Liste erstellt am 2011-01-06

Literatur

Aktuell

Petsko 2010

Gregory Petsko, *Save university arts from the bean counters.* nature **468** (2010), 1003.

Scientists must reach across the divide and speak up for campus colleagues in arts and humanities departments, says Gregory Petsko. Students have neither the wisdom nor the experience to know what they need to know.

Anthropologie

Bustamante 2010

Carlos D. Bustamante & Brenna M. Henn, *Shadows of early migrations.* nature **468** (2010), 1044–1045.

Analysis of ancient nuclear DNA, recovered from 40,000-year-old remains in the Denisova Cave, Siberia, hints at the multifaceted interaction of human populations following their migration out of Africa.

Callaway 2010

Ewen Callaway, *Fossil genome reveals ancestral link.* nature **468** (2010), 1012.

Eisenstein 2010

Michael Eisenstein, *The first supper.* nature **468** (2010), S8–S9.

Diet-directed evolution shaped our brains, but whether it was meat or tubers, or their preparation, that spurred our divergence from other primates remains a matter of hot debate.

Pellicano 2011

Elizabeth Pellicano, Alastair D. Smith, Filipe Cristino, Bruce M. Hood, Josie Briscoe & Iain D. Gilchrist, *Children with autism are neither systematic nor optimal foragers.* PNAS **108** (2011), 421–426.

It is well established that children with autism often show outstanding visual search skills. To date, however, no study has tested whether these skills, usually assessed on a table-top or computer, translate to more true-to-life settings. One prominent account of autism, Baron-Cohen's "systemizing" theory, gives us good reason to suspect that they should. In this study,wetested whether autistic children's exceptional skills at small-scale search extend to a large-scale environment and, in so doing, tested key claims of the systemizing account. Twenty school-age children with autism and 20 age- and ability-matched typical children took part in a large-scale search task in the "foraging room": a purpose-built laboratory, with numerous possible search locations embedded into the floor. Children were instructed to search an array of 16 (green) locations to find the hidden (red) target as quickly as possible. The distribution of target locations was manipulated so that they appeared on one side of the midline for 80 % of trials. Contrary to predictions of the systemizing account, autistic children's search behavior was much less efficient than that of

typical children: they showed reduced sensitivity to the statistical properties of the search array, and furthermore, their search patterns were strikingly less optimal and less systematic. The nature of large-scale search behavior in autism cannot therefore be explained by a facility for systemizing. Rather, children with autism showed difficulties exploring and exploiting the large-scale space, which might instead be attributed to constraints (rather than benefits) in their cognitive repertoire.
autism spectrum conditions | navigation | spatial representation

Petherick 2010

Anna Petherick, *Mother's milk: A rich opportunity*. nature **468** (2010), S5–S7.
Research on the contents of milk and how breast-feeding benefits a growing child is surprising scientists.

Reich 2010

David Reich et al., *Genetic history of an archaic hominin group from Denisova Cave in Siberia*. nature **468** (2010), 1053–1060.
n468-1053-Supplement1.pdf, n468-1053-Supplement2.xls
David Reich, Richard E. Green, Martin Kircher, Johannes Krause, Nick Patterson, Eric Y. Durand, Bence Viola, Adrian W. Briggs, Udo Stenzel, Philip L. F. Johnson, Tomislav Maricic, Jeffrey M. Good, Tomas Marques-Bonet, Can Alkan, Qiaomei Fu, Swapan Mallick, Heng Li, Matthias Meyer, Evan E. Eichler, Mark Stoneking, Michael Richards, Sahra Talamo, Michael V. Shunkov, Anatoli P. Derevianko, Jean-Jacques Hublin, Janet Kelso, Montgomery Slatkin & Svante Pääbo
Using DNA extracted from a finger bone found in Denisova Cave in southern Siberia, we have sequenced the genome of an archaic hominin to about 1.9-fold coverage. This individual is from a group that shares a common origin with Neanderthals. This population was not involved in the putative gene flow from Neanderthals into Eurasians; however, the data suggest that it contributed 4-6 % of its genetic material to the genomes of present-day Melanesians. We designate this hominin population 'Denisovans' and suggest that it may have been widespread in Asia during the Late Pleistocene epoch. A tooth found in Denisova Cave carries a mitochondrial genome highly similar to that of the finger bone. This tooth shares no derived morphological features with Neanderthals or modern humans, further indicating that Denisovans have an evolutionary history distinct from Neanderthals and modern humans.

Klima

Prentice 2010

Colin Prentice, *The Burning Issue*. science **330** (2010), 1636–1637.
Antarctic ice cores reveal a 650-year record of biomass burning in the Southern Hemisphere.

