

## References

### Aktuell

#### BASTARD 2022

Paul Bastard, *Why do people die from COVID-19? Autoantibodies that neutralize type I interferons increase with age.* [science](#) **375** (2022), 829–830. DOI:10.1126/science.abn9649.

#### CALLAWAY 2022

Ewen Callaway, *Omicron sub-variant, What scientists know so far.* [nature](#) **602** (2022), 556–557.

Early studies suggest that the BA.2 lineage might prolong the Omicron wave.

#### XIE 2022

Yan Xie, Evan Xu, Benjamin Bowe & Ziyad Al-Aly, *Long-term cardiovascular outcomes of COVID-19.* [Nature Medicine](#) (2022), preprint, 1–22. DOI:10.1038/s41591-022-01689-3.

NatMed2022.02-Xie-Supplement.pdf

The cardiovascular complications of acute coronavirus disease 2019 (COVID-19) are well described, but the post-acute cardiovascular manifestations of COVID-19 have not yet been comprehensively characterized. Here we used national healthcare databases from the US Department of Veterans Affairs to build a cohort of 153,760 individuals with COVID-19, as well as two sets of control cohorts with 5,637,647 (contemporary controls) and 5,859,411 (historical controls) individuals, to estimate risks and 1-year burdens of a set of pre-specified incident cardiovascular outcomes. We show that, beyond the first 30 d after infection, individuals with COVID-19 are at increased risk of incident cardiovascular disease spanning several categories, including cerebrovascular disorders, dysrhythmias, ischemic and non-ischemic heart disease, pericarditis, myocarditis, heart failure and thromboembolic disease. These risks and burdens were evident even among individuals who were not hospitalized during the acute phase of the infection and increased in a graded fashion according to the care setting during the acute phase (non-hospitalized, hospitalized and admitted to intensive care). Our results provide evidence that the risk and 1-year burden of cardiovascular disease in survivors of acute COVID-19 are substantial. Care pathways of those surviving the acute episode of COVID-19 should include attention to cardiovascular health and disease.

### Anthropologie

#### ARMIT 2021

Ian Armit & David Reich, *The return of the Beaker folk? Rethinking migration and population change in British prehistory.* [Antiquity](#) **95** (2021), 1464–1477.

Recent aDNA analyses demonstrate that the centuries surrounding the arrival of the Beaker Complex in Britain witnessed a massive turnover in the genetic make-up of the island's population. The genetic data provide information both

on the individuals sampled and the ancestral populations from which they derive. Here, the authors consider the archaeological implications of this genetic turnover and propose two hypotheses—Beaker Colonisation and Steppe Drift—reflecting critical differences in conceptualisations of the relationship between objects and genes. These hypotheses establish key directions for future research designed to investigate the underlying social processes involved and raise questions for wider interpretations of population change detected through aDNA analysis.

**Keywords:** Europe | Britain | Neolithic | Bronze Age | Chalcolithic | Beaker Complex | burial | aDNA | migration

## DULIAS 2022

Katharina Dulias et al., *Ancient DNA at the edge of the world, Continental immigration and the persistence of Neolithic male lineages in Bronze Age Orkney*. *PNAS* **119** (2022), e2108001119.

[pnas119-e2108001119-Supplement.pdf](#)

Orkney was a major cultural center during the Neolithic, 3800 to 2500 BC. Farming flourished, permanent stone settlements and chambered tombs were constructed, and long-range contacts were sustained. From  $\approx 3200$  BC, the number, density, and extravagance of settlements increased, and new ceremonial monuments and ceramic styles, possibly originating in Orkney, spread across Britain and Ireland. By  $\approx 2800$  BC, this phenomenon was waning, although Neolithic traditions persisted to at least 2500 BC. Unlike elsewhere in Britain, there is little material evidence to suggest a Beaker presence, suggesting that Orkney may have developed along an insular trajectory during the second millennium BC. We tested this by comparing new genomic evidence from 22 Bronze Age and 3 Iron Age burials in northwest Orkney with Neolithic burials from across the archipelago. We identified signals of inward migration on a scale unsuspected from the archaeological record: As elsewhere in Bronze Age Britain, much of the population displayed significant genome-wide ancestry deriving ultimately from the Pontic-Caspian Steppe. However, uniquely in northern and central Europe, most of the male lineages were inherited from the local Neolithic. This suggests that some male descendants of Neolithic Orkney may have remained distinct well into the Bronze Age, although there are signs that this had dwindled by the Iron Age. Furthermore, although the majority of mitochondrial DNA lineages evidently arrived afresh with the Bronze Age, we also find evidence for continuity in the female line of descent from Mesolithic Britain into the Bronze Age and even to the present day.

