

References

Aktuell

CALLAWAY 2017

Ewen Callaway, *Ancient genomes expose Africa's past, DNA analyses reveal extensive migration around continent.* [nature 547 \(2017\), 149.](#)

The unpublished study from Skoglund's team revealed additional movement. The 2,000-year-old genome of an individual from southern Africa was related to those of contemporary southern African hunter-gatherers known as the San. It was also related to ancient genomes that the team had sequenced from hunter-gatherers whose remains were found in Malawi and Tanzania — but not to the DNA of the current inhabitants of eastern Africa. The reason for this, Skoglund suggested, is a well-documented migration of Bantuspeaking groups from West Africa, who brought agriculture and a distinct language to eastern and southern Africa 1,000–2,000 years ago. These migrants seem to have completely replaced local hunter-gatherers.

GRILLI 2017

Jacopo Grilli & Stefano Allesina, *Last name analysis of mobility, gender imbalance, and nepotism across academic systems.* [PNAS 114 \(2017\), 7600–7605.](#)

In biology, last names have been used as proxy for genetic relatedness in pioneering studies of neutral theory and human migrations. More recently, analyzing the last name distribution of Italian academics has raised the suspicion of nepotism, with faculty hiring their relatives for academic posts. Here, we analyze three large datasets containing the last names of all academics in Italy, researchers from France, and those working at top public institutions in the United States. Through simple randomizations, we show that the US academic system is geographically well-mixed, whereas Italian academics tend to work in their native region. By contrasting maiden and married names, we can detect academic couples in France. Finally, we detect the signature of nepotism in the Italian system, with a declining trend. The claim that our tests detect nepotism as opposed to other effects is supported by the fact that we obtain different results for the researchers hired after 2010, when an antinepotism law was in effect.

Keywords: academic systems | isonomy | gender imbalance | nepotism

Significance: In the age of Big Data and high-throughput sequencing, a list of names might seem like a meager source of data. However, here we show that, by analyzing last name distributions, one can highlight distinctive patterns in academic systems around the world. By collecting data on academics in Italy, France, and the United States, we show that, in the Italian system, professors tend to work in their native region, whereas the US system is geographically well-mixed. We can detect the effect of field-specific immigration in the United States and highlight patterns of gender imbalance in the sciences. Finally, we show that, in Italy, the plague of nepotism—professors hiring their relatives—is slowly declining.

OBRIST 2017

Daniel Obrist et al., *Tundra uptake of atmospheric elemental mercury drives Arctic mercury pollution.* [nature 547 \(2017\), 201–204.](#)

Daniel Obrist, Yannick Agnan, Martin Jiskra, Christine I. Olson, Dominique P. Colegrove, Jacques Hueber, Christopher W. Moore, Jeroen E. Sonke & Detlev Helmig

Anthropogenic activities have led to large-scale mercury (Hg) pollution in the Arctic. It has been suggested that sea-salt-induced chemical cycling of Hg (through ‘atmospheric mercury depletion events’, or AMDEs) and wet deposition via precipitation are sources of Hg to the Arctic in its oxidized form (Hg(ii)). However, there is little evidence for the occurrence of AMDEs outside of coastal regions, and their importance to net Hg deposition has been questioned. Furthermore, wet-deposition measurements in the Arctic showed some of the lowest levels of Hg deposition via precipitation worldwide⁸, raising questions as to the sources of high Arctic Hg loading. Here we present a comprehensive Hg-deposition mass-balance study, and show that most of the Hg (about 70%) in the interior Arctic tundra is derived from gaseous elemental Hg (Hg(0)) deposition, with only minor contributions from the deposition of Hg(ii) via precipitation or AMDEs. We find that deposition of Hg(0)—the form ubiquitously present in the global atmosphere—occurs throughout the year, and that it is enhanced in summer through the uptake of Hg(0) by vegetation. Tundra uptake of gaseous Hg(0) leads to high soil Hg concentrations, with Hg masses greatly exceeding the levels found in temperate soils. Our concurrent Hg stable isotope measurements in the atmosphere, snowpack, vegetation and soils support our finding that Hg(0) dominates as a source to the tundra. Hg concentration and stable isotope data from an inland-to-coastal transect show high soil Hg concentrations consistently derived from Hg(0), suggesting that the Arctic tundra might be a globally important Hg sink. We suggest that the high tundra soil Hg concentrations might also explain why Arctic rivers annually transport large amounts of Hg to the Arctic Ocean.

