

References

Aktuell

BROADLEY 2018

Michael W. Broadley, Peter H. Barry, Chris J. Ballentine, Lawrence A. Taylor & Ray Burgess, *End-Permian extinction amplified by plume-induced release of recycled lithospheric volatiles*. [Nature Geoscience](#) **11** (2018), 682–687.

[NatGeo11-682-Supplement.pdf](#)

Magmatic volatile release to the atmosphere can lead to climatic changes and substantial environmental degradation including the production of acid rain, ocean acidification and ozone depletion, potentially resulting in the collapse of the biosphere. The largest recorded mass extinction in Earth's history occurred at the end of the Permian, coinciding with the emplacement of the Siberian large igneous province, suggesting that large-scale magmatism is a key driver of global environmental change. However, the source and nature of volatiles in the Siberian large igneous province remain contentious. Here we present halogen compositions of sub-continental lithospheric mantle xenoliths emplaced before and after the eruption of the Siberian flood basalts. We show that the Siberian lithosphere is massively enriched in halogens from the infiltration of subducted seawater-derived volatiles and that a considerable amount (up to 70%) of lithospheric halogens are assimilated into the plume and released to the atmosphere during emplacement. Plume–lithosphere interaction is therefore a key process controlling the volatile content of large igneous provinces and thus the extent of environmental crises, leading to mass extinctions during their emplacement.

KUPFERSCHMIDT 2018

Kai Kupferschmidt, *Tide Of Lies, The researcher at the center of an epic scientific fraud remains an enigma to the scientists who exposed him*. [science](#) **361** (2018), 636–641.

Satoh maintains that he only corrected the English in the papers.

In 2002 they started to put each other's name on every paper they authored. Still, Iwamoto claims he was unaware of Sato's practice.

“In most of the papers which Dr. Sato published, which included Dr. Iwamoto's name, Dr. Iwamoto did not know that his name was included,”

Saya chalks problems in the papers up to “immaturity.” “We do not think there is fabrication,” he says.

Avenell's team, says Ogawa, is now giving Iwamoto's papers a level of scrutiny that is unfair and is causing his client a great deal of distress.

MALOY 2018

Jeffrey Maloy, *The universe in a classroom*. [science](#) **361** (2018), 718.

The universe is an unfathomably large place. But from the front of a lecture hall, it can feel suffocatingly tiny. Standing behind a podium at 8 a.m., I looked out into an auditorium at 360 students; 720 eyes staring intently back at me; 3600 fingers furiously pounding away at keyboards, transcribing my uncertainty for posterity. Did I say “polymerase” when I meant to say “primase”? Was my answer to that question clear? The heat radiating from the projector felt stifling. With

5 minutes remaining, I fumbled an explanation. My chest tightened as I scanned the lecture hall, searching for an escape but finding only four walls that seemed to be inching closer. An eternity elapsed in 30 seconds. When I heard a chuckle (or was it a snicker?) from the corner of the room, I yielded to my inadequacy and dismissed class with a precious 2 minutes to spare, promising to rehash the topic at the beginning of the next class.

Altpaläolithikum

KUMAN 2018

Kathleen Kuman, Morris B. Sutton, Travis Rayne Pickering & Jason L. Heaton, *The Oldowan industry from Swartkrans cave, South Africa, and its relevance for the African Oldowan*. [Journal of Human Evolution 123 \(2018\), 52–69](#).

