

References

Aktuell

HOFFMANN 2018

D. L. Hoffmann et al., “*U-Th dating of carbonate crusts reveals Neandertal origin of Iberian cave art*”, *Response to Comment. science* **362** (2018), 166.

D. L. Hoffmann, C. D. Standish, M. García-Diez, P. B. Pettitt, J. A. Milton, J. Zilhão, J. J. Alcolea-González, P. Cantalejo-Duarte, H. Collado, R. de Balbín, M. Lorblanchet, J. Ramos-Muñoz, G.-Ch. Weniger & A. W. G. Pike

Slimak et al. challenge the reliability of our oldest (>65,000 years) U-Th dates on carbonates associated with cave paintings in Spain. They cite a supposed lack of parietal art for the 25,000 years following this date, along with potential methodological issues relating to open-system behavior and corrections to detrital or source water 230Th. We show that their criticisms are unfounded.

NIKOLAEVA 2018

Sasha Nikolaeva, *A normal student parent. science* **362** (2018), 258.

“I don’t know if you’ll be able to reach her,” the student said. I was in the first year of my master’s program, preparing to be a teaching assistant by contacting students who had taken the course in previous years. This student had recommended that I connect with the graduate student who had taught the course when he took it, but now he was backtracking. “She was pregnant when she taught the class. She must be on leave now.” There was some curiosity in his voice, mixed with what I perceived as a hint of judgment. I should probably keep the fact that I am a single parent to myself, I thought.

ŞAHİN 2018

Mustafa Şahin & Mark R. Fairchild, *Nicea’s Underwater Basilica. Biblical Archaeology Review* **44** (2018), vi, 30–37, 61.

SLIMAK 2018

Ludovic Slimak, Jan Fietzke, Jean-Michel Geneste & Roberto Ontañón, “*U-Th dating of carbonate crusts reveals Neandertal origin of Iberian cave art*”, *Comment. science* **361** (2018), 1–2.

Hoffmann et al. (Reports, 23 February 2018, p. 912) report the discovery of parietal art older than 64,800 years and attributed to Neanderthals, at least 25 millennia before the oldest parietal art ever found. Instead, critical evaluation of their geochronological data seems to provide stronger support for an age of 47,000 years, which is much more consistent with the archaeological background in hand.

Anthropologie

MAXMEN 2018

Amy Maxmen, *Rare DNA sequences bring early human history to light. nature* **563** (2018), 13–14.

Genome studies unlock clues to our ancient family tree and migration patterns in Africa.

Researchers presented these as-yet unpublished results at an American Society of Human Genetics (ASHG) meeting in San Diego, California, in mid-October.

Bibel

PULM 2014

Thomas Pulm, *Saul inter prophetas? Das Bild König Sauls in der Bibel im Vergleich mit seiner Erscheinung in Pseudo-Philos Liber Antiquitatum Biblicarum und im Midrasch Samuel*. Dissertation, Universität Köln (Köln 2014).

Die Namen der ersten israelitischen Könige hat im Abendland wohl jeder schon einmal gehört. Auch wenn der Name "Saul" vielleicht nicht so im Gedächtnis haften geblieben ist, wie der weitaus bekanntere David, so hat man ihn zumindest in Zusammenhang mit ebendiesem David schon mal vernommen. Salomo kennen wir als weisen und gerechten König und Erbauer des Tempels in Jerusalem, seinen Vater David vor allem als den Bezwinger des riesenhaften Goliath, als Eroberer Jerusalems und als Schöpfer des israelitischen Reiches, dass seit seiner Zeit als Idealvorstellung in den Köpfen biblischer Autoren herumgeistert. Und Saul? Ihn kennen wir als den verworfenen König, der es in seiner späteren Laufbahn vor allem darauf anlegte den ihn an Popularität überflügelnden und ihm damit gefährlich werdenden David aus dem Weg zu räumen. Diese Vorstellungen basieren alle auf dem Bild, das uns der biblische Text vermittelt. Über die Einheitlichkeit, das ursprüngliche Aussehen des Textes und die Beziehungen der vielen verschiedenen bekannten Textzeugen untereinander wird seit etwa 250 Jahren lebhaft diskutiert. Doch auch wenn sich das Bild Sauls bei der Diskussion über die biblischen Texte nicht in ein günstigeres Licht rücken lässt, so lassen zumindest die Ansichten in den rabbinischen Texten und die Legenden und Sagen der jüdischen Traditionsliteratur ein differenzierteres Bild zu und zeigen andere Facetten der Figur des ersten Königs von Israel. Es sollte uns damit möglich sein, durch die Untersuchung der Rezeption von Sauls Charakter in den zeitlich späteren, vor allem aus rabbinischer Zeit stammenden Texten, seine Wirkung in nachfolgenden Jahrhunderten zu ergründen. Aus der Wirkungs- oder Rezeptionsgeschichte Sauls lässt sich damit ein positiveres Bild des in der Bibel auf den ersten Blick nur sehr eindimensional dargestellten Königs entwerfen. Vor allem beim Vergleich mit dem Midrasch Samuel und dem Pseudophilo zugeschriebenen Liber Antiquitatum Biblicarum eröffnet sich dem Leser ein anderer Blickwinkel auf den ersten König Israels. Zwar wird Saul auch dort an manchen Stellen grausam und unbarmherzig dargestellt, doch verliert diese Darstellung durch die Betonung, alles geschehe nach einem universellen göttlichen Plan, ihre Schärfe.

