Archaeologists challenge theory of violent Steppe invasion in Iberia Peninsula

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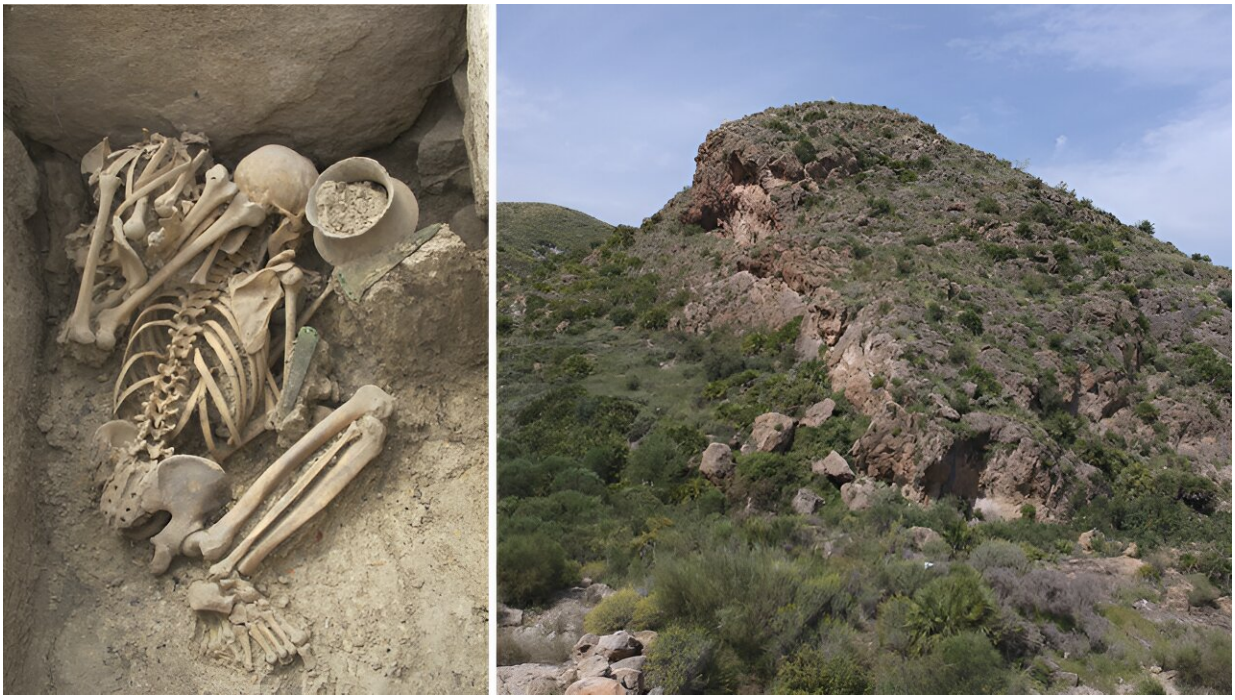

Left Tomb 80 of La Almoloya (Pliego Murcia). Example of a typical burial from the Argaric Bronze Age. Right: he archaeological site of Gatas (Turre, Almería), where one of the oldest known Argaric tombs was found. Credit: ASOME-UAB

A study by the Universitat Autònoma de Barcelona (UAB) and the University of Murcia (UM) challenges the theory that warrior groups with a "Steppe" genetic component originating from Eastern Europe violently replaced the male population of the Iberian Peninsula some

4,200 years ago and presents a different scenario, in which groups with Steppe ancestry mixed with other demographically weakened locals.

In the paper, published in the *Journal of Archaeological Science: Reports*, the research team explored how society and populations changed in southeast Spain 4,200 years ago, during the transition from the Copper to the Bronze Age.

To this end, they focused on one of the best known aspects of this transition: the shift from communal burials in the Copper Age to the single and double tombs of the Bronze Age El Argar society. The team looked at a large sample of radiocarbon (C-14) dates from human bones discovered in these different types of graves.

