Liste erstellt am 2013-09-02

Literatur

Aktuell

Heggarty 2013

Paul Heggarty, *Ultraconserved words and Eurasiatic? The "faces in the fire" of language prehistory*. PNAS **110** (2013), E3254.

"Ultraconserved words" are invalidated by several basic principles of linguistics: the relationship between sound and meaning is essentially arbitrary; change proceeds largely independently on each level; and in sound, changes generally apply without exception, irrespective of words' meanings. Stability in meaning is powerless against instability in sound. Even if cognacy may survive for tens of millennia, the ability to detect it at all depends on sound, whose decay clock ticks far faster (witness water: Latin [akwam] to French [o] in just two millennia).

Krause-Kyora 2013

Ben Krause-Kyora et al., *Use of domesticated pigs by Mesolithic hunter-gatherers in northwestern Europe*. Nature Communications **4** (2013), 2348. DOI:10.1038/ncomms3348.

NatComm04-2348-Supplement1.pdf, NatComm04-2348-Supplement2.xlsx, NatComm04-2348-Supplement3.xlsx, NatComm04-2348-Supplement4.xlsx

Ben Krause-Kyora, Cheryl Makarewicz, Allowen Evin, Linus Girdland Flink, Keith Dobney, Greger Larson, Sönke Hartz, Stefan Schreiber, Claus von Carnap-Bornheim, Nicole von Wurmb-Schwark & Almut Nebel

Mesolithic populations throughout Europe used diverse resource exploitation strategies that focused heavily on collecting and hunting wild prey. Between 5500 and 4200 cal BC, agriculturalists migrated into northwestern Europe bringing a suite of Neolithic technologies including domesticated animals. Here we investigate to what extent Mesolithic Ertebølle communities in northern Germany had access to domestic pigs, possibly through contact with neighbouring Neolithic agricultural groups. We employ a multidisciplinary approach, applying sequencing of ancient mitochondrial and nuclear DNA (coat colour-coding gene MC1R) as well as traditional and geometric morphometric (molar size and shape) analyses in Sus specimens from 17 Neolithic and Ertebølle sites. Our data from 63 ancient pig specimens show that Ertebølle hunter-gatherers acquired domestic pigs of varying size and coat colour that had both Near Eastern and European mitochondrial DNA ancestry. Our results also reveal that domestic pigs were present in the region B500 years earlier than previously demonstrated.

Mahowald 2013

Kyle Mahowald & Edward Gibson, *Short, frequent words are more likely to appear genetically related by chance*. PNAS **110** (2013), E3253.

Pagel et al.'s model critically requires that judgments of cognates not be confounded with frequency. [...] are assigned. There is a robust inverse correlation between word frequency and word length, so words like "I" or "me" that are frequent across languages are also likely to be short. Even slightly shorter words are much more likely to be phonologically similar simply by chance.

Pagel 2013

Mark Pagel, Quentin D. Atkinson, Andreea S. Calude & Andrew Meade, *No problems with short words, and no evidence provided, Reply to Mahowald and Gibson and to Heggarty.* PNAS **110** (2013), E3255.

This repeats the major obstacle to progress in the field—a reliance on assertions rather than clear statistical evidence. Providing such evidence was precisely the starting point of our paper: our previous research empirically demonstrated the possibility of a small subset of words retaining traces of their ancestry long enough to connect languages or language families separated by more than 10,000 y.

Terschüren 2013

Anna Terschüren, *Die Reform der Rundfunkfinanzierung in Deutschland, Analyse der Neuordnung und Entwicklung eines idealtypischen Modells.* Dissertation, TU Ilmenau (Ilmenau 2013). URN:nbn:de:gbv:ilm1-2013000224.

