

References

Bibel

BAR-RON 2021

Michael Shelomo Bar-Ron, *The Exodus Inscriptions at Serabit El-Khadim, Five Proto-Sinaitic inscriptions provide unprecedented historical context for ancient Israelite traditions of the Exodus.* ([unpublished 2021](#)).

A careful, rigorous approach to Proto-Sinaitic inscriptions found at Serabit el-Khadim – Sinai 353, 349, 357, 361 and 375a – reveals an as-of-yet unidentified genre of P-S inscriptions that voice polemical outrage at the cult of Ba‘alat, (the “Golden Calf”) even harsh judgement of its faithful, with apparent references to specific themes of the Exodus in the biblical narrative. Considering their intuitive reading as pure archaic Hebrew and biblical phrasing, epigraphic clues to their common authorship, and a disciplined system of dating early Semitic inscriptions relative to one another, these inscriptions may provide actual historical context for biblical traditions concerning the Exodus from Egypt.

In order to support the proposed context of the inscriptions, their time period, authorship, and target audience, arguments are proposed for the correct chronological place of the Exodus, a scientific model for the “Ten Plagues”, and proposals for the significance of the P-S inscription Gerster No. 1 and the true location of Mount Sinai.

BIENKOWSKI 2024

Piotr Bienkowski & Juan Manuel Tebes, *Faynan, Nomads and the Western Negev in the Early Iron Age, A Critical Re-appraisal.* [Palestine Exploration Quarterly \(2024\), preprint, 1–28.](#)
[DOI:10.1080/00310328.2023.2277628.](#)

The final report on the Edom Lowlands Regional Archaeology Project concludes that local nomadic tribes created a complex polity at early Iron Age Faynan, in southern Jordan, that was responsible for a radical shift in copper production to an industrial scale. Erez Ben-Yosef has subsequently used these Conclusions as the key example in a theoretical argument about the social complexity – and, usually, archaeological invisibility – of nomadic societies. A review of the archaeological evidence from Faynan indicates that the sudden change at the beginning of the 10th century BCE should not be attributed to local nomads. Evidence from the Wadi Fidan 40 cemetery – both material culture and chemical analysis of teeth – shows that its nomadic inhabitants did not actively participate in the copper industry. There is no evidence of a process of transition from nomadism to sedentarism at Faynan, and its architecture does not reflect any influence or antecedents in the archaeology of nomads. The evidence shows close material culture connections with the western Negev and the major site of Tel Masos. The scenario that best fits the evidence is that Masos took direct control of copper production at Faynan and developed it as an industrial site to exponentially increase the copper trade – Masos had the resources, technical skills, an architectural tradition, and connections to trade networks that the local nomads lacked, and which transformed Faynan. Hundreds of sites in the Negev Highlands were settled by pastoralists who found employment both in production and transport in the burgeoning copper

industry. The industrial transformation of Faynan, along with the settlement of Tel Masos and the Negev Highlands sites, was short-lived, and lasted little more than a hundred years.

Keywords: Iron Age | Levant | Faynan | nomads | states | metallurgy

HEZSER 2024

Catherine Hezser, *Jewish Monotheism and Slavery*. Cambridge Elements in Religion and Monotheism (Cambridge 2024).

Biblical monotheism imagines God as a slave master who owns and has total control over humans as his slaves, who are expected to show obedience to him. The theological use of slavery metaphors has a limited value, however, and is deeply problematic from the perspective of real-life slave practices. Ancient authors already supplemented the metaphor of God as a slave master with other images and emphasized God's difference from human slave owners. Ancient and modern experiences of and attitudes toward slavery determined the understanding and applicability of the slavery metaphors. This Element examines the use of slavery metaphors in ancient Judaism and Christianity in the context of the social reality of slavery, modern abolitionism, and historical-critical approaches to the ancient texts.

Keywords: slavery | monotheism | Jewish | Christian | Bible

SAUR 2023

Markus Saur, *Gelassenheit, Eine Auslegung des Koheletbuches*. (Berlin 2023).