The oldest recognized artifacts at the Swartkrans cave hominid-bearing site in South Africa have long been known to occur in the Lower Bank of Member 1, now dated with the cosmogenic nuclide burial method to ca. 1.8–2.19 Ma. However, the affinities of this industry have been debated due to small sample size. In this paper we present newly excavated material from the Lower Bank retrieved since 2005 in the Swartkrans Paleoanthropological Research Project. The sample is now large enough to confirm its affinity with the Oldowan industrial complex. The assemblage is highly expedient and core reduction strategies are largely casual. Although freehand flaking is present, the bipolar technique is most significant, even in non-quartz raw materials. The Swartkrans assemblage shows some significant contrasts with the Sterkfontein Oldowan, ca. 2.18 Ma, which can be explained by its closer proximity to raw material sources, its somewhat different geographic context, and its more expedient nature. The Swartkrans Oldowan now provides us with the first good indication of Oldowan variability in southern Africa, where only two sizeable assemblages have thus far been discovered. Comparisons are made with other sites across Africa that help to place this variability within our overall understanding of the Oldowan industrial complex.

Keywords: Swartkrans | Sterkfontein | Oldowan | Lithic technology | Core reduction strategies | Bipolar technique

Anthropologie

BOYLE 2018

Eve K. Boyle, Ellison J. McNutt, Tomohiko Sasaki, Gen Suwa, Bernhard Zipfel & Jeremy M. DeSilva, *A quantification of calcaneal lateral plantar process position with implications for bipedal locomotion in Australopithecus*. [Journal of Human Evolution 123 \(2018\), 24–34](#).

The evolution of bipedalism in the hominin lineage has shaped the posterior human calcaneus into a large, robust structure considered to be adaptive for dissipating peak compressive forces and energy during heel-strike. A unique anatomy thought to contribute to the human calcaneus and its function is the lateral plantar process (LPP). While it has long been known that humans possess a plantarly positioned LPP and apes possess a more dorsally positioned homologous structure, the relative position of the LPP and intraspecific variation of this structure have never been quantified. Here, we present a method for quantifying relative LPP position and find that, while variable, humans have a significantly more

plantar position of the LPP than that found in the apes. Among extinct hominins, while the position of the LPP in *Australopithecus afarensis* falls within the human distribution, the LPP is more dorsally positioned in *Australopithecus sediba* and barely within the modern human range of variation. Results from a resampling procedure suggest that these differences can reflect either individual variation of a foot structure/function largely shared among *Australopithecus* species, or functionally distinct morphologies that reflect locomotor diversity in Plio-Pleistocene hominins. An implication of the latter possibility is that calcaneal changes adaptive for heel-striking bipedalism may have evolved independently in two different hominin lineages.

Keywords: *Australopithecus afarensis* | *Australopithecus sediba* | Calcaneus | Hominins | Lateral plantar process

HABER 2017

Marc Haber et al., *Continuity and Admixture in the Last Five Millennia of Levantine History from Ancient Canaanite and Present-Day Lebanese Genome Sequences*. *American Journal of Human Genetics* **101** (2017), 274–282.

Marc Haber, Claude Doumet-Serhal, Christiana Scheib, Yali Xue, Petr Danecek, Massimo Mezzavilla, Sonia Youhanna, Rui Martiniano, Javier Prado-Martinez, Michał Szpak, Elizabeth Matisoo-Smith, Holger Schutkowski, Richard Mikulski, Pierre Zalloua, Toomas Kivisild & Chris Tyler-Smith

The Canaanites inhabited the Levant region during the Bronze Age and established a culture that became influential in the Near East and beyond. However, the Canaanites, unlike most other ancient Near Easterners of this period, left few surviving textual records and thus their origin and relationship to ancient and present-day populations remain unclear. In this study, we sequenced five whole genomes from 3,700-year-old individuals from the city of Sidon, a major Canaanite city-state on the Eastern Mediterranean coast. We also sequenced the genomes of 99 individuals from present-day Lebanon to catalog modern Levantine genetic diversity. We find that a Bronze Age Canaanite-related ancestry was widespread in the region, shared among urban populations inhabiting the coast (Sidon) and inland populations (Jordan) who likely lived in farming societies or were pastoral nomads. This Canaanite-related ancestry derived from mixture between local Neolithic populations and eastern migrants genetically related to Chalcolithic Iranians. We estimate, using linkage-disequilibrium decay patterns, that admixture occurred 6,600–3,550 years ago, coinciding with recorded massive population movements in Mesopotamia during the mid-Holocene. We show that present-day Lebanese derive most of their ancestry from a Canaanite-related population, which therefore implies substantial genetic continuity in the Levant since at least the Bronze Age. In addition, we find Eurasian ancestry in the Lebanese not present in Bronze Age or earlier Levantines. We estimate that this Eurasian ancestry arrived in the Levant around 3,750–2,170 years ago during a period of successive conquests by distant populations.

