

References

Afrika

JESSE 2004

Friederike Jesse, *The development of pottery design styles in the Wadi Howar Region (northern Sudan)*. [Préhistoires Méditerranéennes 13 \(2004\), 97–107.](#)

Pottery is by far the most important archaeological material found in the Wadi Howar Region in Northern Sudan. Its detailed analysis, especially of the decorative patterns allowed for the establishment of a Holocene cultural sequence. Three main cultural horizons can be distinguished stretching over a period from about 5200 to 1100 BC, each horizon is characterised by a different pottery design style.

Incision and impression are the techniques of decoration; impression, however, always predominates. The main ornament types differ for each cultural horizon as do the decorative principles. (Dotted) Wavy Line, Laqiya type and packed zigzag patterns are followed by Leiterband and various zigzag patterns and then by different geometric patterns. Whereas vessels have been completely decorated at first, undecorated zones get more and more important as part of the decoration. Mat impression appears at the end of the sequence.

Aktuell

BAZANT 2021

Martin Z. Bazant & John W. M. Bush, *A guideline to limit indoor airborne transmission of COVID-19*. [PNAS 118 \(2021\), e2018995118. DOI:10.1073/pnas.2018995118.](#)

[pnas118-e2018995118-Supplement1.pdf](#), [pnas118-e2018995118-Supplement2.xlsx](#)

The current revival of the American economy is being predicated on social distancing, specifically the Six-Foot Rule, a guideline that offers little protection from pathogen-bearing aerosol droplets sufficiently small to be continuously mixed through an indoor space. The importance of airborne transmission of COVID-19 is now widely recognized. While tools for risk assessment have recently been developed, no safety guideline has been proposed to protect against it. We here build on models of airborne disease transmission in order to derive an indoor safety guideline that would impose an upper bound on the “cumulative exposure time,” the product of the number of occupants and their time in an enclosed space. We demonstrate how this bound depends on the rates of ventilation and air filtration, dimensions of the room, breathing rate, respiratory activity and face mask use of its occupants, and infectiousness of the respiratory aerosols. By synthesizing available data from the best-characterized indoor spreading events with respiratory drop size distributions, we estimate an infectious dose on the order of 10 aerosol-borne virions. The new virus (severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) is thus inferred to be an order of magnitude more infectious than its forerunner (SARS-CoV), consistent with the pandemic status achieved by COVID-19. Case studies are presented for classrooms and nursing homes, and a spreadsheet and online app are provided to facilitate use of our guideline. Implications for contact tracing and quarantining are considered, and appropriate

caveats enumerated. Particular consideration is given to respiratory jets, which may substantially elevate risk when face masks are not worn.

Keywords: COVID-19 | infectious aerosol | airborne transmission | SARS-CoV-2 coronavirus | indoor safety guideline

Significance: Airborne transmission arises through the inhalation of aerosol droplets exhaled by an infected person and is now thought to be the primary transmission route of COVID-19. By assuming that the respiratory droplets are mixed uniformly through an indoor space, we derive a simple safety guideline for mitigating airborne transmission that would impose an upper bound on the product of the number of occupants and their time spent in a room. Our theoretical model quantifies the extent to which transmission risk is reduced in large rooms with high air exchange rates, increased for more vigorous respiratory activities, and dramatically reduced by the use of face masks. Consideration of a number of outbreaks yields self-consistent estimates for the infectiousness of the new coronavirus.

Archäologie

SADR 2019

Karim Sadr, *The ‘Neolithic’ Concept in South Africa*. [South African Archaeological Society Goodwin Series 12 \(2019\), 69–71](#).

The Neolithic concept has a long history in world archaeology. This paper critically examines the concept as it is used, and avoided, in South Africa.

Keywords: Neolithic | Later Stone Age | livestock | herding.

Bibel

ABERNETHY 2020

Andrew T. Abernethy, *The Spirit of God in Haggai 2:5, Prophecy as a Sign of God’s Spirit*. [Vetus Testamentum \(2020\), preprint, 1–18](#).

In Hag 2:5b, a statement unique within the Hebrew Bible appears: “my spirit is standing in your midst”. Some interpret this clause as stating that God will empower the entire community by his spirit to rebuild the temple. Others interpret this as a promise that God will be present to protect his people by his spirit, as he had with the Pillar of Cloud in exodus traditions. After a critique of these standard interpretations, the case is made to support a marginal view that Hag 2:5b refers to the spirit of God in prophetic activity in the post-exilic era.

Keywords: ruah | spirit | prophets | post-exile.

Biologie

ELLIS 2021

Erle C. Ellis et al., *People have shaped most of terrestrial nature for at least 12,000 years*. [PNAS 118 \(2021\), e2023483118](#).

[pnas118-e2023483118-Supplement.pdf](#)

Archaeological and paleoecological evidence shows that by 10,000 BCE, all human societies employed varying degrees of ecologically transformative land use practices, including burning, hunting, species propagation, domestication, cultivation, and others that have left long-term legacies across the terrestrial biosphere. Yet, a lingering paradigm among natural scientists, conservationists, and policy-makers is that human transformation of terrestrial nature is mostly recent and

inherently destructive. Here, we use the most up-to-date, spatially explicit global reconstruction of historical human populations and land use to show that this paradigm is likely wrong. Even 12,000 y ago, nearly three quarters of Earth’s land was inhabited and therefore shaped by human societies, including more than 95 % of temperate and 90 % of tropical woodlands. Lands now characterized as “natural,” “intact,” and “wild” generally exhibit long histories of use, as do protected areas and Indigenous lands, and current global patterns of vertebrate species richness and key biodiversity areas are more strongly associated with past patterns of land use than with present ones in regional landscapes now characterized as natural. The current biodiversity crisis can seldom be explained by the loss of uninhabited wildlands, resulting instead from the appropriation, colonization, and intensifying use of the biodiverse cultural landscapes long shaped and sustained by prior societies. Recognizing this deep cultural connection with biodiversity will therefore be essential to resolve the crisis.