In der vorliegenden interdisziplinären Arbeit der Rechts- und Wirtschaftswissenschaften wird die Neuordnung der Rundfunkfinanzierung im Jahre 2013 analysiert, wobei der Fokus auf verfassungsrechtlichen und ökonomischen Aspekten liegt. Die Reform umfasst im Wesentlichen die Ablösung der Rundfunkgebühr durch den geräteunabhängigen Rundfunkbeitrag. Die Untersuchung des neuen Finanzierungssystems zeigt, dass die Schwachpunkte der ehemaligen Rundfunkgebühr nicht in Gänze beseitigt werden konnten und die Neuregelung gegen die Verfassung verstößt. Daher wird im nächsten Schritt ein idealtypisches Modell der Rundfunkfinanzierung entwickelt. Dies geschieht unter den Prämissen, sowohl die funktionsgerechte Finanzausstattung der Rundfunkanstalten als auch die gleichmäßige Belastung der Abgabepflichtigen sicherzustellen. Außerdem wird betrachtet, wie die Aufgaben des öffentlich-rechtlichen Rundfunks unter verfassungsrechtlichen und volkswirtschaftlichen Gesichtspunkten zu gestalten sind.

Amerika

Achilli 2013

Alessandro Achilli et al., *Reconciling migration models to the Americas with the variation of North American native mitogenomes.* PNAS **110** (2013), 14308–14313.

Alessandro Achilli, Ugo A. Perego, Hovirag Lancioni, Anna Olivieri, Francesca Gandini, Baharak Hooshiar Kashani, Vincenza Battaglia, Viola Grugni, Norman Angerhofer, Mary P. Rogers, Rene J. Herrera, Scott R. Woodward, Damian Labuda, David Glenn Smith, Jerome S. Cybulski, Ornella Semino, Ripan S. Malhi & Antonio Torroni

In this study we evaluated migration models to the Americas by using the information contained in native mitochondrial genomes (mitogenomes) from North America. Molecular and phylogeographic analyses of B2a mitogenomes, which are absent in Eskimo-Aleut and northern Na-Dene speakers, revealed that this haplogroup arose in North America ≈11–13 ka from one of the founder Paleo-Indian B2 mitogenomes. In contrast, haplogroup A2a, which is typical of Eskimo-Aleuts and Na-Dene, but also present in the easternmost Siberian groups, originated only 4–7 ka in Alaska, led to the first Paleo-Eskimo settlement of northern Canada and Greenland, and contributed to the formation of the Na-Dene gene pool. However, mitogenomes also show that Amerindians from northern North America, without any distinction between Na-Dene and non-Na-Dene, were heavily affected by an

additional and distinctive Beringian genetic input. In conclusion, most mtDNA variation (along the double-continent) stems from the first wave from Beringia, which followed the Pacific coastal route. This was accompanied or followed by a second inland migratory event, marked by haplogroups X2a and C4c, which affected all Amerindian groups of Northern North America. Much later, the ancestral A2a carriers spread from Alaska, undertaking both a westward migration to Asia and an eastward expansion into the circumpolar regions of Canada. Thus, the first American founders left the greatest genetic mark but the original maternal makeup of North American Natives was subsequently reshaped by additional streams of gene flow and local population dynamics, making a three-wave view too simplistic.
Native Americans | human mtDNA

LOMBARDO 2013

Umberto Lombardo et al., *Early and Middle Holocene Hunter-Gatherer Occupations in Western Amazonia, The Hidden Shell Middens*. PLoS ONE **8** (2013), e72746. DOI:10.1371/journal.pone.0072746.

pone08-e72746-Supplement.zip

Umberto Lombardo, Katherine Szabo, José M. Capriles, Jan-Hendrik May, Wulf Amelung, Rainer Hutterer, Eva Lehndorff, Anna Plotzki & Heinz Veit