HARNEY 2018

Éadaoin Harney et al., *Ancient DNA from Chalcolithic Israel reveals the role of population mixture in cultural transformation*. *Nature Communications* **9** (2018), 3336, 1–11. DOI:10.1038/s41467-018-05649-9.

NatComm09-a03336-Supplement.pdf

Éadaoin Harney, Hila May, Dina Shalem, Nadin Rohland, Swapan Mallick, Iosif Lazaridis, Rachel Sarig, Kristin Stewardson, Susanne Nordenfelt, Nick Patterson, Israel Hershkovitz & David Reich

The material culture of the Late Chalcolithic period in the southern Levant (4500–3900/ 3800 BCE) is qualitatively distinct from previous and subsequent periods. Here, to test the hypothesis that the advent and decline of this culture was influenced by movements of people, we generated genome-wide ancient DNA from 22 individuals from Peqi'in Cave, Israel. These individuals were part of a homogeneous population that can be modeled as deriving $\approx 57\%$ of its ancestry from groups related to those of the local Levant Neolithic, $\approx 17\%$ from groups related to those of the Iran Chalcolithic, and $\approx 26\%$ from groups related to those of the Anatolian Neolithic. The Peqi'in population also appears to have contributed differently to later Bronze Age groups, one of which we show cannot plausibly have descended from the same population as that of Peqi'in Cave. These results provide an example of how population movements propelled cultural changes in the deep past.

SLON 2018

Viviane Slon, Fabrizio Mafessoni, Benjamin Vernot, Cesare De Filippo, Steffi Grote, Bence Viola, Mateja Hajdinjak, Stéphane Pe, *The genome of the offspring of a Neanderthal mother and a Denisovan father*. [nature](#) **561** (2018), 113–116.

[n561-0113-Supplement.pdf](#)

Viviane Slon, Fabrizio Mafessoni, Benjamin Vernot, Cesare De Filippo, Steffi Grote, Bence Viola, Mateja Hajdinjak, Stéphane Peyrégne, Sarah Nagel, Samantha Brown, Katerina Douka, Tom Higham, Maxim B. Kozlikin, Michael V. Shunkov, Anatoly P. Derevianko, Janet Kelso, Matthias Meyer, Kay Prüfer & Svante Pääbo

Neanderthals and Denisovans are extinct groups of hominins that separated from each other more than 390,000 years ago^{1,2}. Here we present the genome of 'Denisova 11', a bone fragment from Denisova Cave (Russia)³ and show that it comes from an individual who had a Neanderthal mother and a Denisovan father. The father, whose genome bears traces of Neanderthal ancestry, came from a population related to a later Denisovan found in the cave^{4–6}. The mother came from a population more closely related to Neanderthals who lived later in Europe^{2,7} than to an earlier Neanderthal found in Denisova Cave⁸, suggesting that migrations of Neanderthals between eastern and western Eurasia occurred sometime after 120,000 years ago. The finding of a first-generation Neanderthal–Denisovan offspring among the small number of archaic specimens sequenced to date suggests that mixing between Late Pleistocene hominin groups was common when they met.

Bibel

CROSS 1947

Frank M. Cross & Jr., *The Tabernacle, A Study from an Archaeological and Historical Approach*. [Biblical Archaeologist](#) **10** (1947), 45–68.