Altpaläolithikum

WILLEMS 2017

Erik P. Willems & Carel P. van Schaik, *The social organization of *Homo ergaster*, Inferences from anti-predator responses in extant primates*. [Journal of Human Evolution](#) **109** (2017), 11–21.

Patterns of primate socioecology have been used to suggest that the first truly savanna-dwelling hominin, *Homo ergaster*, lived in sizeable groups. Here, we revisit these estimates and infer additional features of the social organization of these early hominins based on anti-predator responses observed across the primate taxon. We first show that the effect of habitat on primate group size, composition, and sexual dimorphism is negligible after controlling for substrate use and phylogeny: terrestrial species live in larger groups with more and bigger males than arboreal taxa. We next hypothesize that groups can only survive in open habitats if males are able to engage in joint counter-attacks against the large carnivores typical of such environments. To test this, we analyze reports on primate counter-attacks against known predators and find these are indeed disproportionately frequent in terrestrial taxa living in open habitats, sometimes even involving the use of tentative weapons. If we subsequently only examine the taxa that are particularly adept at this (chimpanzees and baboons), we find an effect of habitat type on group size: groups on the savanna are larger than those in the forest. We thus infer that *H. ergaster* lived in very large groups with many males that jointly defended the group against carnivores, and argue that these counter-attacks will readily have turned into confrontational scavenging and cooperative hunting, allowing

Homo to move into the niche of social carnivore. These two features (life in very large multimale groups and a switch to persistent carnivory) shaped the evolution of our lineage to such an extent that the social organization of *H. ergaster* may already have contained many key elements characterizing modern day foragers: male bonding, incipient maleefemale friendships with food sharing, a tendency toward endogamy, and the presence of large communities that eventually turned into the ethno-linguistic units we can still recognize today.

Keywords: Comparative approach | Confrontational scavenging | Joint counter-attack | Predator defense | Social evolution

Amerika

LOUDERBACK 2017

Lisbeth A. Louderback & Bruce M. Pavlik, *Starch granule evidence for the earliest potato use in North America*. [PNAS 114 \(2017\), 7606–7610](#).

The prehistory of wild potato use, leading to its domestication and diversification, has been well-documented in, and confined to, South America. At least 20 tuber-bearing, wild species of *Solanum* are known from North and Central America, yet their importance in ancient diets has never been assessed from the archaeological record. Here, we report the earliest evidence of wild potato use in North America at 10,900–10,100 calendar years (cal) B.P. in the form of well-preserved starch granules extracted from ground stone tools at North Creek Shelter, southern Utah. These granules have been identified as those of *Solanum jamesii* Torr. (Four Corners potato), a tuber-bearing species native to the American Southwest. Identification was based on applying five strictly defined diagnostic characteristics (eccentric hilum, longitudinal fissure, lack of fissure branching, fissure ratio, and maximum granule size) to each of 323 archaeological granules. Of those, nine were definitively assigned to *S. jamesii* based on possession of all characteristics, and another 61 were either likely or possibly *S. jamesii* depending on the number of characteristics they possessed. The oldest granules were found in substratum 4k (10,900–10,100 cal B.P.). Younger deposits, dating to $\approx 6,900$ cal B.P., also contained tools with *S. jamesii* granules, indicating at least 4,000 y of intermittent use. Ethnographic and historical accounts extend the period of use to more than 10,000 y. The question then arises as to whether some *S. jamesii* populations could have undergone transport, cultivation, and eventual domestication over such a long period of time.