Die zahlreichen nicht nur inhaltlichen, sondern auch formalen Bezüge des Koheletbuches auf das Proverbienbuch weisen in jedem Fall auf eine gezielt gestaltete Nahe zwischen den beiden Schriften hin, die sich auch in den korrespondierenden Überschriften der Bücher zeigt, wenngleich in Prov 1,1 Salomo als Sohn Davids und König Israels explizit genannt wird, wohingegen in Koh 1,1 vom ‚Sohn Davids‘ und dem ‚König in Jerusalem‘ gesprochen wird. Dahinter steht möglicherweise auch das Wissen der Trägergruppen der Bücher um die Literaturgeschichte der beiden Schriften: Während sich im Proverbienbuch tatsächlich literarische Überlieferungen bis in die mittlere Königszeit hinein zurückverfolgen lassen und das Buch eine über Jahrhunderte gewachsene Sammlung weisheitlicher Texte bietet, liegt mit dem Koheletbuch ein literarisch weitgehend geschlossener Entwurf vor, der nur in der Überschrift und den Nachworten editorische Arbeit erkennen lässt. Die Trägerkreise des Koheletbuches haben an der perserzeitlich-hellenistischen Stilisierung Salomos als eines paradigmatisch weisen Königs mitgewirkt, wissen aber genau, dass das Koheletbuch nicht auf den historischen König Salomo zurückgeführt werden kann – und sie behaupten es daher auch nicht.

Dass das Koheletbuch nicht in vorexilischer Zeit entstanden sein kann, zeigen in erster Linie seine sprachlichen Besonderheiten. Die bereits genannten persischen Lehnwörter in Koh 2,5; 8,11 sprechen dafür, den terminus a quo in der Perserzeit zu suchen, in der solche sprachlichen Vermittlungen am ehesten denkbar sind. Aufgrund seiner Verortung innerhalb des alttestamentlichen Weisheitsdiskurses kann das Buch nicht in der frühen oder mittleren vorexilischen Königszeit entstanden sein, da man damit rechnen muss, dass Kohelet sich mit dem in der Spruchweisheit dokumentierten Denken auseinandersetzt und dessen Formensprache und Themen rezipiert und transformiert. Dieses Denken wird zunächst seine ersten schriftlichen Zusammenstellungen erfahren haben, bevor Kohelets Schrift entsteht. Für eine spätere Entstehung des Koheletbuches sprechen auch die Diskursformen, die Entsprechungen in älteren mesopotamischen Formen weisheitlicher Auseinandersetzung,

aber vor allem auch in jüngeren hellenistischen Gattungsmustern wie dem der Diatribe haben könnten.

Blickt man von den sprachlichen und formalen Hinweisen ausgehend auf die sozioökonomischen Hintergründe des Koheletbuches, lassen sich nach Choon-Leong Seow zahlreiche Hinweise auf das Wirtschaftssystem der Perserzeit erkennen. Dass das Koheletbuch in Jerusalem entstanden ist, lässt sich nach Hans Wilhelm Hertzberg an konkreten Bezügen innerhalb des Buches erkennen. Im Blick auf die Entstehungszeit und den Entstehungsort des Koheletbuches lässt sich vor diesem Hintergrund ein weitreichender Konsens erkennen: „In der neueren Forschung wird fast allgemein angenommen, dass das Koheletbuch in der zweiten Hälfte des 3. Jahrhunderts v.Chr. [...] in Jerusalem verfasst wurde.“ Dass das Buch nicht viel jünger sein kann, zeigt der terminus ad quem, der sich durch die Bezeugung des Koheletbuches in Qumran ergibt und im 2./1. Jh. v.Chr. liegen dürfte.

USSISHKIN 2000

David Ussishkin, *The Credibility of the Tel Jezreel Excavations, A Rejoinder to Amnon Ben-Tor*. *Tel Aviv: Archaeology* **27** (2000), 248–256.

In summary, it seems to me that Ben-Tor is wrong in both his conclusions. Concerning the gate of the Jezreel enclosure, the present available data is inconclusive as to whether it was a six-chambered or a four-chambered gatehouse. Regarding the pottery assemblage from the enclosure – found in eight “key loci” – it apparently dates to the period of use of the enclosure. Assuming that the Jezreel enclosure can be reliably dated to the period of the Omride dynasty it follows that the Jezreel enclosure and its pottery assemblage can be used as a “key site” in the current debate on Iron Age chronology in the Land of Israel.