Keywords: agriculture | hunter-gatherer | extinction | conservation | Anthropocene

Erle C. Ellis, Nicolas Gauthier, Kees Klein Goldewijk, Rebecca Bliege Bird, Nicole Boivin, Sandra Díaz, Dorian Q. Fuller, Jacquelyn L. Gill, Jed O. Kaplan, Naomi Kingston, Harvey Locke, Crystal N. H. McMichael, Darren Ranco, Torben C. Rick, M. Rebecca Shaw, Lucas Stephens, Jens-Christian Svenning & James E. M. Watson

Significance: The current biodiversity crisis is often depicted as a struggle to preserve untouched habitats. Here, we combine global maps of human populations and land use over the past 12,000 y with current biodiversity data to show that nearly three quarters of terrestrial nature has long been shaped by diverse histories of human habitation and use by Indigenous and traditional peoples. With rare exceptions, current biodiversity losses are caused not by human conversion or degradation of untouched ecosystems, but rather by the appropriation, colonization, and intensification of use in lands inhabited and used by prior societies. Global land use history confirms that empowering the environmental stewardship of Indigenous peoples and local communities will be critical to conserving biodiversity across the planet.

LUNDGREN 2021

Erick J. Lundgren et al., *Equids engineer desert water availability*. [science](#) **372** (2021), 491–495.

[s372-0491-Supplement.pdf](#)

Megafauna play important roles in the biosphere, yet little is known about how they shape dryland ecosystems. We report on an overlooked form of ecosystem engineering by donkeys and horses. In the deserts of North America, digging of ≤ 2 -meter wells to groundwater by feral equids increased the density of water features, reduced distances between waters, and, at times, provided the only water present. Vertebrate richness and activity were higher at equid wells than at adjacent dry sites, and, by mimicking flood disturbance, equid wells became nurseries for riparian trees. Our results suggest that equids, even those that are introduced or feral, are able to buffer water availability, which may increase resilience to ongoing human-caused aridification.

Erick J. Lundgren, Daniel Ramp, Juliet C. Stromberg, Jianguo Wu, Nathan C. Nieto6c, Martin Sluk, Karla T. Moeller & Arian D. Wallach

Islam

MACDONALD 2015

Michael C. A. Macdonald, *Was There a “Bedouinization of Arabia”?* *Der Islam* **92** (2015), 42–84.

In 1953, Werner Caskel produced a theory which he called “the Bedouinization of Arabia”. In this, he maintained that around AD 100 Arabia was peaceful, dominated by settled states, with some non-tribal nomads who were simply “shepherds near the cities”. He contrasted this with Arabia in the sixth and seventh centuries in which he claimed “the Bedouin form of society and ideology prevailed”. The evidence he provided for this false dichotomy consisted of errors, misunderstandings and *argumenta ex silentio*, as was pointed out at the time, but his theory has nevertheless been widely accepted in the years which followed. In 1959, it was taken up and adapted by Walter Dostal who tried to explain the “Bedouinization” by producing a novel definition of the Bedouin as “camel-herders accustomed to fighting as rider warriors” and said that “Vollbeduinen” were only those who used the shadad or so-called “North-Arabian” camel saddle which, he imagined, gave them a secure seat from which to fight. In fact, however, there is no evidence at all that nomads in Arabia have ever fought from camel-back if they could possibly get off to fight on foot or on horseback. Nevertheless, in 1975, Richard Bulliet adopted Dostal’s idea and took it further by claiming that the use of the shadad made camel-riders an almost invincible force and this produced “an alteration in the balance of political power in favour of the nomads”. This gave apparent support to Caskel’s idea that the North Arabian Bedouin were able to sweep to military and political domination of the sedentaries by the sixth century AD. The present examination of these theories shows that there is no basis to them and, in doing so, argues that what is known of nomadic life in Arabia between AD 100 and 500 suggests continuity both in its structures and in its relations with the sedentaries.

Keywords: Arabia | Bedouin | Bedouinization | nomads | saddles | warfare | pre-Islamic | early Islamic state

Klima

BUSH 2021

M. B. Bush & C. N. H. McMichael et al., *Widespread reforestation before European influence on Amazonia*. *science* **372** (2021), 484–487. [s372-0484-Supplement.pdf](#)

An estimated 90 to 95% of Indigenous people in Amazonia died after European contact. This population collapse is postulated to have caused decreases in atmospheric carbon dioxide concentrations at around 1610 CE, as a result of a wave of land abandonment in the wake of disease, slavery, and warfare, whereby the attendant reversion to forest substantially increased terrestrial carbon sequestration. On the basis of 39 Amazonian fossil pollen records, we show that there was no synchronous reforestation event associated with such an atmospheric carbon dioxide response after European arrival in Amazonia. Instead, we find that, at most sites, land abandonment and forest regrowth began about 300 to 600 years before European arrival. Pre-European pandemics, social strife, or environmental change may have contributed to these early site abandonments and ecological shifts.

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