Keywords: potato | *Solanum jamesii* | starch granule analysis | tuber use | Colorado Plateau

Significance: Starch granules of *Solanum jamesii* extracted from ground stone tools establish wild potato use as early as 10,900–10,100 calendar years B.P. in southern Utah. This discovery is the earliest documented use of potatoes in North America, an important energy source that has been largely undervalued or even ignored when diet breadth analyses and optimal foraging theory have been applied in archaeological studies. Younger deposits also contained tools with *S. jamesii* granules, indicating at least 4,000 years of intermittent use. Ethnographic and historical accounts from the region extend the period of use to more than 10,000 years. Given this long prehistory and history, the question arises as to whether some *S. jamesii* populations could have undergone transport, cultivation, and eventual domestication over such a long period of time.

Anthropologie

ROSSANO 2017

Matt J. Rossano, *Cognitive Fluidity and Acheulean Over-imitation*. [Cambridge Archaeological Journal 27 \(2017\), 495–509](#).

This paper analyses recently discussed evidence of over-imitation in Acheulean biface construction. First, it evaluates the argument for over-imitation using the available archaeological and cognitive science evidence. Next, it applies the four major theories of over-imitation, (1) Copy and Correct (C&C), (2) Automatic Causal Encoding (ACE), (3) social affiliation and (4) normative theory, as potential explanations for Acheulean over-imitation. ACE theory is the most likely explanation for early biface over-imitation (before 500,000 years bp), with social affiliation becoming increasingly likely after that. Normative over-imitation probably did not occur until around 300,000 years bp, when both the necessary hominin cognitive capacities and social conditions were present. An important conclusion emerging from this analysis is that over-imitation requires an integration of social and technical intelligence. Thus, the origins of cognitive fluidity may date back to as early as a million years ago, well before material evidence of fluidity is present.

Bibel

CLINES 2017

David J. A. Clines, *Alleged Female Language about the Deity in the Hebrew Bible, Society for Old Testament Study, 100th Anniversary Summer Meeting, King's College, London, 18 July 2017*. (2017).

When the topic of divine masculinity in the Hebrew Bible is broached, attention is often drawn to alleged examples of female language about the deity in our texts as countervailing evidence. There has not been, to my knowledge, a systematic critique of such instances. They include passages where God is said to be described as a human or animal mother, and a range of passages where language that seems appropriate only to women (e.g. of birthing and of female bodily organs) is used in reference to the deity. This paper will assess the claim of Phyllis Tribble and others that “recovery of this meaning tempers any assertion that Yahweh is a male deity”.

EVIAN 2017

Shirly Ben-Dor Evian, *Ramesses III And The ‘Sea-Peoples’, Towards A New Philistine Paradigm*. [Oxford Journal of Archaeology 36 \(2017\), 267–285](#).

The Philistine paradigm attempts to answer fundamental questions in Philistine history, namely the how and when of Philistine settlement in the southern Levant. According to the traditional paradigm, the Philistines, among other ‘Sea-Peoples’, came from the Aegean islands and were settled in Egyptian strongholds in the south Canaanite Coastal Plain in the eighth year of Ramesses III. Formulated on the basis of Egyptian texts and Philistine archaeological remains, the paradigm has been criticized over the reliability of both source materials. Therefore, it is the aim of the present study to conduct a methodological analysis of the pillars on which the paradigm rests and to offer a new reconstruction of the events that took place in the Levant in the twelfth century BCE.

RÖMER 2015

Thomas Römer, *The Joseph Story in the Book of Genesis: Pre-P or Post-P?* In: FEDERICO GIUNTOLI & KONRAD SCHMID (Hrsg.),

The Post-Priestly Pentateuch, New Perspectives on its Redactional Development and Theological Profiles. *Forschungen zum Alten Testament* (Tübingen 2015), 185–201.

The Joseph narrative, now integrated into Gen 37–50, was originally an independent Diaspora novella composed during the Persian period, probably by a member of the Hebrews living in Egypt in order to legitimate a life outside the land. In contrast to the current idea that the original Joseph story must be older than P, our investigation has shown that this is not in fact the case. The Joseph narrative was inserted at the end of Genesis after the integration of the P-texts, by redactors who wanted to construct a Hexa- or a Pentateuch and give some space also to a voice of the Diaspora. To end with Jean Louis Ska's statement quoted at the opening of our investigation, the hypothesis that the Joseph story is post-P represents the best solution, since it explains the largest amount of data.