Biologie

GROSSMAN 2015

Daniel Grossman, Kari White, Lisa Harris, Matthew Reeves, Paul D. Blumenthal, Beverly Winikoff & David A. Grimes, *Continuing pregnancy after mifepristone and “reversal” of first-trimester medical abortion, A systematic review*. *Contraception* **92** (2015), 206–211.

Objective: We conducted a systematic review of the literature on the effectiveness of medical abortion “reversal” treatment. Since the usual care for women seeking to continue pregnancies after ingesting mifepristone is expectant management with fetal surveillance, we also performed a systematic review of continuing pregnancy after mifepristone alone.

Study design: We searched PubMed, CINAHL (Cumulative Index to Nursing and Allied Health Literature), Scopus and the Cochrane Library for articles published through March 2015 reporting the proportion of pregnancies continuing after treatment with either mifepristone alone or after an additional treatment following mifepristone aimed at reversing its effect.

Results: From 1115 articles retrieved, 1 study met inclusion criteria for abortion reversal, and 13 studies met criteria for continuing pregnancy after mifepristone alone. The one report of abortion reversal was a case series of 7 patients receiving varying doses of progesterone in oil intramuscularly or micronized progesterone orally or vaginally; 1 patient was lost to follow-up. The study was of poor quality and lacked clear information on patient selection. Four of six women continued the pregnancy to term [67%, 95% confidence interval (CI) 30–90%]. Assuming the lost patient aborted resulted in a continuing pregnancy proportion of 57%

(95 % CI 25–84 %). The proportion of pregnancies continuing 1–2 weeks after mifepristone alone varied from 8 % (95 % CI 3–22 %) to 46 % (95 % CI 37–56 %). Continuing pregnancy was more common with lower mifepristone doses and advanced gestational age.

Conclusions: In the rare case that a woman changes her mind after starting medical abortion, evidence is insufficient to determine whether treatment with progesterone after mifepristone results in a higher proportion of continuing pregnancies compared to expectant management.

Implications: Legislation requiring physicians to inform patients about abortion reversal transforms an unproven therapy into law and represents legislative interference in the patient–physician relationship.

Energie

JUNTUNEN 2023

Veera Juntunen & Timo Asikainen, *Electricity consumption in Finland influenced by climate effects of energetic particle precipitation*. [Scientific Reports 13 \(2023\), 20546. DOI:10.1038/s41598-023-47605-8.](#)

It is known that electricity consumption in many cold Northern countries depends greatly on prevailing outdoor temperatures especially during the winter season. On the other hand, recent research has demonstrated that solar wind driven energetic particle precipitation from space into the polar atmosphere can influence the stratospheric polar vortex and tropospheric weather patterns during winter. These changes are significant, e.g., in Northern Europe, especially in Finland. In this study we demonstrate that geomagnetic activity, as a proxy of energetic particle precipitation, significantly influences Finland’s average temperature and total wintertime electricity consumption in Finland. This influence is only seen when the prevailing equatorial stratospheric winds, so called QBO winds, are easterly. The results demonstrate a previously unrecognized societal influence of space weather, and imply that long-term energy consumption forecasts could potentially be improved by considering long-term space weather predictions.

Isotope

VAN DER MERWE 1991

Nikolaas J. van der Merwe & Ernesto Medina, *The Canopy Effect, Carbon Isotope Ratios and Foodwebs in Amazonia*. [Journal of Archaeological Science 18 \(1991\), 249–259.](#)

In forests, the canopy effect produces ^{13}C -depleted plants and a gradient of leaf $\delta^{13}\text{C}$ values from ground to canopy; the most negative values are near the ground. Explanations for this phenomenon include recycling of ^{13}C -depleted CO_2 in the forest, fractionation due to photosynthesis in low light, and other physiological causes. We report F^{13}C measurements for CO_2 at different heights in two forests of the upper Amazon basin. The results show that much of the “C depletion in leaves derives from photosynthetic recycling of CO_2 , produced by forest soil respiration. Recycling does not, however, account adequately for the observed height gradient in $\delta^{13}\text{C}$ values which must be due to an additional factor(s). ^{13}C -depleted forest CO_2 is also photosynthesized by plants in forest clearings. Furthermore, the canopy effect is passed along the foodchain to forest and aquatic fauna, as well as humans. This is of particular importance when using carbon isotopes to reconstruct prehistoric dietary regimes, e.g. the use of maize in Amazonia.

