

Evolution & Behavior

Ancient feasts drew people and animals from across Neolithic Britain

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ABSTRACT

Biomolecular analysis of pig remains from the Stonehenge complex and other monuments have demonstrated that people and animals from across Neolithic Britain came to Wessex for vast feasting events. These were probably the builders of the Stonehenge.



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Impressive monumental sites such as [Stonehenge](#) and [Avebury](#) represent some of the most famous prehistoric archaeological sites in the world. They often comprise sites of different character and function, with the Stonehenge complex having the stone circle of Stonehenge, a focus for funerary ritual, the wooden circle of [Woodhenge](#) and the henge enclosure of [Durrington Walls](#), a centre for feasting and settlement.

These monumental complexes have been a focus of research for centuries. What were the origins of the people who engaged in ceremonies at (and very likely built) Stonehenge and other impressive [Late Neolithic](#) (c. 2800-2400 BCE) monumental

complexes? Such origins represent a long-standing enigma in research on British prehistory. [Isotope analysis](#) provides a suite of methods for identifying non-local individuals and exploring origins through sampling bone and teeth. However, human remains at these sites are almost all cremated and therefore unsuitable for some forms of isotope analysis. Consequently, we must use other proxies for human movement.

This study uses the bones and teeth of pigs, the prime feasting animal at these complexes. Tens of thousands have been recovered from Durrington Walls, providing a vital resource for reconstructing prehistoric lifeways. These are domestic pigs and

therefore must have been brought by humans, thus potentially providing a good proxy for human movement. However, pigs are not well-suited to movement over distance and are commonplace in Late Neolithic Britain. Therefore, even if people came from far and wide, they might quickly find a pig in the vicinity, rather than bringing one that they had raised. Pigs may, therefore, provide a weak proxy for human migration.

Our research produced the most extensive five-isotope faunal dataset yet published in archaeology. We analysed a total of 131 animals from four Late Neolithic complexes in Wessex: Durrington Walls, West Kennet Palisade Enclosures, Mount Pleasant and Marden. Each isotope system provides different information about the origins of the animals. Strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) provides a geological signal, oxygen ($\delta^{18}\text{O}$) a climatic signal and sulphur ($\delta^{34}\text{S}$) an indication of coastal proximity. Carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope analysis provides dietary information and represents an essential baseline from which to interpret the other proxies. The combination of these isotope systems means that we can identify non-local animals with greater confidence. We can also posit, in some instances, their likely origins.

Results were diverse in all of the provenancing isotope proxies. They are considered in the context of British origins, as there is no evidence for contact with continental Europe at this time. The strontium values encompassed the vast majority of biosphere variation, from the youngest to oldest lithological zones. Oxygen values were suggestive of origins from the coastal west to the highland east and all zones in between. Sulphur results indicated many animals were raised near the coast, with others having inland roots. No other British site of any period provides data as wide-ranging as for these Late Neolithic sites.

Based on current mapping data, it is not possible to define origins with confidence, even when using multi-isotope proxies. [Equifinality](#) remains a hurdle to interpretation, as some areas may not be distinguishable. However, the scale of variation in all provenancing proxies provides convincing evidence for wide-ranging origins, with some perhaps coming from as far as Scotland. It is not only the famous megalithic centers like Stonehenge that were significant foci. All four sites show long-distance connectivity, and there is no indication that they served different networks. All drew people and animals from across Britain for these feasting events.

These findings have significant ramifications for how we understand Late Neolithic Britain. The monumental complexes of Wessex were not just power bases in the heartland of regional groups, at which feasting events acted to unify a diverse, yet local populace. Nor were they sites of reciprocal feasting, where neighbouring groups were forging and consolidating alliances. These centres were lynchpins for a much larger scale of connectivity, involving disparate groups from across Britain. Our results also suggest that prescribed contributions were required. Rules dictated that offered pigs must be raised by the feasting participants, accompanying them on their journey, rather than being acquired locally. The volume and scale of the mobility have not previously evidenced, and we can argue that the Late Neolithic was the first phase of pan-British connectivity. These long-distance networks were not only sustained by the movement of people but also of livestock. These results provide clear evidence for a significant volume and scale of intercommunity mobility in Late Neolithic Britain, demonstrating a level of interaction and social complexity not previously appreciated.