

## FINDING OUR PLACE

**DUE TO THE  
COVID-19  
PANDEMIC, CFAS  
FORUMS AND  
RECEPTIONS AT  
PROFESSIONAL  
CONFERENCES  
HAVE BEEN  
CANCELLED FOR  
2020**

One of the interesting aspects of the COVID-19 pandemic is the place of science in the public discourse. There is lots of talk about “following the science,” and “listening to scientists.” By science and scientist, commentators generally mean biomedical scientists and their research. Yet, as we write this column at the end of May, the most important treatments for the COVID-19 pandemic, while driven by medical information, have been social in nature—shutting down businesses, keeping people at home, maintaining “social” distance in public, and not allowing crowds. Such public policies are based on sound science about how the virus spreads. What is not clear is whether these policies

fully appreciate the social dynamics involved, which would best be based on rigorous, evidence-based sociological and psychological studies. The public discourse about how to keep communities safe and how to re-open society often seems more partisan than data driven. Social science, now more than ever, is needed.

Do archaeology and history have a place in this discourse? Thus far, accounts of the Spanish Flu and Black Plague have served as useful anecdotes about the size and scale of past pandemics. The social responses to epidemics in Greek and Roman times are eerily reminiscent of those of today. Reminding us that societies have lived with and survived pandemics in the past, often relying on similar social measures that we are adopting today, is comforting. However, can we learn anything from studying past pandemics about social processes that are not better studied by examining contemporary society?

We hear on the news that the COVID-19 pandemic will shape society for generations to come in unpredictable ways. Are there clues in the past that can inform on how societies change due to shocks such as pandemics over generations, centuries, or even millennia? Are some social configurations more resilient to these kinds of shocks than others? If we could isolate the social dynamics embedded in these situations that are best, if not uniquely, studied through a long-term lens, then archaeological studies might be critically important to how contemporary society moves forward.

## MOVING FORWARD

The COVID-19 pandemic has certainly affected CfAS activities. Receptions and forums have been cancelled for 2020 and plans for another design workshop this year have been put off. In other ways, however, the pandemic has allowed us to focus on ongoing projects and future plans. The first two CfAS-sponsored collaborative synthetic projects—Fire Management in the Border Lakes region and the ArchaeoEcology project—remain on schedule to finish this year. Stefani Crabtree updates us on the latter project in this newsletter.

The three human migration projects that were conceived at the SAA-EAA CfAS sponsored design workshop continue to develop: (1) establishing variation in global, historic rates of migration at regional and community levels; (2) examining how the characteristics of past migrations affected the different dimensions of human security; and (3) identifying the social conditions that made past societies more vulnerable to climate-related migration. Participants who first met in September 2019 at the Amerind Foundation are now melding into project teams, honing their project questions and research designs and seeking funding. Christopher Beekman was invited by Colorado State Senator Kerry Donovan (who worked for a while in CRM) to talk about the human security project (No. 2 above) in Convo from the Couch, an on-line program she hosts. An edited version of Chris' talk is provided below.

CfAS is also looking forward to launching new initiatives. The CfAS board of directors established the New Initiatives Committee, chaired by Daron Duke, with members including Michael Heilen, Matthew Peeples, Eszter Banffy, Penny Bickle, Scott Ortman, Keith Kintigh (ex officio) and Jeff Altschul (ex officio). Currently, the committee is focusing on developing ideas and themes for future design workshops, including drafting workshop statements and requests-for-information (RFIs).

## CfAS Partners

### Professional Organizations

- American Cultural Resources Organization (ACRA)
- Archaeology Division, American Anthropological Association
- Archaeological Institute of America (AIA)
- Chartered Institute for Archaeologists (CIfA)
- European Association of Archaeologists (EAA)
- International Scientific Committee on Archaeological Heritage Management (ICAHM)
- International Council for Archaeozoology (ICAZ)
- PanAfrican Archaeological Association (PAA)
- Society for American Archaeology (SAA)
- Society for Historical Archaeology (SHA)

### Cultural Heritage Firms

- Alpine Archaeology, Inc.
- Cultural Heritage Partners
- Cultural Resource Analysts, Inc.
- Desert Archaeology, Inc.
- Far Western Anthropological Research Group
- Landward Research, Ltd.
- PaleoWest Archaeology
- Statistical Research, Inc.