In the preceeding pages, we have endeavored to describe the place of the historical Tabernacle, both in its relation to the desert origins of Israel, and as it played the role of covenant sanctuary in Canaan. We have found it to be the seat of Mosaic institutions, the preserver of vigorous desert Yahwism, and the center of an inherently theocratic political system. With these concepts as a background, we have turned to the Tent ideal of later times, particularly the Priestly description

of the Tabernacle. The Priestly Tabernacle appears perspective to be the culminating tradition – schematic and ideal to be sure – of themes which had seminal beginnings in the Mosaic Tent.

As for the contemporary and future generations to which the Priestly writers addressed themselves, no doubt the Tabernacle account was to be an explanation for the past and a plan for the future. Theologically speaking, they strove after a solution to the problems of covenant theology; the means through which the breached covenant might be repaired, and the conditions under which a holy and universal God might “tabernacle” in the midst of Israel. It may be added that the writers of the New Testament were intimately concerned with the same themes, that is, the forgiveness of sin and the self-revelation of God. Christian theology may thus be said to continue, and, from a Christian point of view, to resolve these Priestly problems of the Old Testament.

CROSS 2013

Andrew Cross, *The Description of the Tabernacle in Ex. 25–40*. [unknown 2013, July 31, 1–34](#).

This paper will argue that linguistic analysis of the tabernacle description rules out a post-exilic date for its composition. Furthermore, the description of the tabernacle has too many distinctive features for it to stand in a literary continuum between the description of Solomon’s temple and the idealized descriptions of the temple found in Ezekiel or the Temple Scroll. To the contrary, the description of Solomon’s temple relies on information contained in the description of the tabernacle. This leads us to conclude that a significant portion of the elaborate description of the tabernacle found in the last chapters of Exodus predates the description of Solomon’s temple in 1 Kings 6 and 7.

HALPERN 1974

Baruch Halpern, *Sectionalism and the Schism*. [Journal of Biblical Literature 93 \(1974\), 519–532](#).

The district system was not meant as a complement to tribal organization. It was Solomon’s first real effort to seize control of all political and economic machinery in the state, much as the construction of the Temple engendered a religious centralization. Most directly threatened were the tribal elders themselves. At Shechem, at the time of Rehoboam’s coronation, these elders finally united to fight the threat with the only effective means at their disposal, Israelite tradition.

Briefly, then, the empire of David and Solomon could not stand the strain imposed on it by a natural polarization toward north and south, toward past and future, when this was combined with a strong Egypt and an hostile Aram. This strain gave rise to squabbling over allocation of government funds, over government organization, and over priorities in foreign and domestic policies. Yet Solomon may well have been justified in pursuing a policy which drew heavily on the north to guard the south. Though Rehoboam at Shechem was confronted perhaps superficially with a choice, history, in its role as advocate, has shown that it mattered little which path he chose. To retain the corvee, on the one hand, was to sacrifice the unity of the empire. To reduce the corvee, on the other, would probably have been to forego security from Egyptian attack, to sacrifice independence for vassalage. While historians have excoriated Solomon’s son for what appears from the biblical account to have been an objectless, petulant display of brutality, Rehoboam, in the last analysis, had nowhere to turn. Fate, it seems, was dealing seconds to stack the hand in Egypt’s favor.

HUROWITZ 1995

Victor Avigdor Hurowitz, *The Form and Fate of the Tabernacle, Reflections on a Recent Proposal*. [Jewish Quarterly Review](#) **86** (1995), 127–151.