Tian 2011

H. Tian, D. Schryvers & Ph. Claeys, *Nanodiamonds do not provide unique evidence for a Younger Dryas impact*. PNAS **108** (2011), 40–44.
Microstructural, d13C isotope and C/N ratio investigations were conducted on excavated material from the black Younger Dryas boundary in Lommel, Belgium, aiming for a characterisation of the carbon content and structures. Cubic diamond nanoparticles are found in large numbers. The larger ones with diameters around or above 10 nm often exhibit single or multiple twins. The smaller ones around 5 nm in diameter are mostly defect-free.

Also larger flake-like particles, around 100 nm in lateral dimension, with a cubic diamond structure are observed as well as large carbon onion structures. The combination of these characteristics does not yield unique evidence for an exogenic impact related to the investigated layer.
transmission electron microscopy | diffraction | spectroscopy

Wang 2010

Z. Wang, J. Chappellaz, K. Park & J. E. Mak, *Large Variations in Southern Hemisphere Biomass Burning During the Last 650 Years*. science **330** (2010), 1663–1666.
s330-1663-Supplement.pdf
We present a 650-year Antarctic ice core record of concentration and isotopic ratios (d13C and d18O) of atmospheric carbon monoxide. Concentrations decreased by ≈25 % (14 parts per billion by volume) from the mid-1300s to the 1600s then recovered completely by the late 1800s. d13C and d18O decreased by about 2 and 4 per mil (‰), respectively, from the mid-1300s to the 1600s then increased by about 2.5 and 4 ‰ by the late 1800s. These observations and isotope mass balance model results imply that large variations in the degree of biomass burning in the Southern Hemisphere occurred during the last 650 years, with a decrease by about 50 % in the 1600s, an increase of about 100 % by the late 1800s, and another decrease by about 70 % from the late 1800s to present day.

Mittelpaläolithikum

Lalueza-Fox 2011

Carles Lalueza-Fox et al., *Genetic evidence for patrilocal mating behavior among Neandertal groups*. PNAS **108** (2011), 250–253.
pnas108-00250-Supplement.pdf
Carles Lalueza-Fox, Antonio Rosas, Almudena Estalrrich, Elena Gigli, Paula F. Campos, Antonio García-Tabernero, Samuel García-Vargas, Federico Sánchez-Quinto, Oscar Ramírez, Sergi Civit, Markus Bastir, Rosa Huguet, David Santamaría, M. Thomas P. Gilbert, Eske Willerslev and Marco de la Rasilla
The remains of 12 Neandertal individuals have been found at the El Sidrón site (Asturias, Spain), consisting of six adults, three adolescents, two juveniles, and one infant. Archaeological, paleontological, and geological evidence indicates that these individuals represent all or part of a contemporaneous social group of Neandertals, who died at around the same time and later were buried together as a result of a collapse of an underground karst. We sequenced phylogenetically informative positions of mtDNA hypervariable regions 1 and 2 from each of the remains. Our results show that the 12 individuals stem from three different maternal lineages, accounting for seven, four, and one individual(s), respectively. Using a Y-chromosome assay to confirm the morphological determination of sex for each individual, we found that, although the three adult males carried the same mtDNA lineage, each of the three adult females carried different mtDNA lineages. These findings provide evidence to indicate that Neandertal groups not only were small and characterized by low genetic diversity but also were likely to have practiced patrilocal mating behavior.
patrilocality | kinship | demography | human evolution

Neolithikum

Meyer 2009

Christian Meyer, Guido Brandt, Wolfgang Haak, Robert A. Ganslmeier, Harald Meller & Kurt W. Alt, *The Eulau eulogy: Bioarchaeological interpre-*

tation of lethal violence in Corded Ware multiple burials from Saxony-Anhalt, Germany. Journal of Anthropological Archaeology **28** (2009), 412–423.

The Corded Ware is one of the major archaeological traditions of Late Neolithic Europe. Its burial customs are characterized by single graves but multiple burials also occur. We present a detailed study of antemortem and perimortem trauma in a group of Corded Ware skeletons from four multiple graves and give the most probable interpretation of the site, based upon all available bioarchaeological evidence. The pattern of observed injuries in male, female, and subadult skeletons, including cranial trauma, arrow wounds, and fractures of the forearm and hands points towards a violent event that resulted in the death of all individuals, most probably a raid. In contrast to comparable Neolithic raid sites, there was no complete extermination of the local population and no use of mass graves. The burials have been arranged with care and detailed knowledge about biological kinship ties [Haak, W., Brandt, G., de Jong, H.N., Meyer, C., Ganslmeier, R., Heyd, V., Hawkesworth, C., Pike, A.W.G., Meller, H., Alt, K.W., 2008. Ancient DNA, strontium isotopes, and osteological analyses shed light on social and kinship organization of the Later Stone Age. Proceedings of the National Academy of Sciences of the United States of America 105, 18226-18231]. The combination of clear causes of death and the proven biological relationships among some of the individuals, including a nuclear family, provides new and important insights into Corded Ware mortuary customs and the reasons why and how multiple graves have been utilised.

Keywords: Neolithic; Europe; Fractures; Trauma; Palaeopathology; Mortuary customs; Kinship