### Cyberinfrastructure Providers

- Archaeological Data Service (ADS; University of York)
- ARIADNE
- ASU, Center for Digital Antiquity (Arizona State University)
- Network for Computational Modeling in Social & Ecological Sciences (CoMSES Net)
- OCHRE Data Services
- Open Context

### Academic Units

- Center for Ancient Cultural Heritage & Environment (CACHE; Macquarie University)
- Center for Archaeology & Society (Arizona State University)
- Center for Public Archaeology, Capital Normal University (Beijing)
- Cotsen Institute of Archaeology (University of California, Los Angeles)
- Eurasia Institute of Earth Sciences, Department of Ecology and Evolution (Istanbul Technical University)
- Institute for European and Mediterranean Archaeology (University at Buffalo)
- Museum of Anthropological Archaeology (University of Michigan)
- Phoebe A. Hearst Museum of Anthropology (University of California, Berkeley)
- Santa Fe Institute (SFI)
- University of Arizona, School of Anthropology
- University of Colorado, Department of Anthropology

### Non-governmental Organizations

- Amerind Foundation
- Archaeology Southwest
- Center for American Archaeology
- Crow Canyon Archaeological Center
- The Field Museum
- Institute for Field Research (IFR)
- Integrated History & Future of People on Earth (IHOPE)
- School for Advanced Research (SAR)
- Shiyani Research Institute (India)
- SRI Foundation
- Wenner-Gren Foundation for Anthropological Research

Beyond developing new initiatives, CfAS continues to work with the University of Colorado (CU), Boulder, toward the establishment of the Center for Collaborative Synthesis in Archaeology (CCSA). CCSA will be housed in the CU Institute of Behavioral Science (IBS). To that end, CfAS and IBS have drafted a Memorandum of Understanding (MOU). The MOU has been reviewed by a task force established by the CfAS board of directors and attorneys for CU, Boulder. CfAS has retained an attorney in Colorado to review the MOU before it goes to the CfAS board of directors. Simultaneously, IBS and CU, Boulder, will be reviewing the MOU. Our goal is to have a signed MOU before the end of the year.

–Jeff Altschul and Keith Kintigh

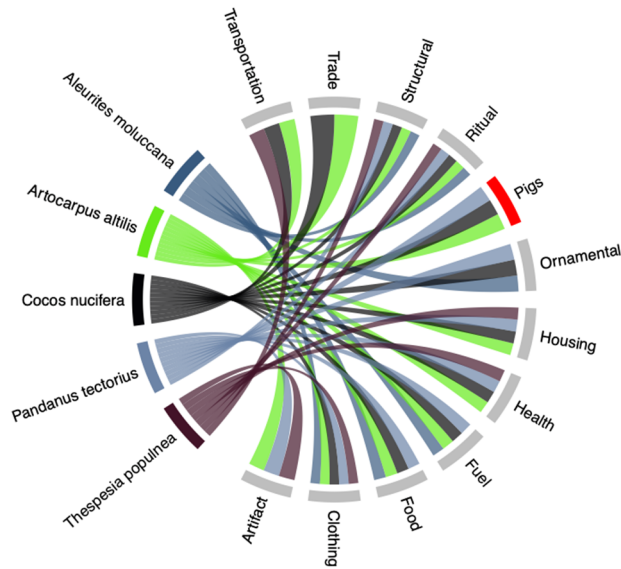
## **FINDING OUR PLACE IN HUMAN ECOSYSTEMS: THE ARCHAEOECOLOGY PROJECT**

*Stefani Crabtree is the Principal Investigator on the CfAS sponsored ArchaeoEcology Project. She is an Assistant Professor in Social-Environmental Modeling at Utah State University, ASU-SFI Fellow at the Santa Fe Institute, Fellow at Le Centre de Recherche Interdisciplinaire, Associate Investigator at the Australian Research Council, and a Research Associate in the Crow Canyon Archaeological Center's Research Institute.*

Understanding the human place in ecosystems has become an even more pressing need in light of recent global events. Since 2018 the CfAS-funded ArchaeoEcology Project has been doing just that. Using multiple case studies of pre-industrial societies, the team has set out to examine the ways that humans embed themselves in ecosystems, how human action can lead to more stable food webs, and how human action can sometimes lead to unraveled food webs and negative ecological consequences.