USSISHKIN 2017

David Ussishkin, *The Date of Building 338 at Megiddo, A Rejoinder*. *Israel Exploration Journal* **67** (2017), 50–60.

Recently Kleiman, Kaplan and Finkelstein (2016) presented the results of their excavation in the area of Building 338 in Megiddo, arguing that the data acquired in the new excavation proves that Building 338 should be dated to Stratum IVA. In the present rejoinder I continue to argue for its dating to Stratum VA–IVB, on the basis of all available data.

Datierung

MÜLLER 2009

Johannes Müller & Brigitte Lohrke, *Neue absolutchronologische Daten für die süddeutsche Hügelgräberbronzezeit*. *Germania* **87** (2009), 25–39.

Im Rahmen eines Datierungsprojektes zur Frage von Innovationsprozessen des Endneolithikums und der Frühbronzezeit war es vor mehreren Jahren nötig, auch die mittelbronzezeitliche Entwicklung Süddeutschlands durch absolutchronologische Daten abzusichern. Es gelang, von menschlichen Knochen aus 14 Gräbern Radiokarbondaten anfertigen zu lassen (Anhang), die im Folgenden vorgestellt und diskutiert werden sollen.

Keywords: Southern Germany | Middle Bronze Age | chronology | radiocarbon dating | calibration | grave goods

Keywords: Süddeutschland | Mittlere Bronzezeit | Chronologie | Radiokarbondatierung | Kalibration | Beigabensitten

Grabung Mesolithikum

HOLST 2007

Daniela Holst, *Subsistenz und Landschaftsnutzung im Frühmesolithikum, Nussröstplätze am Duvensee*. Monographien des Römisch-Germanischen Zentralmuseums 120 (Mainz 2014). Dissertation, Johannes Gutenberg-Universität Mainz.

Die anhand der Duvenseer Wohnplätze herausgestellte Subsistenzstrategie, die intensive Haselnussnutzung, weisen eine mehr als nur regionale Verbreitung auf und lassen eine weite zeitliche und räumliche Relevanz der Untersuchungen

erkennen. Obwohl die kurzfristig saisonal genutzten Plätze nur einen kleinen Ausschnitt der Subsistenz und Siedlungsweise bilden, geben sie doch einen klareren Einblick in die diesbezüglichen Verhaltensweisen als man dies von dauerhafter und vielfältig genutzten Siedlungen (“Basislager”) erwarten darf. Die Existenz solch spezialisierter Werkplätze wie am Duvensee erweckt den Anschein, dass die archäologische Sichtbarkeit der eigentlichen Siedlungsplätze bzw. “Basislager” so gering ist, weil die abfallintensiven Prozesse, wie z.B. Nussknacken, hier gar nicht durchgeführt wurden. Sie müssen demnach nicht unbedingt in den heute versunkenen mesolithischen Küstengebieten vermutet werden.

Die regionalen Eigenständigkeiten der kulturellen Hinterlassenschaften innerhalb des nordwesteuropäischen Frühmesolithikums und die Ressourcen der frühholozänen Landschaft sprechen für kleinere Schweifgebiete und eine wesentlich geringere Mobilität als dies sonst oft postuliert wird. Eine reduzierte Mobilität in begrenzten Territorien wurde durch die umfangreiche saisonale Nutzung energiereicher Ressourcen wie der Haselnuss ermöglicht und war vielleicht sogar erforderlich. Verhaltensweisen wie z.B. territoriale Besitzrechte auf besonders ertragreiche Haselbestände oder deren bewusste Hege lassen sich zwar kaum direkt nachweisen; die damit verbundenen Auswirkungen, wie eine konstante Platznutzung bis hin zu erhöhter Sesshaftigkeit sowie die spezialisierte Ausbeutung der Ressourcen, sind nach den Ergebnissen dieser Arbeit jedoch evident.