**Keywords:** ancient DNA | Orkney | Neolithic | Bronze Age | genome-wide

Katharina Dulias, M. George B. Foody, Pierre Justeau, Marina Silva, Rui Martiniano, Gonzalo Oteo-García, Alessandro Fichera, Simão Rodrigues, Francesca Gandini, Alison Meynert, Kevin Donnelly, Timothy J. Aitman, The Scottish Genomes Partnership, Andrew Chamberlain, Olivia Lelong, George Kozikowski, Dominic Powlesland, Clive Waddington, Valeria Mattiangeli, Daniel G. Bradley, Jaroslaw Bryk, Pedro Soares, James F. Wilson, Graeme Wilson, Hazel Moore, Maria Pala, Ceiridwen J. Edwards & Martin B. Richards

**Significance:** The Orcadian Neolithic has been intensively studied and celebrated as a major center of cultural innovation, whereas the Bronze Age is less well known and often regarded as a time of stagnation and insularity. Here, we analyze ancient genomes from the Orcadian Bronze Age in the context of the variation in Neolithic Orkney and Bronze Age Europe. We find clear evidence for Early Bronze Age immigration into Orkney, but with an extraordinary pattern: continuity from the Neolithic on the male line of descent but immigration from continental Europe on the female side, echoed in the genome-wide picture. This suggests that despite

substantial immigration, indigenous male lineages persisted for at least a thousand years after the end of the Neolithic.

#### PRICE 2022

Michael Price, *Oldest genomes from Africa offer glimpse of complex past, Signs of ice age isolation match archaeological clues.* [science 375 \(2022\), 803–804.](#)

#### REES 2022

Jasmin Rees & Aida Andrés, *Inferring human evolutionary history, Unified genetic genealogy improves our understanding of how humans evolved.* [science 375 \(2022\), 817–818.](#)

#### WOHNS 2022

Anthony Wilder Wohns, Yan Wong, David Reich, Jerome Kelleher & Gil McVean et al., *A unified genealogy of modern and ancient genomes.* [science 375 \(2022\), 836.](#)

s375-0836-Supplement1.pdf, s375-0836-Supplement2.mp4, s375-0836-Supplement3.pdf

The sequencing of modern and ancient genomes from around the world has revolutionized our understanding of human history and evolution. However, the problem of how best to characterize ancestral relationships from the totality of human genomic variation remains unsolved. Here, we address this challenge with nonparametric methods that enable us to infer a unified genealogy of modern and ancient humans. This compact representation of multiple datasets explores the challenges of missing and erroneous data and uses ancient samples to constrain and date relationships. We demonstrate the power of the method to recover relationships between individuals and populations as well as to identify descendants of ancient samples. Finally, we introduce a simple nonparametric estimator of the geographical location of ancestors that recapitulates key events in human history.

Anthony Wilder Wohns, Yan Wong, Ben Jeffery, Ali Akbari, Swapan Mallick, Ron Pinhasi, Nick Patterson, David Reich, Jerome Kelleher & Gil McVean

## Bibel

#### RICHELLE 2022

Matthieu Richelle, *Old and New Readings in the Samaria Ostraca.* [Babelao 10 \(2022\), 379–413.](#)

This article provides the texts and translations of the Samaria ostraca found in 1910, together with epigraphical notes on a selection of 21 of these inscriptions, and a map of the Manasseh territory with the toponyms for which a localization can be proposed.

Keywords: Samaria ostraca | Paleo-Hebrew | Epigraphy | Ancient Israel | Historical Geography

## Grabung

#### HAUCK 2010

Thomas Carsten Hauck, *The Mousterian Sequence of Hummal (Syria).* Dissertation, Universität Basel ([Basel 2010](#)).

## Isotope

DUNNE 2021

Julie Dunne et al., *Holocene resource exploitation along the Nile: Diet and subsistence strategies of Mesolithic and Neolithic societies at Khor S.* *Antiquity* **95** (2021), 1426–1445.

[Antiquity095-1426-Supplement.pdf](#)

The subsistence practices of Holocene communities living in the Nile Valley of Central Sudan are comparatively little known. Recent excavations at Khor Shambat, Sudan, have yielded well-defined Mesolithic and Neolithic stratigraphy. Here, for the first time, archaeozoological, palaeobotanical, phytolith and dental calculus studies are combined with lipid residue analysis of around 100 pottery fragments and comparative analysis of faunal remains and organic residues. This holistic approach provides valuable information on changes in adaptation strategies, from Mesolithic hunter-gatherers to Neolithic herders exploiting domesticates. A unique picture is revealed of the natural environment and human subsistence, demonstrating the potential wider value of combining multiple methods.