We report on previously unknown early archaeological sites in the Bolivian lowlands, demonstrating for the first time early and middle Holocene human presence in western Amazonia. Multidisciplinary research in forest islands situated in seasonally-inundated savannahs has revealed stratified shell middens produced by human foragers as early as 10,000 years ago, making them the oldest archaeological sites in the region. The absence of stone resources and partial burial by recent alluvial sediments has meant that these kinds of deposits have, until now, remained unidentified. We conducted core sampling, archaeological excavations and an interdisciplinary study of the stratigraphy and recovered materials from three shell midden mounds. Based on multiple lines of evidence, including radiocarbon dating, sedimentary proxies (elements, steroids and black carbon), micromorphology and faunal analysis, we demonstrate the anthropogenic origin and antiquity of these sites. In a tropical and geomorphologically active landscape often considered challenging both for early human occupation and for the preservation of hunter-gatherer sites, the newly discovered shell middens provide evidence for early to middle Holocene occupation and illustrate the potential for identifying and interpreting early open-air archaeological sites in western Amazonia. The existence of early hunter-gatherer sites in the Bolivian lowlands sheds new light on the region's past and offers a new context within which the late Holocene "Earthmovers" of the Llanos de Moxos could have emerged.

Anthropologie

BECKES 2013

Lane Beckes, James A. Coan & Karen Hasselmo, *Familiarity promotes the blurring of self and other in the neural representation of threat*. Social Cognitive and Affective Neuroscience **8** (2013), 670–677.

SCAN08-670-Supplement.zip, SCAN08-670-Regression.pdf

Neurobiological investigations of empathy often support an embodied simulation account. Using functional magnetic resonance imaging (fMRI), we monitored statistical associations between brain activations indicating self-focused threat to those indicating threats to a familiar friend or an unfamiliar stranger. Results in regions such as the anterior insula, putamen and supramarginal gyrus indicate that

self-focused threat activations are robustly correlated with friend-focused threat activations but not stranger-focused threat activations. These results suggest that one of the defining features of human social bonding may be increasing levels of overlap between neural representations of self and other. This article presents a novel and important methodological approach to fMRI empathy studies, which informs how differences in brain activation can be detected in such studies and how covariate approaches can provide novel and important information regarding the brain and empathy.
Keywords: empathy; emotion; social cognition; interpersonal relationships; prosocial behavior; familiarity

Bibel

Ben-Tor 2013

Amnon Ben-Tor, *Who destroyed Canaanite Hazor?* Biblical Archaeology Review **39** (2013), iv, 26–36.
The Book of Joshua says the Israelites defeated the mighty king of Hazor and destroyed the city with fire. Years of excavation have revealed the intentional destruction of the once-powerful Canaanite city—"the head of all those kingdoms"—with a raging inferno that burned at more than 2,350 degrees Fahrenheit. But who did it? According to the excavator, the Israelites are the only feasible candidate.

Collins 2013

Steven Collins, *Where is Sodom? The Case for Tall el-Hammam.* Biblical Archaeology Review **39** (2013), ii, 32–41.
Biblical writers knew their geography quite precisely and realistically. And we are told clearly in Genesis 13 where Sodom was located. Contrary to a number of modern scholars who locate Sodom near the southern end of the Dead Sea, our author locates it northeast of the Dead Sea, where he has been excavating the site of Tall el-Hammam for eight years. Whether the story of Sodom's destruction is literally true or simply a traditional tale, the geography is real; the Biblical author is referring to an actual site. Where is it?

Frendo 2013

Anthony J. Frendo, *Was Rahab really a harlot?* Biblical Archaeology Review **39** (2013), v, 62–65.
Rahab was the heroine who assisted two Israelite spies to escape out the window and down the wall of Jericho, according to the Book of Joshua. But was she a prostitute or an innkeeper? And did she live on the city wall or in it? Archaeology may provide the answer at least to the latter question.

Frumkin 2006

Amos Frumkin & Aryeh Shimron, *Tunnel engineering in the Iron Age, Geoarchaeology of the Siloam Tunnel, Jerusalem.* Journal of Archaeological Science **33** (2006), 227–237.
The Siloam Tunnel (ST) is the best-identified biblical structure that can be entered today. We use geological, structural, and chemical features of ST and its internal deposits to show that it is an authentic engineering project, without any pre-existing natural conduit that could have guided its excavators. Radiometrically and historically dated to ≈700 BCE, ST pinpoints the technological advance in leveling techniques that was essential for the construction of such a long tunnel