Most recently, the team met on Quadra Island, BC, in October of 2019 for a week-long workshop and writing retreat at the Tula Center for Coastal Dialogue. (The team was slated to meet in May of 2020 at the Santa Fe Institute but, like all conferences, this has been postponed.) While at Quadra Island, the ArchaeoEcology Project team made headway on several papers examining the human place in ecosystems.

Early findings suggest several places where we can identify commonalities of how humans make decisions related to biodiversity. One piece of comparison is how people recognize when the decisions they are making are actually detrimental to their own interests in the long run. For example, in French Polynesia, pigs were introduced as an important ritual and food product. However, on smaller and older islands, pigs were destructive to fauna that was important for human survival. Through our network analyses we identify where this conflict—wanting pigs for ritual but seeing pigs out-competing humans—may have led to the decision to extirpate pigs on these smaller islands. We see similar impacts in some of our other systems, where conflicts exist between key taxa.



*Five most critical taxa in French Polynesia linked to their many uses by people. Note that we include pigs here in red to show how they specifically target three of the identified taxa. Pigs competed with humans, especially on smaller and older islands, leading to difficult decisions to extirpate the animals.*

This work is still ongoing, but the results are promising. Via these network approaches we are discovering that humans are, indeed, among the most generalist feeders globally, occupying a key niche and providing key prey-dampening services to many ecosystems worldwide. We are starting to disentangle the ways that people incorporate traditional ecological knowledge that promotes stable and persistent ecosystems. We hope this work will be instrumental as we move forward in the twenty-first century and attempt to understand the greater ecosystem-human entanglements that are confronting us today.

*The ArchaeoEcology Project Team presented preliminary findings at the 2019 AAAS Meetings in Washington DC. Several interviews came out of these meetings, which are linked below.*

<https://www.nytimes.com/2019/02/08/science/australia-aboriginal-fires-martu.html>

<https://www.quantamagazine.org/with-food-webs-jennifer-dunne-puts-humans-back-into-ecology-20190321/>

<https://wydaily.com/local-news/2019/02/21/boatloads-of-pigs-and-a-lesson-in-cultural-ecology/>

<https://wydaily.com/local-news/2019/11/02/the-ancient-anthropocene-the-mystery-of-the-sweet-potato-and-how-bananas-became-seedless/>

<https://www.earth.com/news/hunters-australias-food-webs/>

<https://www.atlasobscura.com/articles/how-to-stop-australian-wildfires>

<https://phys.org/news/2019-02-reveals-humanity-roles-ecosystems.html>

## FINDING OUR PLACE ON HUMAN MIGRATION

*Christopher Beekman is an Associate Professor, Department of Anthropology, University of Colorado, Denver. He was a participant in the CfAS design workshop on human migration and is now a member of the research team examining how the characteristics of past migrations affected the different dimensions of human security*

In response to the COVID-19 pandemic, Colorado State Sen. Kerry Donovan (D) began hosting a virtual series, “Convos from the Couch,” to bring communities together during this time of social distancing. According to the Senator’s office, each “convo” is a “quick and interesting conversation on a topic you always wish you knew a little more about.” On April 22, 2020, Christopher Beekman (University of Colorado, Denver) was a guest on the show, speaking about “lessons on migration from archaeology.” An edited version of the conversation is provided below.

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**Lessons on migration from archaeology**

A project by the Coalition for Archaeological Synthesis

Hello Senator, thanks for having me. I hope I can alleviate some of the boredom for people while they are doing their part and staying isolated at home. I have been at home practicing social isolation for some 5 weeks now and saving the time I would spend commuting to campus or otherwise going out. But academics abhor a vacuum, so I have been filling my spare time with work on other projects, in particular the one I thought of talking about here today.