**Keywords:** Sudan | Mesolithic | Neolithic | diet | archaeobotany | lipid residue analysis

Julie Dunne, Maciej Jordeczka, Marek Chodnicki, Karen Hardy, Lucy Kubiak-Martens, Magdalena Moskal-del Hoyo, Marta Osypinska, Marta Portillo, Iwona Sobkowiak-Tabaka, Selina Delgado-Raack, Przemyslaw Bobrowski, Paul S. Breeze, Nick Drake, Katie Manning & Richard P. Evershed

## Mesolithikum

CRISTIANI 2022

Emanuela Cristiani et al., *Wild cereal grain consumption among Early Holocene foragers of the Balkans predates the arrival of agriculture.* *eLife* **10** (2022), e72976.

Forager focus on wild cereal plants has been documented in the core zone of domestication in southwestern Asia, while evidence for forager use of wild grass grains remains sporadic elsewhere. In this paper, we present starch grain and phytolith analyses of dental calculus from 60 Mesolithic and Early Neolithic individuals from five sites in the Danube Gorges of the central Balkans. This zone was inhabited by likely complex Holocene foragers for several millennia before the appearance of the first farmers  $\approx 6200$  cal BC. We also analyzed forager ground stone tools (GSTs) for evidence of plant processing. Our results based on the study of dental calculus show that certain species of Poaceae (species of the genus *Aegilops*) were used since the Early Mesolithic, while GSTs exhibit traces of a developed grass grain processing technology. The adoption of domesticated plants in this region after  $\approx 6500$  cal BC might have been eased by the existing familiarity with wild cereals.

Emanuela Cristiani, Anita Radini, Andrea Zupancich, Angelo Gismondi, Alessia D'Agostino, Claudio Ottoni, Marialetizia Carra, Snežana Vukojičić, Mihai Constantinescu, Dragana Antonović, T. Douglas Price & Dušan Borić

## Metallzeiten

MATSUI 2022

Takafumi Matsui, Ryota Moriwaki, Eissa Zidan & Tomoko Arai, *The manufacture and origin of the Tutankhamen meteoritic iron dagger*. *Meteoritics & Planetary Science* (2022), preprint, 1–12. DOI:10.1111/maps.13787.

The Iron Age was the time when people acquired iron processing technology and is generally thought to have begun after 1200 B.C. Some prehistoric iron artifacts made of iron meteorites are dated from the Bronze Age. A nicely preserved meteoritic iron dagger was found in the tomb of King Tutankhamen (1361–1352 B.C.) of ancient Egypt. Yet, its manufacturing method and origin remain unclear. Here, we report nondestructive twodimensional chemical analyses of the Tutankhamen iron dagger, conducted at the Egyptian Museum of Cairo. Elemental mapping of Ni on the dagger blade surface shows discontinuous banded arrangements in places with “cubic” symmetry and a bandwidth of about 1 mm, suggesting a Widmanstätten pattern. The intermediate Ni content (11.8 ± 0.5 wt %) with the presence of the Widmanstätten pattern implies the source meteorite of the dagger blade to be octahedrite. The randomly distributed sulfur-rich black spots are likely remnants of troilite (FeS) inclusions in iron meteorite. The preserved Widmanstätten pattern and remnant troilite inclusion show that the iron dagger was manufactured by low-temperature (<950 °C) forging. The gold hilt with a few percent of calcium lacking sulfur suggests the use of lime plaster instead of gypsum plaster as an adhesive material for decorations on the hilt. Since the use of lime plaster in Egypt started during the Ptolemaic period (305–30 B.C.), the Ca-bearing gold hilt hints at its foreign origin, possibly from Mitanni, Anatolia, as suggested by one of the Amarna letters saying that an iron dagger with gold hilt was gifted from the king of Mitanni to Amenhotep III, the grandfather of Tutankhamen.

SUÁREZ-PADILLA 2021

José Suárez-Padilla, Víctor Jiménez-Jáimez & José L. Caro, *The Phoenician diaspora in the westernmost Mediterranean, Recent discoveries*. *Antiquity* **95** (2021), 1495–1510.

Antiquity095-1495-Supplement.xlsx

Important discoveries over the past 15 years in the coastal area between Huelva and Málaga in Spain have illuminated the beginnings of the eighth century BC Phoenician diaspora into the Western Mediterranean. Here, the authors combine Bayesian modelling of recently published radiocarbon dates with the latest archaeological data to investigate the Phoenician presence in southern Iberia. Their assessment of its significance for the Late Bronze and Early Iron Ages in the Western Mediterranean contributes not only to understanding the integration of the Phoenicians into local communities, but also to apprehending the mechanisms of colonisation and pre-colonial situations elsewhere in protohistoric Europe and other world contexts.

Keywords: Mediterranean | Spain | Bronze Age | Iron Age | Phoenicians | colonialism