RÖMER 2014

Thomas Römer, *Die Erfindung Gottes, Eine Reise zu den Quellen des Monotheismus*. (Darmstadt 2018). Original: L'invention de Dieu.

Der universelle und transzendente Gott der Hebräischen Bibel ist nicht immer schon "einzig" gewesen – dies spiegelt sich auch in den biblischen Texten. Aber wie ist aus einem Gott unter vielen der eine und einzige Gott geworden? Diese ebenso grundlegende wie Grund legende Frage beantwortet Thomas Römer in dem vorliegenden Werk. Für die deutschsprachige Ausgabe hat der Autor den Text seines Standardwerks vollständig überarbeitet und aktualisiert.

Grabung

SCHWALL 2018

Christoph Schwall, *Çukuriçi Höyük 2, Das 5. und 4. Jahrtausend v. Chr. in Westanatolien und der Ostägäis*. *Oriental and European Archaeology* 7 (Wien 2018).

Diese Studie von Christoph Schwall ist nicht nur eine umfassende Vorlage der archäologischen Primärdaten der Siedlungsphasen VII bis V vom Cukurici Höyük, sondern zugleich eine grundlegende Aufbereitung und Analyse des 5. und 4. Jahrtausends in Westanatolien und der Ostägäis. Damit sind dem Autor gleich mehrere Ergebnisse auf verschiedenen Ebenen gelungen, die eine bisher einzigartige Grundlage für die Kupferzeit dieses Großraumes darstellen. So kann er die sonst in unserem Forschungsfeld durchaus übliche Trennung entlang moderner Nationalgrenzen überwinden und beide Bereiche – den griechischen wie auch den türkischen Raum – gleichwertig auswerten und zusammenfassend interpretieren. Damit gelingt ihm eine überzeugende Beweisführung der schon vor mehr als 15 Jahren von O. Kouka für die Frühbronzezeit postulierten “ostägäischen Koine”, die Ch. Schwall auf Basis neuer Primärdaten zu einem Gesamtbild chalkolithischer Kulturercheinungen zusammenführt. Von besonderem Wert für ein breiteres wissenschaftliches Publikum dürfte dabei u. a. die gründliche Sammlung aller ergrabenen archäologischen Fundorte und Daten des 5. und 4. Jahrtausends sein, die wohl auch aufgrund schwierig zugänglicher Literatur in unterschiedlichen Sprachen bisher kaum Beachtung fanden. Eine weitere wissenschaftliche Leistung dieser Arbeit ist die chronologische Auswertung aus einer holistischen Perspektive, in der sowohl die Radiokarbonaten und ihre archäologischen Kontexte als auch ihre relative Kompatibilität auf Basis der materiellen Kultur berücksichtigt werden.

Klima

BAUSKA 2018

T. K. Bauska, E. J. Brook, S. A. Marcott, D. Baggenstos, S. Shackleton, J. P. Severinghaus & V. V. Petrenko, *Controls on Millennial-Scale Atmospheric CO₂ Variability During the Last Glacial Period*. *Geophysical Research Letters* 45 (2018), 7731–7740.

