Crushed leg bones, battered skulls and other mutilated human remains are likely all that's left of a Native American population destroyed by genocide that took place circa 800 A.D., suggests a new study.

The paper, accepted for publication in the *Journal of Anthropological Archaeology*, describes the single largest deposit to date of mutilated and processed human remains in the American Southwest.

The entire assemblage comprises 14,882 human skeletal fragments, as well as the mutilated remains of dogs and other animals killed at the massacre site -- Sacred Ridge, southwest of Durango, Colo.

Based on the archaeological findings, which include two-headed axes that tested positive for human blood, co-authors Jason Chuipka and James Potter believe the genocide occurred as a result of conflict between different Anasazi Ancestral Puebloan ethnic groups.

"It was entirely an inside job," Chuipka, an archaeologist with Woods Canyon Archaeological Consultants, told Discovery News.

"The type of event at Sacred Ridge is on the far end of the conflict spectrum where social relations completely melt down," he added, mentioning that the Sacred Ridge "occupants were targeted to take the blame."

Chuipka and Potter analyzed objects excavated at Sacred Ridge, which was a multiple habitation site of 22 pit structures, some of which may have operated as communal ritual facilities for a population that extended beyond the immediate site inhabitants. This suggests the residents at one point exerted some social control in the area.

The unearthed bones and artifacts indicate that when the violence took place, men, women and children were tortured, disemboweled, killed and often hacked to bits. In some cases, heads, hands and feet appear to have been removed as trophies for the killers. The attackers then removed belongings out of the structures and set the roofs on fire.

"I think that the major event was preceded by social stress within the community that may have been exacerbated by a period of drought," Chuipka said. "The scale of the mutilations suggests that it was planned and organized in the preceding days or weeks, and that the violence took place in a relatively short period of time -- a few days."

"All evidence points to a rapid event, which is only possible with coordination and complicity within the community," he added.

The researchers ruled out other possible explanations, such as starvation cannibalism, traditional preparation of the deceased, and even individuals targeted for practicing witchcraft. Cannibalism, for example, usually involves bone marrow processing. Witch roundups tend to affect a relatively small number of victims.

In this case, a large group of people was dispatched at one time.

For a separate study, John McClelland, lab manager of osteology at Arizona State Museum, analyzed teeth from human remains within the Ridges Basin region, including Sacred Ridge.
He found that the population at Sacred Ridge in the early 800s was distinct from others in the area.

"The individuals at Sacred Ridge whose remains were disarticulated and processed were not a random selection from among the overall population of Ridges Basin," McClelland determined. "In addition to the biological differences, they appear to have had a somewhat different diet and may have experienced a higher level of juvenile growth disruption."

At least two other separate studies have come to similar conclusions, suggesting the genocide victims at Sacred Ridge belonged to an ethnic group that was different from that of other nearby populations.

Given basic established patterns from more recent ethnic cleansing in Yugoslavia, Iraq and Rwanda, the researchers think political structures that had been keeping ethnic conflict at bay probably broke down at Sacred Ridge.

"What we can learn from Sacred Ridge is that archaeological sites are not simply piles of rock and refuse, but that they were occupied by people that were involved in complex webs of social relations," Chuipka said. "Sacred Ridge is a case where social relations melted down and the solution chosen was absolute and shocking."