

# Ancient Pig DNA Study Sheds New Light On Colonization Of Europe By Early Farmers

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Ancient Pig DNA Study Sheds New Light On Colonization Of Europe By Early Farmers

Science Daily – The earliest domesticated pigs in Europe, which many archaeologists believed to be descended from European wild boar, were actually introduced from the Middle East by Stone Age farmers, new research suggests.

The research by an international team led by archaeologists at Durham University, which is published recently in the journal Proceedings of the National Academies of Sciences, analysed mitochondrial DNA from ancient and modern pig remains. Its findings also suggest that the migration of an expanding Middle Eastern population, who brought their 'farming package' of domesticated plants, animals and distinctive pottery styles with them, actually 'kickstarted' the local domestication of the European wild boar.

While archaeologists already know that agriculture began about 12,000 years ago in the central and western parts of the Middle East, spreading rapidly across Europe between 6,800 – 4000BC, many outstanding questions remain about the mechanisms of just how it spread. This research sheds new and important light on the actual process of the establishment of farming in Europe.

Durham University's Dr Keith Dobney explained: "Many archaeologists believe that farming spread through the diffusion of ideas and cultural exchange, not with the direct migration of people. However, the discovery and analysis of ancient Middle Eastern pig remains across Europe reveals that although cultural exchange did happen, Europe was definitely colonised by Middle Eastern farmers.

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"A combination of rising population and possible climate change in the 'fertile crescent', which put pressure on land and resources, made them look for new places to settle, plant their crops and breed their animals and so they rapidly spread west into Europe."

The research, funded by the Wellcome Trust, the Leverhulme Trust, the Arts and Humanities Research Council (AHRC) and the Smithsonian Institution also showed that within 500 years after the local domestication of the European wild boar, the new domestics completely replaced the Middle Eastern pigs that had arrived in Europe as part of the 'farming package'.

Dr Greger Larson, who performed the genetic analysis said: "The domestic pigs that were derived from the European wild boar must have been considered vastly superior to those originally from Middle East, though at this point we have no idea why. In fact, the European domestic pigs were so successful that over the next several thousand years they spread across the continent and even back into the Middle East where they overtook the indigenous domestic pigs. For whatever reason, European pigs were the must have farm animal."

The research is part of an ongoing research project based at Durham University which explores the role of animals in reconstructing early farming, ancient human migration and past trade and exchange networks around the world.