Isotope

TURCK 2014

Rouven Turck, Bernd Kober, Johanna Kontny, Joachim Wahl & Renate Ludwig, *Strontiumisotopenanalysen und anthropologische Untersuchungen an der Mehrfachbestattung der Michelsberger Kultur in Heidelberg-Handschuhsheim*. [Fundberichte aus Baden-Württemberg 34 \(2014\), i, 385–407.](#)

Die Handschuhsheimer Mehrfachbestattung zeigt ungeachtet der begrenzten Stichproben an nur sechs Individuen eine erhebliche Heterogenität der $87\text{Sr}/86\text{Sr}$ -Verhältnisse in den untersuchten Zähnen der Michelsberger Zeit. Daraus folgt eine Orientierung der drei Erwachsenen und der drei Kinder zu individuellem geologischen Untergrund. Dies ist Ausdruck unterschiedlicher Lebenshistorien der Individuen, deren Lebenspfade spätestens in Heidelberg-Handschuhsheim zusammengefunden haben. Die beiden Männer haben ihre Kindheit in einem Hochland verbracht, das sie später verlassen haben, um sich die Oberrheinebene als Lebensraum zu erschließen. Ihre anthropologischen Merkmale und dabei insbesondere ihre grazile Gestalt zeigen, dass die Hochlandbewohner während der Zeit der Michelsberger Kultur eine Subpopulation gebildet haben könnten, die vielleicht zeitweise separat von den Flachlandbewohnern lebte. Andererseits wird durch die Strontiumisotope dokumentiert, dass einzelne Individuen Mobilitätsbereitschaft besaßen und zum Verlassen ihrer Lebensumgebung bereit waren. Offenbar konnte es entscheidende Gründe dafür geben, die Hochlandareale zu verlassen und das Tiefland als neue Lebensumgebung zu erschließen. Dabei haben sich mobile Hochland-Individuen offenbar bereitwillig mit Flachlandbewohnern zu Siedlungsgemeinschaften zusammengefunden. Vertreter solcher Flachlandbewohner sind die Frau und der Jugendliche aus der Mehrfachbestattung. Beide sind in einem gemeinsamen Siedlungsgebiet großgeworden, das wegen der Strontiumisotopensignatur seines geologischen Grundes z.B. im nördlichen Oberrheingraben gelegen haben könnte. Da dieses Gebiet eine andere Signatur seiner Strontiumisotope hat

als die des Geburtsortes der beiden Kinder (vermutlich das unmittelbare Heidelberger Gebiet), waren auch diese beiden Michelsberger Individuen als Flachland-Siedler zum Wechsel ihrer Lebensumgebung bereit. Beide haben mindestens einen Ortswechsel vollzogen, nämlich von ihrem Kindheitsort zum Heidelberger Gebiet als ihrem neuen Siedlungsraum und späteren Sterbeort. Aus den anthropologischen und den Strontiumisotopen-Daten ergibt sich daher, dass sich im Heidelberger Gebiet Michelsberger Menschen unterschiedlicher Subpopulationen (Hochland/Flachland) mit unterschiedlichen Herkunftsorten und möglicherweise unterschiedlicher kultureller Entwicklung zu Siedlungs- oder gar Familiengemeinschaften zusammengeschlossen haben.

Judentum

SHAW 2015

Brent D. Shaw, *The Myth of the Neronian Persecution*. [Journal of Roman Studies](#) **105** (2015), 73–100.

A conventional certainty is that the first state-driven persecution of Christians happened in the reign of Nero and that it involved the deaths of Peter and Paul, and the mass execution of Christians in the aftermath of the great fire of July 64 C.E. The argument here contests all of these facts, especially the general execution personally ordered by Nero. The only source for this event is a brief passage in the historian Tacitus. Although the passage is probably genuine Tacitus, it reflects ideas and connections prevalent at the time the historian was writing and not the realities of the 60s.

Keywords: Nero | Christians | persecution | martyrs | (St) Peter | (St) Paul | Tacitus | Pliny the Younger | Great Fire of 64 C.E.

Klima

BOCK 2017

Michael Bock, Jochen Schmitt, Jonas Beck, Barbara Seth, Jérôme Chappellaz & Hubertus Fischer, *Glacial/interglacial wetland, biomass burning, and geologic methane emissions constrained by dual stable isotopic CH₄ ice core records*. [PNAS](#) **114** (2017), E5778–E5786.