GeoResLet45-07731-Supplement1.xlsx, GeoResLet45-07731-Supplement2.docx

Changes in atmospheric CO₂ on millennial-to-centennial timescales are key components of past climate variability during the last glacial and deglacial periods (70–10 ka), yet the sources and mechanisms responsible for the CO₂ fluctuations remain largely obscure. Here we report the ¹³C/¹²C ratio of atmospheric CO₂ during a key interval of the last glacial period at submillennial resolution, with coeval histories of atmospheric CO₂, CH₄, and N₂O concentrations. The carbon isotope data suggest that the millennial-scale CO₂ variability in Marine Isotope Stage 3 is driven largely by changes in the organic carbon cycle, most likely by sequestration of respired carbon in the deep ocean. Centennial-scale CO₂ variations, distinguished by carbon isotope signatures, are associated with both abrupt hydrological change in the tropics (e.g., Heinrich events) and rapid increases in Northern Hemisphere temperature (Dansgaard-Oeschger events). These events can be linked to modes of variability during the last deglaciation, thus suggesting that drivers of millennial and centennial CO₂ variability during both periods are intimately linked to abrupt climate variability.

Key Points:

- A new ice core record of carbon isotopes in atmospheric CO₂ suggests organic carbon sources controlled CO₂ during the last glacial period
- The millennial-scale CO₂ variability is tentatively linked to variations in Southern Ocean carbon sources
- Centennial-scale CO₂ variability during the last glacial period is associated with similarly abrupt changes during the deglaciation

Plain Language Summary: Ice cores provide unique records of variations in atmospheric CO₂ prior to the instrumental era. While it is clear that changes in atmospheric CO₂ played a significant role in driving past climate change, it is unclear what in turn drove changes in atmospheric CO₂. Here we investigate enigmatic changes in atmospheric CO₂ levels during an interval of the last glacial period ($\approx 50,000$ to 35,000 years ago) that are associated with abrupt changes in polar climate. To determine the sources and sinks for atmospheric CO₂, we measured the stable isotopes of carbon in CO₂ and found that the primary source of carbon to the atmosphere was an organic carbon reservoir. Most likely, this carbon was sourced from a deep ocean reservoir that waxed and waned following changes in either the productivity of the surface ocean or stratification of the deep ocean. We also found that atmospheric CO₂ can change on the centennial timescale during abrupt climate transitions in the Northern Hemisphere. This observation adds to a growing body of evidence that abrupt changes in atmospheric CO₂ are an important component of past carbon cycle variability.

OWEN 2018

R. Bernhart Owen et al., *Progressive aridification in East Africa over the last half million years and implications for human evolution*. [PNAS **115** \(2018\), 11174–11179](#).

[pnas115-11174-Supplement.pdf](#)

R. Bernhart Owen, Veronica M. Muiruri, Tim K. Lowenstein, Robin W. Renaut, Nathan Rabideaux, Shangde Luo, Alan L. Deino, Mark J. Sier, Guillaume Dupont-Nivet, Emma P. McNulty, Kennie Leet, Andrew Cohen, Christopher Campisano, Daniel Deocampo, Chuan-Chou Shen, Anne Billingsley & Anthony Mbuthia

Evidence for Quaternary climate change in East Africa has been derived from outcrops on land and lake cores and from marine dust, leaf wax, and pollen records. These data have previously been used to evaluate the impact of climate change on hominin evolution, but correlations have proved to be difficult, given poor data continuity and the great distances between marine cores and terrestrial basins where fossil evidence is located. Here, we present continental coring evidence for progressive aridification since about 575 thousand years before present (ka), based on Lake Magadi (Kenya) sediments. This long-term drying trend was interrupted by many wet–dry cycles, with the greatest variability developing during times of high eccentricity-modulated precession. Intense aridification apparent in the Magadi record took place between 525 and 400 ka, with relatively persistent arid conditions after 350 ka and through to the present. Arid conditions in the Magadi Basin coincide with the Mid-Brunhes Event and overlap with mammalian extinctions in the South Kenya Rift between 500 and 400 ka. The 525 to 400 ka arid phase developed in the South Kenya Rift between the period when the last Acheulean tools are reported (at about 500 ka) and before the appearance of Middle Stone Age artifacts (by about 320 ka). Our data suggest that increasing Middle- to Late-Pleistocene aridification and environmental variability may have been drivers in the physical and cultural evolution of *Homo sapiens* in East Africa.