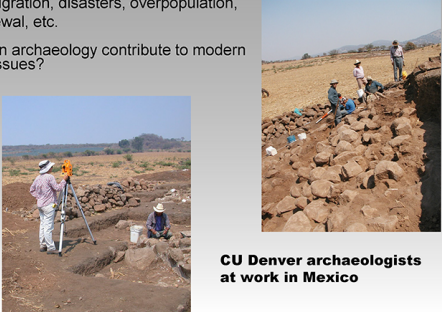
I am spending time working with my colleagues via Zoom on a project begun last year by the CfAS, fronted by Jeff Altschul (SRI Foundation) and Keith Kintigh (Arizona State University), and the physical Center is being established at CU Boulder and will be directed by Scott Ortman. The overall objective of the Coalition is to bring together existing archaeological data to inform the policy makers on contemporary issues. Economists, health experts, or specialists in other fields are commonly consulted on public policy. Archaeologists may be consulted on heritage preservation law or protecting archaeological sites, but rarely on social issues, which is really what archaeologists study. The Coalition’s position is that archaeology studies societies of every kind, across every continent, and across a truly enormous span of time. You can think of these as thousands of completed social experiments in the past, and archaeology is the only discipline in a position to tap into that information.

Archaeologists in the private sector and in educational institutions do their work to comply with legal requirements for heritage protection, or to answer social scientific questions. We don’t always engage with or have time to address the application of that knowledge to public policy issues.

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Academic and private sector archaeology have thousands of examples from around the world of human behavior in relation to climate change, migration, disasters, overpopulation, urban renewal, etc.

- How can archaeology contribute to modern policy issues?



**CU Denver archaeologists at work in Mexico**



But the Coalition is interested in doing precisely that, in taking what we've learned and offering evidence-based findings to policymakers.

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- First big project for the CfAS is on migration
- 258 million migrants worldwide live in a country different from where they were born<sup>1, 2</sup>
  - Climate change alone predicted to add 200 million to this number by 2050<sup>3</sup>
  - Migrations commonly caused by economic, political, climatic instability
  - Can have a variety of impacts at the destination, positive and negative, short-term and long-term
  - Claims about migrants commonly made based on short-term perspective, and policies are largely reactive rather than proactive

1. UN Refugee Agency (UNHCR) "Figures at a Glance" <https://www.unhcr.org/uk/figures-at-a-glance.html>  
 2. United Nations (UN) "Migration" <https://www.un.org/en/sections/issues-depth/migration/index.html>  
 3. O. Brown, Migration and Climate Change, IOM Migration Research Series 31, International Organization for Migration, Geneva, 2008.

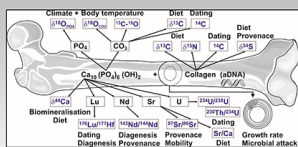
A group of about 20 of us met last September at the Amerind Foundation in Arizona for a 4-day workshop to discuss what archaeology could contribute to the specific issue of migration. Migration is obviously a topic of great significance today, and in fact the topic was selected by Felipe Criado-Boada of the European Association of Archaeologists in response to the refugee crisis out of Syria.

At its origin points, migrations can be provoked by political and economic instability, by violent conflict, and increasingly by disruption of the environment due to global warming. At the destination points, migrants are often perceived as putting pressure on local resources. But the interpretations and claims about migration are very commonly made from a short-term perspective. In the long term, migrants can actually bring new skills, add to the economy, and have other impacts that are less visible to us when we are "in the moment."

At its origin points, migrations can be provoked by political and economic instability, by violent conflict, and

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- How do archaeologists recognize migrations?
- High tech: Ancient DNA, skeletal analysis, and chemical signatures in the bone
  - Low tech: The retention of cultural practices among migrants, such as clothing, diet, burial rites, household life, and other things that people choose to retain even after migrating
  - Comparison to documents, etc.



Research page of Thomas Tütken, [https://www.paleontology.uni-mainz.de/en\\_pub\\_tt.html](https://www.paleontology.uni-mainz.de/en_pub_tt.html)



The Anglo-Saxon invasion and the beginnings of the 'English,' <https://www.ourmigrationstory.org.uk/oms/anglo-saxon-migrations>

Archaeologists have been identifying migrations successfully for the past century at least, but technology has made it much easier in recent years. We can use ancient DNA, skeletal traits, and even chemical signatures in the skeleton that indicate where people were raised. But people may also retain many of their prior ways of doing things, such as how they dress, how they prepare food, how they bury the dead, how they organize house space, and many others. They may choose to downplay some of those if they are trying to avoid standing out wherever they have migrated, but

some practices typically remain, especially in private settings.