Atmospheric methane (CH₄) records reconstructed from polar ice cores represent an integrated view on processes predominantly taking place in the terrestrial biogeosphere. Here, we present dual stable isotopic methane records [d13CH₄ and dD(CH₄)] from four Antarctic ice cores, which provide improved constraints on past changes in natural methane sources. Our isotope data show that tropical wetlands and seasonally inundated floodplains are most likely the controlling sources of atmospheric methane variations for the current and two older interglacials and their preceding glacial maxima. The changes in these sources are steered by variations in temperature, precipitation, and the water table as modulated by insolation, (local) sea level, and monsoon intensity. Based on our dD(CH₄) constraint, it seems that geologic emissions of methane may play a steady but only minor role in atmospheric CH₄ changes and that the glacial budget is not dominated by these sources. Superimposed on the glacial/interglacial variations is a marked difference in both isotope records, with systematically higher values during the last 25,000 y compared with older time periods. This shift cannot be explained by climatic changes. Rather, our isotopic methane budget points to a marked increase in fire activity, possibly caused by biome changes and accumulation of fuel related to the

late Pleistocene megafauna extinction, which took place in the course of the last glacial.

Keywords: atmosphere | methane | megafauna | ice core | stable isotopes

Significance: Polar ice is a unique archive of past atmosphere. Here, we present methane stable isotope records (used as source fingerprint) for the current and two past interglacials and their preceding glacial maxima. Our data are used to constrain global emissions of methane. Tropical wetlands and floodplains seem to be the dominant sources of atmospheric methane changes, steered by past variations in sea level, monsoon intensity, temperature, and the water table. In contrast, geologic emissions of methane are stable over a wide range of climatic conditions. The long-term shift seen in both isotopes for the last 25,000 y compared with older intervals is likely connected to changes in the terrestrial biosphere and fire regimes as a consequence of megafauna extinction.

JARMAN 2017

Catrine L. Jarman et al., *Diet of the prehistoric population of Rapa Nui (Easter Island, Chile) shows environmental adaptation and resilience*. *American Journal of Physical Anthropology* (2017), preprint, 1–19. DOI:10.1002/ajpa.23273.

Catrine L. Jarman, Thomas Larsen, Terry Hunt, Carl Lipo, Reidar Solsvik, Natalie Wallsgrave, Cassie Ka'apu-Lyons, Hilary G. Close & Brian N. Popp

Objectives: The Rapa Nui “ecocide” narrative questions whether the prehistoric population caused an avoidable ecological disaster through rapid deforestation and over-exploitation of natural resources. The objective of this study was to characterize prehistoric human diets to shed light on human adaptability and land use in an island environment with limited resources.

Materials and methods: Materials for this study included human, faunal, and botanical remains from the archaeological sites Anakena and Ahu Tepeu on Rapa Nui, dating from c. 1400 AD to the historic period, and modern reference material. We used bulk carbon and nitrogen isotope analyses and amino acid compound specific isotope analyses (AA-CSIA) of collagen isolated from prehistoric human and faunal bone, to assess the use of marine versus terrestrial resources and to investigate the underlying baseline values. Similar isotope analyses of archaeological and modern botanical and marine samples were used to characterize the local environment.

Results: Results of carbon and nitrogen AA-CSIA independently show that around half the protein in diets from the humans measured came from marine sources; markedly higher than previous estimates. We also observed higher d15N values in human collagen than could be expected from the local environment.

Discussion: Our results suggest highly elevated d15N values could only have come from consumption of crops grown in substantially manipulated soils. These findings strongly suggest that the prehistoric population adapted and exhibited astute environmental awareness in a harsh environment with nutrient poor soils. Our results also have implications for evaluating marine reservoir corrections of radiocarbon dates.

Keywords: amino acids | compound specific isotope analysis | ecology | radiocarbon | stable isotopes

Methoden

FÖLDI 2017

Zsombor Földi, *Cuneiform Tablets and the Antiquities Market, The*

Archives from Dūr-Abī-ešuh. [Distant Worlds Journal 2 \(2017\), 7–27](#).