The first result of the analysis is chronological and suggests that the change from communal to individual tombs happened quickly. But it is the second result that has arguably greater implications. By examining a large sample of radiocarbon dates from human remains in southeast Iberia, they observed a peak in the number of buried dead during 2550-2400 BCE, followed by a sudden drop in 2300-2250 BCE.

The authors interpret this data from a demographic perspective. "It is likely that the inhabitants of southeastern Iberia were already very few, around 4,300 or 4,200 years ago, just before the arrival of populations with new genetic components, labeled 'Steppe.' When individuals with Steppe ancestry were found in southeastern Iberia, around 2200-2000 BC, they simply mixed with small local groups or occupied uninhabited areas," says Rafael Micó, professor at the UAB and co-director of the Mediterranean Social Archaeoecology Research Group (ASOME-UAB), which carried out the study.

Along with these results, the team also cites previous archaeogenetic studies that point to the absence of a "male bias" among peninsular

groups with Steppe ancestry.

"This allows us to propose a different historical scenario, which does not contemplate invading hordes of Steppe warriors who would have annihilated the local men and formed a male elite with exclusive access to local women," says Cristina Rihuete Herrada, also professor at the UAB and co-author of the study.

A period of abrupt change, but with a progressive 'Steppe' genetic influence

Around 4,200 years ago, between the Late Copper Age and the Early Bronze Age, major social disruptions occurred in Central and Western Europe. Archaeologists are still debating over their exact sources, and explanations range from drought to large-scale violent migrations or the spread of contagious diseases.

"In recent years it has been argued that populations with what is known as 'Steppe ancestry' migrated westwards from the region around the Black Sea, aided by the horse and wheel as new technologies, and brutally raided Western Europe," explains Camila Oliart, UAB researcher and co-author of the study.

"In the case of Iberia, it has been suggested that men arriving from the East had preferential access to women and discriminated or eliminated local males, in what is a very impactful 'invasionist' interpretation in the media, but perhaps also a too hasty one."

In the study now published, the research team outlines a context that may have important implications for understanding the transition between the Chalcolithic and the Bronze Age in southern Iberia 4,200 years ago, and in the southeast in particular.

Over the two centuries prior to this date, the social landscape may have been quite far from that of a thriving Copper Age. It was probably characterized by smaller settlements and low population density. From this perspective, the collapse of the Copper Age 4,200 years ago was not a rapid, massive and disruptive event affecting a densely populated and powerful society, but the culmination of two centuries of declining local dynamics.

This new scenario does not involve the mass elimination of men or the subjugation of local women after an alleged conquest, as the study points out.

"The inhabitants of southern Iberia were already few in number at the end of the Copper Age and mixed with groups of Steppe genetic ancestry without the need for a large-scale invasion. We should start to consider alternative explanations," suggests Miguel Valério, UAB researcher and co-author of the study. "We cannot ignore the fact that violence was an ingredient of social life in the Copper Age, but so far nothing proves that its end was the consequence of a generalized conflict between genetically distinct populations."

Still, the team emphasizes that more high-precision radiocarbon dating and genetic analysis on human samples from the latest Copper Age and the earliest Bronze Age (El Argar) burials are needed.

"Such data is absolutely crucial to gain a better understanding of the nature, scale and pace of the changes taking place in the formation of Bronze Age societies," they concluded.

During the study, some 450 radiocarbon dates corresponding to individuals buried in tombs from the Copper Age and Early Bronze Age in Almería (La Atalaya, Las Churuletas, Los Millares, El Argar, El Barranquete, Fuente Álamo, Gatas, Llano del Jautón, Loma del Campo

and Loma de Belmonte), Murcia (Camino del Molino), Granada (Cerro de la Virgen, Panoría), Jaén (Marroquíes Bajos), Seville (Valencina de la Concepción), and Évora (Perdigões) were analyzed.

More information: Rafael Micó et al, Tracing social disruptions over time using radiocarbon datasets: Copper and Early Bronze Ages in Southeast Iberia, *Journal of Archaeological Science: Reports* (2024). DOI: 10.1016/j.jasrep.2024.104692

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