Richard Elliott Friedman has argued that the Mosaic Tabernacle, described by the pentateuchal Priestly source, stood in the Holy of Holies in the Jerusalem Temple. In order for the Tabernacle, usually figured to be ten cubits wide and thirty cubits long, to fit into a space twenty cubits square, Friedman has proposed a radical rearrangement of the Tabernacle's components, thereby shrinking its measurements in comparison to standard reconstructions. Friedman's suggestions have met with a modicum of acceptance in scholarly literature, although the details of his argument have never been evaluated. The present article rejects absolutely every aspect of Friedman's proposal. A review of Exodus 25-40 reconfirms standard Tabernacle reconstructions with some minor alterations. Detailed scrutiny of Friedman's argumentation shows that his innovative plan is based on numerous incorrect and impossible interpretations of crucial passages in the biblical text. The Tabernacle proposed by Friedman is, consequently, completely without textual support. There is also no biblical evidence whatsoever that a Tabernacle of any size or shape ever stood in the Holy of Holies of the Temple. Postbiblical literature occasionally speculates on the whereabouts of the Mosaic Tabernacle, and these speculations represent a topic worthy of future scholarly discussion. But these late musings are products of exegetical questions raised by the extant form of the Bible, and contribute nothing to the historical question of how the Tabernacle was disposed of when the Temple was built.

RAMSUNDAR 2018

Pallant Ramsundar, *Locating Noah's Ark from Population Demographics*. [unknown](#) (2018), preprint, 1–35.

A review of the information discussed shows the following:

- a) Observation of the features of humans support the existence of three prime tribal groupings as the white, black/brown and mongoloid.
- b) Present human population numbers trace back to realistic origination at the time of Noah's flood circa 2348 BCE.
- c) The disposition of the three tribal groupings, now and throughout history, shows a nexus of separation at the Pamir mountains in Asia.

The practical logistic for population dispersion is concentric, especially at exit from the Ark, with limited population initially constrained to foot travel. It is reasonable to conclude therefore, that Noah's Ark landed in the proximity of the Pamir mountain range.

TSEVAT 1966

Matitiah Tsevat, *The Meaning of the Book of Job*. [Hebrew Union College Annual](#) **37** (1966), 73–106.

This is God's answer. Job accepts the answer. Unencumbered now by the old doctrine of justice and retribution, he receives confirmation of his former hope that God does turn His face to man, that He is accessible to him — confirmation provided by the theophany. To put it differently: He Who speaks to man in the Book of Job is neither a just nor an unjust god but God.

Of Job, enmeshed in his contradictions, who at the end recanted everything he had said, God says to the friends: "You have not spoken of Me what is right as has My servant Job" (42:7). The error that Job upheld and was compelled to renounce was yet closer to the truth than the arguments of the friends for all the

support of many authorities that these arguments enjoyed. This is the judgment of the book. From the contradictions of Job there is a way to truth, from the consistencies of the friends, none.

Datierung

GARFINKEL 2012

Yosef Garfinkel, Katharina Streit, Saar Ganor & Michael G. Hasel, *State Formation in Judah, Biblical Tradition, Modern Historical Theories, And Radiometric Dates at Khirbet Qeiyafa*. [Radiocarbon 54 \(2012\), 359–369](#).

During the past 30 yr, the biblical narrative relating to the establishment of a kingdom in Judah has been much debated. Were David and Solomon historical rulers of an urbanized state-level society in the early 10th century BC, or was this level of social development reached only at the end of the 8th century BC, 300 yr later? Recent excavations at Khirbet Qeiyafa, the first early Judean city to be dated by radiocarbon, clearly indicate a well-planned, fortified city in Judah as early as the late 11th to early 10th centuries BC. This new data has far-reaching implications for archaeology, history, and biblical studies.

PEARSON 2018

Charlotte L. Pearson et al., *Annual radiocarbon record indicates 16th century BCE date for the Thera eruption*. [Science Advances 4 \(2018\), eaar8241](#). DOI:10.1126/sciadv.aa8241.