In this paper, different issues of dealing with unprovenanced antiquities are discussed from the Assyriologist's point of view. How should one deal with unprovenanced artefacts? Should they be published at all? Is it satisfactory to publish only the artefacts? What is the importance of acquisition history, and to what extent should one trust the data provided by dealers and auction houses? Since the Old Babylonian (20th–17th centuries BCE) city of Dur-Abi-ešu. was virtually unknown until the early 2000s, its unprovenanced archives offer an excellent opportunity to address these issues. One can observe the appearance of cuneiform tablets from these archives in the main European and American centres of antiquities trade, as well as the scarcity of data concerning their acquisition history. However, since the main bulk of tablets still await publication, these observations must be considered preliminary. In an Appendix a previously unknown tablet from Dur-Abi-ešu., housed in a German private collection, is published for the first time.

Mittelpaläolithikum

REYNARD 2017

Jerome P. Reynard & Christopher S. Henshilwood, *Subsistence strategies during the Late Pleistocene in the southern Cape of South Africa, Comparing the Still Bay of Blombos Cave with the Howiesons Poort of Klipdrift Shelter*. [Journal of Human Evolution 108 \(2017\), 110–130](#).

The Still Bay (SB) and Howiesons Poort (HP) were two significant techno-complexes in the Middle Stone Age and key periods in the expression of behavioral complexity. In this study, we compare the recently excavated fauna from the SB layers at Blombos Cave (BBC) with that from the HP levels at Klipdrift Shelter (KDS) in the southern Cape of South Africa. We consider our findings in the framework of recent models for early human subsistence behavior. In particular, we link our study with models involving resource intensification to examine whether foraging strategies in the HP were more or less intensive than those in the SB. Based on our criteria used to assess intensification—the exploitation of low-ranked prey, the processing of low-utility elements, transport decisions, and occupational intensity—intensive subsistence strategies are more evident at KDS than BBC. Our results suggest that low-ranked elements were processed more heavily and diet breadth was broader at KDS than at BBC. However, foraging ranges may have been more extensive at BBC than at KDS. Taphonomic data also suggests that the SB at BBC was a low-intensity, sporadically occupied period in contrast to the high-intensity occupations during the HP at KDS. We argue that this may be related to differences in mobility and residential patterns between these techno-complexes.

Keywords: Middle Stone Age | Zooarchaeology | Still Bay | Howiesons Poort | Intensification | Subsistence strategies

SULLIVAN 2017

Alexis P. Sullivan, Marc de Manuel, Tomas Marques-Bonet & George H. Perry, *An evolutionary medicine perspective on Neandertal extinction*. [Journal of Human Evolution 108 \(2017\), 62–71](#).

The Eurasian sympatry of Neandertals and anatomically modern humans – beginning at least 45,000 years ago and possibly lasting for more than 5000 years – has sparked immense anthropological interest into the factors that potentially contributed to Neandertal extinction. Among many different hypotheses, the

“differential pathogen resistance” extinction model posits that Neandertals were disproportionately affected by exposure to novel infectious diseases that were transmitted during the period of spatiotemporal sympatry with modern humans. Comparisons of new archaic hominin paleogenome sequences with modern human genomes have confirmed a history of genetic admixture – and thus direct contact – between humans and Neandertals. Analyses of these data have also shown that Neandertal nuclear genome genetic diversity was likely considerably lower than that of the Eurasian anatomically modern humans with whom they came into contact, perhaps leaving Neandertal innate immune systems relatively more susceptible to novel pathogens. In this study, we compared levels of genetic diversity in genes for which genetic variation is hypothesized to benefit pathogen defense among Neandertals and African, European, and Asian modern humans, using available exome sequencing data (three individuals, or six chromosomes, per population). We observed that Neandertals had only 31–39% as many non-synonymous (amino acid changing) polymorphisms across 73 innate immune system genes compared to modern human populations. We also found that Neandertal genetic diversity was relatively low in an unbiased set of balancing selection candidate genes for primates, those genes with the highest 1% genetic diversity genome-wide in non-human hominoids (apes). In contrast, Neandertals had similar or higher levels of genetic diversity than humans in 12 major histocompatibility complex (MHC) genes. Thus, while Neandertals may have been relatively more susceptible to some novel pathogens and differential pathogen resistance could be considered as one potential contributing factor in their extinction, the expectations of this model are not universally met.