Keywords: Quaternary | paleoclimate | paleolimnology | hominins | Lake Magadi

Significance: Previous research hypotheses have related hominin evolution to climate change. However, most theories lack basin-scale evidence for a link between

environment and hominin evolution. This study documents continental, core-based evidence for a progressive increase in aridity since about 575 ka in the Magadi Basin, with a significant change from the Mid-Brunhes Event (≈ 430 ka). Intense aridification in the Magadi Basin corresponds with faunal extinctions and changes in toolkits in the nearby Ologesailie Basin. Our data are consistent with climate variability as an important driver in hominin evolution, but also suggest that intensifying aridity may have had a significant influence on the origins of modern *Homo sapiens* and the onset of the Middle Stone Age.

SHOENFELT 2018

Elizabeth M. Shoenfelt, Gisela Winckler, Frank Lamy, Robert F. Anderson & Benjamin C. Bostick, *Highly bioavailable dust-borne iron delivered to the Southern Ocean during glacial periods*. [PNAS 115 \(2018\), 11180–11185](#).

[pnas115-11180-Supplement.pdf](#)

Changes in bioavailable dust-borne iron (Fe) supply to the iron-limited Southern Ocean may influence climate by modulating phytoplankton growth and CO₂ fixation into organic matter that is exported to the deep ocean. The chemical form (speciation) of Fe impacts its bioavailability, and glacial weathering produces highly labile and bioavailable Fe minerals in modern dust sources. However, the speciation of dust-borne Fe reaching the iron-limited Southern Ocean on glacial-interglacial timescales is unknown, and its impact on the bioavailable iron supply over geologic time has not been quantified. Here we use X-ray absorption spectroscopy on subantarctic South Atlantic and South Pacific marine sediments to reconstruct dust-borne Fe speciation over the last glacial cycle, and determine the impact of glacial activity and glaciogenic dust sources on bioavailable Fe supply. We show that the Fe(II) content, as a percentage of total dust-borne Fe, increases from ≈ 5 to 10 % in interglacial periods to ≈ 25 to 45 % in glacial periods. Consequently, the highly bioavailable Fe(II) flux increases by a factor of ≈ 15 to 20 in glacial periods compared with the current interglacial, whereas the total Fe flux increases only by a factor of ≈ 3 to 5. The change in Fe speciation is dominated by primary Fe(II) silicates characteristic of glaciogenic dust. Our results suggest that glacial physical weathering increases the proportion of highly bioavailable Fe(II) in dust that reaches the subantarctic Southern Ocean in glacial periods, which represents a positive feedback between glacial activity and cold glacial temperatures.

Keywords: iron speciation | Southern Ocean | iron bioavailability | dust | productivity

Significance: Dust-borne iron fertilization of Southern Ocean phytoplankton contributes to lower glacial atmospheric CO₂. Previous studies evaluating the impact of dust on climate estimate bioavailable iron using total iron fluxes in sediment cores. Thus, all iron is considered equally bioavailable over geologic time, despite evidence that glaciers mobilize highly bioavailable iron from bedrock, which winds can deliver to the Southern Ocean. Here we reconstruct dust-borne iron speciation over the last glacial cycle, showing that highly bioavailable iron(II) silicate minerals are a greater fraction of total iron reaching the Southern Ocean during glacial periods. The abundance of iron(II) silicates likely controls the bioavailable iron supply to the Southern Ocean and contributes to the previously observed increase in glacial productivity and CO₂ drawdown.

Kultur

FERGUSON 2011

Niall Ferguson, *Civilization, The Six Killer Apps of Western Power*.

(London 2012).

In 1412, Europe was a miserable backwater ravaged by plague, bad sanitation and incessant war, while the Orient was home to dazzling civilizations. Yet, somehow, the West came to dominate the Rest for most of the next half millennium. In this vital, brilliant book, Niall Ferguson reveals the six ‘killer applications’ that the Rest lacked: competition, science, property rights, medicine, consumerism and the work ethic. And he asks: do we still have these winning tools? Or is this the end of Western ascendancy?

GARROWAY 2018

Kristine Henriksen Garroway, *Children in the Ancient Near East*. [Biblical Archaeology Review](#) 44 (2018), vi, 39–44 + 70–71.

Metallzeiten

CHAVALAS 2018

Mark W. Chavalas, *Did Abraham Ride a Camel?* [Biblical Archaeology Review](#) 44 (2018), vi, 52 + 64–65.

Sprachlehre

SABAR 2018

Yona Sabar, *Saving the Aramaic of Jesus and the Jews*. [Biblical Archaeology Review](#) 44 (2018), vi, 24–29 + 68–69.