without intermediate shafts. A combination of geological and archaeological evidence demonstrates that the circuitous route of ST and the final meeting of the two excavating teams are associated with continuous modifications of the plan to allow acoustic communication between hewers and the surface teams. Hydraulic plaster was applied throughout the tunnel in order to seal voids of dissolution and tectonic origin. Organic material accidentally entrapped in the plaster was carbon 14 dated, and speleothems were dated by U-Th, both corroborating the historic and epigraphic evidence ascribing the engineering advance in tunneling techniques to the Judahite King Hezekiah.
Keywords: Hezekiah Tunnel; Iron Age waterworks; Hydraulic plaster; Siloam Inscription; Gihon Spring; Warren Shaft; 14C dating

Shanks 2013

Hershel Shanks, *Will king Hezekiah be dislodged from his tunnel?* Biblical Archaeology Review **39** (2013), v, 52–61.
For more than a hundred years, an extraordinary water tunnel in Jerusalem has been attributed to King Hezekiah, who dug it to protect the city's water supply during the Assyrian siege of 701 B.C.E. Hence its name, Hezekiah's Tunnel. However, recent scholarly publications now argue that the tunnel was not built by Hezekiah but by his predecessor or his successors.

Tabor 2013

James Tabor, *The Making of a Messiah, Did Jesus Claim to be the Messiah and Predict His Suffering and Death?* Bible History Daily **2013**, Mar.,8. <http://www.biblicalarchaeology.org/daily/biblical-topics/bible-interpretation/the-making-of-a-messiah/> (2013-08-27).
In my post on "That Other King of the Jews", I stressed my own conviction that Jesus of Nazareth thought of himself as much more than a teacher, prophet or healer, but rather that he understood himself to be nothing less than the "one to come," the Davidic Messiah or King of Israel. For most Christians such a messianic claim by Jesus is self-evident since it lies at the heart of all of our gospel accounts, which are, as Mark puts things: "The good news of Jesus Christ the Son of God." In contrast, many of my academic colleagues in the field of Christian origins would argue that the identification of Jesus as the Jewish Messiah was one put on Jesus by his followers after his death, as part of their recovery of faith following the unanticipated shock of his crucifixion, not something he claimed himself. According to this understanding the scene in Mark where Jesus is confessed as Christ or Messiah by Peter is projected back into the life of Jesus, implying that he both anticipated his death and understood himself in the role of a "suffering Messiah".

van der Veen 2013

Peter van der Veen, *When pharaohs ruled Jerusalem.* Biblical Archaeology Review **39** (2013), ii, 42–48.
Spurred by a BAR article, author Peter van der Veen went on a hunt for additional archaeological support of ancient Egypt's dominance in Jerusalem. Here is what he found. But it included nothing from the time King David captured the city. Was this why David was able to conquer Jerusalem?

Biologie

Borjigin 2013

Jimo Borjigin et al., *Surge of neurophysiological coherence and connectivity in the dying brain.* PNAS **110** (2013), 14432–14437.

Jimo Borjigin, UnCheol Lee, Tiecheng Liu, Dinesh Pal, Sean Huff, Daniel Klarr, Jennifer Sloboda, Jason Hernandez, Michael M. Wang & George A. Mashour

The brain is assumed to be hypoactive during cardiac arrest. However, the neurophysiological state of the brain immediately following cardiac arrest has not been systematically investigated. In this study, we performed continuous electroencephalography in rats undergoing experimental cardiac arrest and analyzed changes in power density, coherence, directed connectivity, and cross-frequency coupling. We identified a transient surge of synchronous gamma oscillations that occurred within the first 30 s after cardiac arrest and preceded isoelectric electroencephalogram. Gamma oscillations during cardiac arrest were global and highly coherent; moreover, this frequency band exhibited a striking increase in anterior–posteriordirected connectivity and tight phase-coupling to both theta and alpha waves. High-frequency neurophysiological activity in the near-death state exceeded levels found during the conscious waking state. These data demonstrate that the mammalian brain can, albeit paradoxically, generate neural correlates of heightened conscious processing at near-death.

global ischemia | global hypoxia | near-death experience | consciousness

Judentum

Bourke 2013

Stephen Bourke, *The Christian flight to Pella: True or tale?* Biblical Archaeology Review **39** (2013), iii, 30–39.