Keywords: Forest | Canopy Effect | Carbon Isotopes | Carbon Dioxide | Amazon
| Photosynthesis | Foodwebs.

Judentum

JOOSTEN 2024

Jan Joosten, *The Invention of Religion, Jews in Babylon in Light of Evidence of Language and Literature*. [unknown \(2024\), preprint, 1–12](#). .

At some time after the end of the First Temple period, the religion of ancient Israel became independent of the nation. Language and texts are key to this change. Hebrew turned into a sacred language, not one learned from one's parents, but from the study of ancient texts. The process didn't come to full fruition until after the fall of the Second Temple. But its earliest effects can be traced already in writings of the exilic period. This linguistic development is rooted in a profound change affecting Judean religion. Before the fall of Jerusalem, the cult of the God of Israel was part and parcel of a national existence with strong territorial and cultural components. In exile, worship of this same God was motivated differently, with the reference to ancient texts—history, law, and prophecy—taking on a new and ever-increasing role. The result was a new phenomenon in the ancient world.

Lecture at UC Berkeley, California on November 19, 2019

Klima

PIEMONTESE 2024

Luigi Piemontese, Stefano Terzi, Giuliano Di Baldassarre, Diego A. Menestrey Schwieger, Giulio Castelli & Elena Bresci, *Over-reliance on water infrastructure can hinder climate resilience in pastoral drylands*. [Nature Climate Change \(2024\), preprint, 1–20](#). DOI:10.1038/s41558-024-01929-z.

Extreme droughts are affecting millions of livestock farmers in sub-Saharan Africa, causing water shortages, famines, migration and fatalities. The construction of new small water infrastructures (SWIs), such as deep wells and boreholes, is increasingly supported by climate resilience programmes of non-governmental organizations and national governments to improve water availability for agro-pastoralists, especially as an emergency response to extreme droughts. Although the short-term benefits of SWI are clear, their potential cumulative impact and their long-term effects on the resilience of dryland communities remain unclear. Here, building on in-depth anthropological literature from five key African drylands, we model post-drought pastoralists' dynamics related to SWI. We show that while developing new SWI releases water shortages in the short term, it can erode traditional adaptation practices without adequate governance. We further illustrate how our model captures early quantitative signals of resilience loss in dryland Angola. This indicates that poorly governed water development in African drylands can be a limiting factor for the long-term resilience of pastoral communities facing a range of social, demographic, economic and climate challenges.

Kultur

GORDON 2023

JANE GORDON (Hrsg.), *The Adventures of Inanaka and Tuni, Learning to Write in Ancient Babylonia*. (Chicago 2023).

Journey back in time 3,800 years to Nippur, a city in ancient Babylonia, as a girl sets out on a quest to become a scribe. Follow along as Inanaka learns how to make a tablet and write her name, solves the many puzzles of the cuneiform writing system, and prepares with her family for a festival, all with the help (some of the time, at least) of her dog, Tuni.

PAULUS 2023

SUSANNE PAULUS (Hrsg.), *Back to School in Babylonia*. ISAC Museum Publications 1 (Chicago 2023).

Methoden

ROTCHELL 2024

Jeanette M. Rotchell, Freija Mendrik, Emma Chapman, Paul Flintoft, Ian Panter, Giulia Gallio, Christine McDonnell, Catriona R., *The contamination of in situ archaeological remains: A pilot analysis of microplastics in sediment samples using iFTIR*. *Science of the Total Environment* **914** (2024), 169941, 1–11.

Highlights:

- Microplastic (MP) particles are present in archaeological sediment samples.
- MP particles, of 16 polymers, were found in archived and contemporary samples.
- MP levels varied from 0 to 20,588 MP/ kg dependant on location and depth.
- MPs may impact scientific value and preservation of archaeological deposits.

Background: Microplastics (MPs) are found in all environments: aquatic, airborne, and terrestrial. While their presence is not disputed, their potential impacts are not yet known.