[SciAdv04-aa8241-Supplement.pdf](#)

Charlotte L. Pearson, Peter W. Brewer, David Brown, Timothy J. Heaton, Gregory W. L. Hodgins, A. J. Timothy Jull, Todd Lange & Matthew W. Salzer

The mid-second millennium BCE eruption of Thera (Santorini) offers a critically important marker horizon to synchronize archaeological chronologies of the Aegean, Egypt, and the Near East and to anchor paleoenvironmental records from ice cores, speleothems, and lake sediments. Precise and accurate dating for the event has been the subject of many decades of research. Using calendar-dated tree rings, we created an annual resolution radiocarbon time series 1700–1500 BCE to validate, improve, or more clearly define the limitations for radiocarbon calibration of materials from key eruption contexts. Results show an offset from the international radiocarbon calibration curve, which indicates a shift in the calibrated age range for Thera toward the 16th century BCE. This finding sheds new light on the long-running debate focused on a discrepancy between radiocarbon (late 17th–early 16th century BCE) and archaeological (mid 16th–early 15th century BCE) dating evidence for Thera.

WADE 2018

Lizzie Wade, *Study reignites debate about when Thera blew its top*. [science 361 \(2018\), 634](#).

Radiocarbon curve suggests archaeological data were right.

The resulting calibration curve differs slightly but significantly from the IntCal curve, with a so-called radiocarbon plateau that allows a much broader range of eruption dates. Some fall in the late 16th century B.C.E, perhaps around 1540 B.C.E.—closer to the archaeological date.

Grabung Afrika

HILDEBRAND 2018

Elisabeth A. Hildebrand et al., *A monumental cemetery built by eastern Africa's first herders near Lake Turkana, Kenya*. [PNAS 115 \(2018\), 8942–8947](#).

[pnas115-08942-Supplement.pdf](#)

Elisabeth A. Hildebrand, Katherine M. Grillo, Elizabeth A. Sawchuk, Susan K. Pfeiffer, Lawrence B. Conyers, Steven T. Goldstein, Austin Chad Hill, Anneke Janzen, Carla E. Klehm, Mark Helper, Purity Kiura, Emmanuel Ndiema, Cecilia Ngugi, John J. Shea & Hong Wang

Monumental architecture is a prime indicator of social complexity, because it requires many people to build a conspicuous structure commemorating shared beliefs. Examining monumentality in different environmental and economic settings can reveal diverse reasons for people to form larger social units and express unity through architectural display. In multiple areas of Africa, monumentality developed as mobile herders created large cemeteries and practiced other forms of commemoration. The motives for such behavior in sparsely populated, unpredictable landscapes may differ from wellstudied cases of monumentality in predictable environments with sedentary populations. Here we report excavations and ground-penetrating radar surveys at the earliest and most massive monumental site in eastern Africa. Lothagam North Pillar Site was a communal cemetery near Lake Turkana (northwest Kenya) constructed 5,000 years ago by eastern Africa's earliest pastoralists. Inside a platform ringed by boulders, a 119.5-m² mortuary cavity accommodated an estimated minimum of 580 individuals. People of diverse ages and both sexes were buried, and ornaments accompanied most individuals. There is no evidence for social stratification. The uncertainties of living on a “moving frontier” of early herding—exacerbated by dramatic environmental shifts—may have spurred people to strengthen social networks that could provide information and assistance. Lothagam North Pillar Site would have served as both an arena for interaction and a tangible reminder of shared identity.

Keywords: monumentality | pastoralism | Africa | Holocene | early food production

Significance: Archaeologists have long sought monumental architecture's origins among societies that were becoming populous, sedentary, and territorial. In sub-Saharan Africa, however, dispersed pastoralists pioneered monumental construction. Eastern Africa's earliest monumental site was built by the region's first herders \approx 5,000–4,300 y ago as the African Humid Period ended and Lake Turkana's shoreline receded. Lothagam North Pillar Site was a massive communal cemetery with megalithic pillars, stone circles, cairns, and a mounded platform accommodating an estimated several hundred burials. Its mortuary cavity held individuals of mixed ages/sexes, with diverse adornments. Burial placement and ornamentation do not suggest social hierarchy. Amidst profound landscape changes and the socioeconomic uncertainties of a moving pastoral frontier, monumentality was an important unifying force for eastern Africa's first herders.