According to fourth-century church historian Eusebius, on the eve of Jerusalem's destruction by the Romans in 70 A.D., Jesus' followers miraculously escaped the city and fled to Pella of the Decapolis in Jordan. After decades of excavation, have archaeologists been able to sift through more than 8,000 years of occupation history to find evidence of these early Christian refugees?

Deines 2013

Roland Deines, *The Pharisees—good guys with bad press.* Biblical Archaeology Review **39** (2013), iv, 22.

The main problem is that scholars and laypeople alike too often ignore the fact that polemical texts cannot be taken at face value for historical information. They mistake the polemical stance of the New Testament against the Pharisees as an objective description of the Pharisees, and this is as much in evidence today as it has been in the history of the church. To be sure, polemics can serve as a source for historical understanding, and polemics only work when they contain some truth. But it is also true that polemics have a purpose and quite often point to a more deeply rooted conflict in another sphere. This is clear in Matthew's gospel. He accuses the Pharisees of all kind of things, but underlying these accusations is the extent of the Pharisees' influence on the Jewish people (in Matthew's terminology, "the crowds").3 In Matthew's eyes, the Pharisees are mainly responsible for the failure of Jesus' mission among his own people. This brings us back to the question of why the "hypocritical" Pharisees had such influence in the first place. The answer I propose here is that they cared for the people.

Faust 2013

Avraham Faust, *Early Israel: An egalitarian society*. Biblical Archaeology Review **39** (2013), iv, 45–49.
Excavated structures, pottery and other household artifacts offer a glimpse of daily life in the Iron Age highlands of Canaan, but no burials or tombs have been found. What do these findings reveal about the ideology of early Iron Age Israelite society?

Lange 2013

Armin Lange & Esther Eshel, *"The Lord Is One": How its meaning changed*. Biblical Archaeology Review **39** (2013), iii, 58–63.
A 1-inch rectangular gold leaf inscribed with the Shema' Yisrael ("Hear O Israel") served as a protective amulet for a Jewish baby's body in the Roman era. The declaration that "The Lord is One" in this incantation reveals that the Israelite deity Yahweh was more than just the sole God of the Jews, he was the only God.

Klima

WAIS 2013

WAIS Divide Project Members, *Onset of deglacial warming in West Antarctica driven by local orbital forcing*. nature **500** (2013), 440–444.
n500-0440-Supplement1.pdf, n500-0440-Supplement2.xlsx
WAIS Divide ProjectMembers: T. J. Fudge, Eric J. Steig, Bradley R. Markle, Spruce W. Schoenemann, Qinghua Ding, Kendrick C. Taylor, Joseph R. McConnell, Edward J. Brook, Todd Sowers, James W. C. White, Richard B. Alley, Hai Cheng, Gary D. Clow, Jihong Cole-Dai, Howard Conway, Kurt M. Cuffey, Jon S. Edwards, R. Lawrence Edwards, Ross Edwards, John M. Fegyveresi, David Ferris, Joan J. Fitzpatrick, Jay Johnson, Geoffrey Hargreaves, James E. Lee, Olivia J. Maselli, William Mason, Kenneth C. McGwire, Logan E. Mitchell, Nicolai Mortensen, Peter Neff, Anais J. Orsi, Trevor J. Popp, Andrew J. Schauer, Jeffrey P. Severinghaus, Michael Sigl, Matthew K. Spencer, Bruce H. Vaughn, Donald E. Voigt, Edwin D. Waddington, Xianfeng Wang & Gifford J. Wong
The cause of warming in the Southern Hemisphere during the most recent deglaciation remains a matter of debate1,2. Hypotheses for a Northern Hemisphere trigger, through oceanic redistributions of heat, are based in part on the abrupt onset of warming seen in East Antarctic ice cores and dated to 18,000 years ago, which is several thousand years after high-latitude Northern Hemisphere summer insolation intensity began increasing from its minimum, approximately 24,000 years ago3,4. An alternative explanation is that local solar insolation changes cause the Southern Hemisphere to warm independently2,5. Here we present results from a new, annually resolved ice-core record from West Antarctica that reconciles these two views. The records show that 18,000 years ago snow accumulation inWest Antarctica began increasing, coincident with increasing carbon dioxide concentrations,warming in EastAntarctica and cooling in the Northern Hemisphere6 associated with an abrupt decrease in Atlantic meridional overturning circulation7. However, significant warming in West Antarctica began at least 2,000 years earlier. Circum-Antarctic sea-ice decline, driven by increasing local insolation, is the likely cause of this warming. The marine-influencedWest Antarctic records suggest a more active role for the Southern Ocean in the onset of deglaciation than is inferred fromice cores in the East Antarctic interior, which are largely isolated from sea-ice changes.