Objective: To undertake a pilot analysis of MP contamination in archaeological sediment samples, taken in the late 1980s from two archaeological excavation sites in the historic city of York (UK) as well as contemporary sources close to the same sites, with respect to the presence (if any), levels, and characteristics of any particles identified.

Methods: This study analysed pre-digested sediment samples as follows: n = 3 from Queens Hotel (QH) site and n = 3 Wellington Row (WR) contemporary core-source, and n = 3 QH and n = 3 WR archival-source samples, alongside procedural controls (n = 8), using uFTIR spectroscopy (size limitation of 5 µm) to detect and characterise any MPs present.

Results: In total, 66 MP particles consisting of 16 MP polymer types were identified across both site and contemporary/archived samples. The highest levels of MP particles, 20,588 MP/kg was identified at the lowest sample depth (≈7.35 m) at archived WR, 5910 MP/kg in the mid depth layer (≈5.85 m) at the contemporary QH site. Of the MPs detected in sediment samples overall, polytetrafluoroethylene (PTFE), polybutylene sulfone (PSU), and polypropylene: polyethylene (PE:PP) copolymer polymer types were most abundant; mainly fragmented and irregular shape.

Conclusions: This is believed to be the first evidence of MP contamination in archaeological sediment (or soil) samples with polymers and size ranges measured

and while accounting for procedural blanks. These results support the phenomenon of transport of MPs within archaeological stratigraphy, and the characterisation of types, shapes and size ranges identified therein. Through contamination, MPs may compromise the scientific value of archaeological deposits, and environmental proxies suspended within significant sediment, and as such represent a new consideration in the dynamism of, as well as arguments for preserving, archaeological deposits in situ.

Keywords: Archaeological remains | Microplastics | Contamination

Jeanette M. Rotchell, Freija Mendrik, Emma Chapman, Paul Flintoft, Ian Panter, Giulia Gallio, Christine McDonnell, Catriona R. Liddle, David Jennings & John Schofield

Mittelpaläolithikum

SCHMIDT 2024

Patrick Schmidt, Radu Iovita, Armelle Charrié- Duhaut, Gunther Möller, Abay Namen & Ewa Dutkiewicz, *Ochre-based compound adhesives at the Mousterian type-site document complex cognition and high investment*. *Science Advances* **10** (2024), eadl0822. DOI:10.1126/sciadv.adl0822.

SciAdv10-eadl0822-Supplement.pdf

Ancient adhesives used in multicomponent tools may be among our best material evidences of cultural evolution and cognitive processes in early humans. African Homo sapiens is known to have made compound adhesives from naturally sticky substances and ochre, a technical behavior proposed to mark the advent of elaborate cognitive processes in our species. Foragers of the European Middle Paleolithic also used glues, but evidence of ochre-based compound adhesives is unknown. Here, we present evidence of this kind. Bitumen was mixed with high loads of goethite ochre to make compound adhesives at the type-site of the Mousterian, Le Moustier (France). Ochre loads were so high that they lowered the adhesive's performance in classical hafting situations where stone implements are glued to handles. However, when used as handheld grips on cutting or scraping tools, a behavior known from Neanderthals, high-ochre adhesives present a real benefit, improving their solidity and rigidity. Our findings help understand the implications of Pleistocene adhesive making.

Story or Book

MACDERMOT 2019

John MacDermot, *Biblical Lachish, A tale of construction, destruction, excavation and restoration*. *Palestine Exploration Quarterly* **151** (2019), 158–160.

Biblical Lachish: A tale of construction, destruction, excavation and restoration, by D. Ussishkin, Translation: M. F. Vamosh; Jerusalem, The Israel Exploration Society, Biblical Archaeology Society, 2014, 446 pp., £ 107.05 (hardcover), ISBN: 978-9-65221-095-1

Ussishkin's journey through the history of Lachish makes compelling reading and provides some much-needed guidance through the complex and sometimes conflicting, archaeological, biblical and historical sources. The author is an archaeologist and understandably bases his firmest conclusions on the archaeological

evidence, but even there, he finds a measure of uncertainty from time to time. As the title of the book suggests, biblical sources and their contribution to an understanding of Lachish feature as an important part of the story. It comes as no surprise that they appear to become more reliable, at least in the sense that they concur with the archaeological evidence, as the Iron Age progresses.