Keywords: Archaic hominin admixture | Paleoepidemiology | Genetic drift | Human-pathogen co-evolution

Neolithikum

KOLÁŘ 2017

Jan Kolář, Petr Kuneš, Péter Szabó, Mária Hajnalová, Helena Svitavská Svobodová, Martin Macek & Peter Tkáč, *Population and forest dynamics during the Central European Eneolithic (4500–2000 BC)*. [Archaeological and Anthropological Sciences \(2017\), preprint, 1–12. DOI:10.1007/s12520-016-0446-5.](#)

The population boom-and-bust during the European Neolithic (7000–2000 BC) has been the subject of lively discussion for the past decade. Most of the research on this topic was carried out with help of summed radiocarbon probability distributions. We aim to reconstruct population dynamics within the catchment of a medium sized lake on the basis of information on the presence of all known past human activities. We calculated a human activity model based on Monte Carlo simulations. The model showed the lowest level of human activity between 4000 and 3000 BC. For a better understanding of long-term socio-environmental dynamics, we also used the results of a pollen-based quantitative vegetation model, as well as a local macrophysical climate model. The beginning of the decline of archaeologically visible human activities corresponds with climatic changes and an increase in secondary forest taxa probably indicating more extensive land use. In addition, social and technological innovations are important, such as the introduction of the ard, wheel, animal traction and metallurgy, as well as changes in social hierarchy characterizing the same period.

Keywords: Population dynamics | Neolithic | Eneolithic | Secondary woodland | REVEALS | Macrophysical climate model

Religion

NOTROFF 2017

Jens Notroff et al., *More Than a Vulture, A Response to Sweatman and Tsikritsis*. [Mediterranean Archaeology and Archaeometry 17 \(2017\), ii, 57–74](#).

Jens Notroff, Oliver Dietrich, Laura Dietrich, Cecilie Lelek Tvetmarken, Moritz Kinzel, Jonas Schlindwein, Devrim Sönmez & Lee Clare

In a paper recently published in this journal, Martin B. Sweatman and Dimitrios Tsikritsis from the University of Edinburgh (School of Engineering) have suggested an interpretation for the early Neolithic monumental enclosures at Göbekli Tepe as space observatories and the site's complex iconography the commemoration of a catastrophic astronomical event ('Younger Dryas Comet Impact'). As the archaeologists excavating this site, we would like to comment on a few points that we feel require consideration in this discussion.

Keywords: symbolism | Younger Dryas | comet | Taurid meteor | asterism | coherent catastrophism

SWEATMAN 2017

Martin B. Sweatman & Dimitrios Tsikritsis, *Decoding Göbekli Tepe With Archaeoastronomy, What does the fox say?* [Mediterranean Archaeology and Archaeometry 17 \(2017\), i, 233–250](#).

We have interpreted much of the symbolism of Göbekli Tepe in terms of astronomical events. By matching low-relief carvings on some of the pillars at Göbekli Tepe to star asterisms we find compelling evidence that the famous 'Vulture Stone' is a date stamp for $10950 \text{ BC} \pm 250 \text{ yrs}$, which corresponds closely to the proposed Younger Dryas event, estimated at 10890 BC. We also find evidence that a key function of Göbekli Tepe was to observe meteor showers and record cometary encounters. Indeed, the people of Göbekli Tepe appear to have had a special interest in the Taurid meteor stream, the same meteor stream that is proposed as responsible for the Younger-Dryas event. Is Göbekli Tepe the 'smoking gun' for the Younger-Dryas cometary encounter, and hence for coherent catastrophism?

Keywords: symbolism | Younger Dryas | comet | Taurid meteor | asterism | coherent catastrophism.