Metallzeiten

Park 2013

Jang-Sik Park & Vasant Shinde, *Technology, chronology and the role of crucible steel as inferred from iron objects of the ancient site at Junnar, India*. Journal of Archaeological Science **40** (2013), 3991–3998.

Ordinary iron objects from an ancient habitation site at Junnar in India, dating to the 2nd BC to AD 2nd century, were examined for their microstructure, chemical composition and age. The objects were mostly made of high carbon steel with a homogeneous microstructure consisting of fine spherical particles of carbide in the ferrite background, free of non-metallic inclusions. Their carbon concentration ranged from 0.7 % to over 1.6 % with one exception at 0.2 %. Some of them contained trace amounts of silicon, manganese and sulfur while one object retained cavities due to volume contraction during solidification reactions. These features indicate that the objects examined constitute an early example of Indian steel making in crucibles. Evidence was found that basic techniques needed for the success of crucible steel technology were mostly available at Junnar at the time. The radiocarbon measurement on carbon samples extracted from one of the iron objects placed its date between 176 BC and AD 20, in agreement with the radiocarbon dates of three charcoal samples from the same site. The forgoing results support that crucible steel was produced in India at a much earlier date than previously supposed, to serve as a material for specific needs arising in daily life.

Keywords: India | 2nd to 1st century BC | Crucible steel | Technology | Chronology

Mittelpaläolithikum

Soressi 2013

Marie Soressi et al., *Neandertals made the first specialized bone tools in Europe*. PNAS **110** (2013), 14186–14190.

pnas110-14186-Supplement1.pdf, pnas110-14186-Supplement2.pdf

Marie Soressi, Shannon P. McPherron, Michel Lenoir, Tamara Dogandžić, Paul Goldberg, Zenobia Jacobs, Yolaine Maigrot, Naomi L. Martisius, Christopher E. Miller, William Rendu, Michael Richards, Matthew M. Skinner, Teresa E. Steele, Sahra Talamo & Jean-Pierre Texier

Modern humans replaced Neandertals ≈40,000 y ago. Close to the time of replacement, Neandertals show behaviors similar to those of the modern humans arriving into Europe, including the use of specialized bone tools, body ornaments, and small blades. It is highly debated whether these modern behaviors developed before or as a result of contact with modern humans. Here we report the identication of a type of specialized bone tool, lissoir, previously only associated with modern humans. The microwear preserved on one of these lissoir is consistent with the use of lissoir in modern times to obtain supple, lustrous, and more impermeable hides. These tools are from a Neandertal context proceeding the replacement period and are the oldest specialized bone tools in Europe. As such, they are either a demonstration of independent invention by Neandertals or an indication that modern humans started inuencing European Neandertals much earlier than previously believed. Because these nds clearly predate the oldest known age for the use of similar objects in Europe by anatomically modern humans, they could also be evidence for cultural diffusion from Neandertals to modern humans.

human evolution | Paleolithic archaeology | Middle Paleolithic