Islam

SINAI 2012

Nicolai Sinai, „Weihnachten im Koran“ oder „Nacht der Bestimmung“? *Eine Interpretation von Sure 97*. [Der Islam 88 \(2012\), 11–32](#).

This article proposes to interpret Surah 97 based on research undertaken in the framework of the Corpus Coranicum project. The first part scrutinizes Christoph Luxenberg’s seriously flawed argument that Surah 97 can be understood as a Qur’anic hymn on the Nativity of Jesus if some of its key expressions are read against the semantic background of Syriac, while the remainder of the article endeavours to develop a more tenable understanding of the text. This involves an attempt to date Surah 97 relative to other Qur’anic texts and to detect possible additions to it. In addition, the article discusses the meaning and reference of its most central term, *laylat al-qadr*. Finally, special attention is given to the question whether the text might not, in spite of the circularity of Luxenberg’s reading, contain implicit references to the Nativity.

Judentum

MEYERS 1980

Eric M. Meyers, *Ancient Synagogues in Galilee, Their Religious and Cultural Setting*. *Biblical Archaeologist* **43** (1980), 97–108.

The synagogue, one of the most important institutions of Judaic life, has been an object of scholarly investigation for decades. In recent years, several of these structures from an early period have been unearthed by archeologists, revealing facts and artifacts that contribute significantly to our knowledge of life and worship among ancient Jews.

Klima

HIRMAS 2018

Daniel R. Hirmas, Daniel Giménez, Attila Nemes, Ruth Kerry, Nathaniel A. Brunzell & Cassandra J. Wilson, *Climate-induced changes in continental-scale soil macroporosity may intensify water cycle*. *nature* **561** (2018), 100–103.

Soil macroporosity affects field-scale water-cycle processes, such as infiltration, nutrient transport and runoff^{1,2}, that are important for the development of successful global strategies that address challenges of food security, water scarcity, human health and loss of biodiversity³. Macropores—large pores that freely drain water under the influence of gravity—often represent less than 1 per cent of the soil volume, but can contribute more than 70 per cent of the total soil water infiltration⁴, which greatly magnifies their influence on the regional and global water cycle. Although climate influences the development of macropores through soil-forming processes, the extent and rate of such development and its effect on the water cycle are currently unknown. Here we show that drier climates induce the formation of greater soil macroporosity than do more humid ones, and that such climate-induced changes occur over shorter timescales than have previously been considered—probably years to decades. Furthermore, we find that changes in the effective porosity, a proxy for macroporosity, predicted from mean annual precipitation at the end of the century would result in changes in saturated soil hydraulic conductivity ranging from -55 to 34 per cent for five physiographic regions in the USA. Our results indicate that soil macroporosity may be altered rapidly in response to climate change and that associated continental-scale changes in soil hydraulic properties may set up unexplored feedbacks between climate and the land surface and thus intensify the water cycle.

ZHAO 2018

Ning Zhao & Lloyd D. Keigwin, *An atmospheric chronology for the glacial-deglacial Eastern Equatorial Pacific*. [Nature Communications](#) **9** (2018), 3077, 1–8. DOI:10.1038/s41467-018-05574-x.

NatComm09-a03077-Supplement.pdf

Paleoclimate reconstructions are only as good as their chronology. In particular, different chronological assumptions for marine sediment cores can lead to different reconstructions of ocean ventilation age and atmosphere-ocean carbon exchange history. Here we build the first high-resolution chronology that is free of the dating uncertainties common in marine sediment records, based on radiocarbon dating twigs found with computed tomography scans in two cores from the Eastern Equatorial Pacific (EEP). With this accurate chronology, we show that the ventilation ages of the EEP thermocline and intermediate waters were similar to today during the Last Glacial Maximum and deglaciation, in contradiction with previous studies. Our results suggest that the glacial respired carbon pool in the EEP was not significantly older than today, and that the deglacial strengthening of the equatorial Pacific carbon source was probably driven by low-latitude processes rather than an increased subsurface supply of upwelled carbon from high-latitude oceans.

