunters or other fairly skilled individuals cut meat that was to be shared among the group."

Stiner stresses that her new findings need to be more broadly replicated before the implications of her research can be widely accepted.

Meat is one of the highest quality foods that humans may eat, and it is among the most difficult resources to harvest from the environment.

Archaeologists know that the roots of carnivory stretch deep into the past. But the details of carnivory and meat sharing have been sketchy. And they are important details, because they reflect the evolutionary development in human economic and social behaviors.

"It's interesting that these earlier people were skilled predators and very social, but that their social rules are more basic, less derived than those of the Middle Paleolithic.

"What might surprise most archaeologists is that I'm seeing a big difference between Lower and Middle Paleolithic social behaviors, not between Middle and Upper Paleolithic social behaviors.

"Neanderthals lived in the Middle Paleolithic, and they were a lot more

like us in their more formal redistributions of meat than were the earlier hominids."

More information: Stiner, Barkai and Gopher reported on the research in their article, "Cooperative [hunting](#) and [meat](#) sharing 400-200 kya at Qesem Cave, [Israel](#)" in a recent issue of the *Proceedings of the National Academy of Sciences*.

Source: University of Arizona ([news](#) : [web](#))

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