Religion

BONOGOFSKY 2004

Michelle Bonogofsky, *Including Women and Children, Neolithic Modeled Skulls from Jordan, Israel, Syria and Turkey*. [Near Eastern Archaeology](#) **67** (2004), 118–119.

A reinterpretation of Neolithic plastered skulls from Jordan, Syria, Israel and Turkey is changing the way scholars think about cult, death and the afterlife in the Neolithic of the ancient Near East. Current findings, based on scientific studies as well as bioarchaeological evidence, indicate a funerary practice that focused on the special treatment of the skulls of adult females, males and children.

BONOGOFSKY 2005

Michelle Bonogofsky, *A Bioarchaeological Study of Plastered Skulls from Anatolia, New Discoveries and Interpretations*. [International Journal of Osteoarchaeology](#) **15** (2005), 124–135.

Skull removal and the modelling of facial features on dry human skulls occurred in central Anatolia during the late Neolithic period (ca. 6000–5000 BC) at the site of Köşk Höyük. This paper describes significant new evidence for plastered and undecorated skulls from Köşk Höyük that is inconsistent with prior interpretations of these remains as that of an ancestor cult. Rather, this new evidence strongly suggests a funerary ritual in the Near East that focused on the skulls of males, females and children. It also Highlights the need for continued bioarchaeological research on such skulls. This paper describes newly discovered plastered skulls and skulls that were cached but not necessarily decorated from Köşk Höyük, Turkey. It provides the archaeological context, visual description, and osteological analysis of the remains of 12 adult skulls, ten modelled and two plain. In addition, a plastered child's skull was reported in the past. A bioarchaeological study of the primary material indicates that the skulls of males and females were removed from their bodies after natural decomposition, without manual defleshing, followed by applications of plaster modelling. The skulls of both sexes and all ages were modelled

in a similar manner, although crania of three females exhibited healed depressed fractures. Plastered skulls from Köşk Höyük were recovered along with funerary offerings of beads, bone tools, and possibly copper, and derived from a variety of intramural contexts.

Keywords: skulls | compression fractures | funerary offerings | Neolithic | Middle East | ritual | women | children

RÖLLIG 2001

Wolfgang Röllig, *Myths about the Netherworld in the Ancient Near East and their Counterparts in the Greek Religion*. In: SERGIO RIBICHINI, MARIA ROCCHI & PAOLO XELLA (Hrsg.), *La questione delle influence vicino-orientali sulla religione greca – Stato degli studi – prospettive della ricerca, Atti del Colloquio Internazionale, Rome, 20–22 mai 1999*. Monografie scientifiche (Roma 2001), 307–314.

Today scholars have the literary production in cuneiform of nearly 3 millennia at their disposal, i.e. from the beginning of Sumerian writing until the compositions of the Seleucid period. The situation of the scribes in Assyria and Babylonia was in many instances quite different. As a rule they both had at hand the traditional literature of two or three generations which had been copied and recopied in the school. It should be stressed however, that many literary compositions which we know today were not included into the stream of tradition, but excluded for reasons unknown to us. This is true of almost all the great Sumerian compositions, the epics and myths, the lamentations and dialogues, which were collected in a canonical version in Old Babylonian times and in one place, the temple library of Nippur. It is evident that these compositions were unknown in the second half of the second millennium and of course not a part of the tradition during the first millennium. Such compositions cannot be considered in the context of the transmittal of oriental motifs into the Greek world. If – as has been the case in an article by Gisela Strasburger just published in “Antike und Abendland” 22 – such narratives as “The Death of Urnammu”, the sulgi hymns or the Sumerian myth of “Enlil and Ninlil” are used as specific motifs, it should be borne in mind that the tradition of these texts ended with the Old Babylonian period. There are no traces of an oral tradition of such texts, and we have to conclude that not only the specific formulations but also the entire content of these texts did not survive.