Archaeology has the long-term perspective that is more amenable to forward-looking public policy and has access to concrete data on migrations from the past 100,000 years or more, right up to the twenty-first century. It is important to understand that archaeology can be defined two ways—many people define it as the study of the human past, but it is also the study of human behavior through how we use and think about objects and materials and buildings and cities. So historians may use documents, ethnographers may use interviews, and archaeologists use things and where we find them.

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- Archaeology**
- Has access to data on migrations since our ancestors left Africa 120,000 years ago up to the twenty-first century

- Archaeology can be defined as
- the study of the human past, or . . .
  - the study of human behavior through *material culture* (tools, toys, clothes, furniture, buildings, cities, etc.)




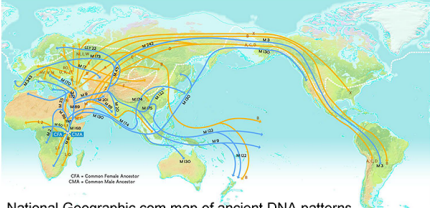
American Museum of Natural History

You might have heard about the Garbage Project many years ago, in which archaeologists looked at how people in Tucson, Arizona, bought, used, and discarded food and drink and especially focused on times of scarcity. We learned that people often fib about how much they drink, how much they conserve, and how much they recycle. Looking at people through their things then offers another approach to understanding behavior that actually has advantages over what might seem the most direct approach—just asking them.

Besides Scott Ortman at Boulder, I am the other archaeologist in the CU system who is working on this particular project. The group is pursuing different aspects of migration that we think we can pull from the archaeological record.

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We plan to answer questions about migration using test cases from early *Homo sapiens*, modern Europe, my work in Mexico, and the research of my colleagues

Passports pre- and post-Brexit grant very different travel rights

National Geographic.com map of ancient DNA patterns

How common was migration in the past?

Which people are most vulnerable to migration due to climate change?

How does migration impact human security for both migrants and local people?

So the Coalition project on migration not only looks at the wide range of cases from the past, but some of the group are archaeologists who study modern-day migrants, as I said. For example, what the things they

carry with them—such as memory pieces from home—say about their experience as migrants; how their access to identifying documents such as passports can have a real impact on their fate; the material conditions in which they are living, whether we are talking about refugee camps or community centers, once they have been relocated. We are fortunate then in that my colleagues are experts in studying migrations across a range of scales, from Neanderthals right up to post-WWII refugee movements. My own research has looked at migrations associated with droughts in northern Mexico from around the years 500–900 A.D.

Our particular problem is to understand how migration impacts various forms of human security. The United Nations has defined seven forms of human security, upon which people's peace and prosperity largely depend (Food, Environmental, Personal, Health, Economic, Community, and Political Security). This gives us a good framework for assessing those aspects of daily life that have been identified as most central to our well-being. So while food security and personal security are obvious and straightforward, the UN also considers health care, environment, access to political decision-making, and maintaining the integrity of one's way of life. How

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How does migration impact "human security" for both migrants and local people?

United Nations has defined seven forms of human security, upon which people's peace and prosperity largely depend:

- Food
- Environmental
- Personal
- Health
- Economic
- Community
- Political Security

How do the impacts on forms of human security vary depending on the physical and social barriers placed on migration?

What is a "successful" outcome? What were the factors that allowed that to be achieved?

do these change for people depending on the social or physical barriers put up to limit their movement, for instance? The upshot is that we want to know what constitutes a successful outcome and how that has been achieved in other cases.

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Abidjan, Ivory Coast Edwardsville, Illinois	Denver, Colorado Tucson, Arizona Devon, England	Barcelona, Spain Tübingen, Germany
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My colleagues on our particular project are Rachael Kiddey (University of Oxford), Corey Ragsdale (Southern Illinois University, Edwardsville), Juan Antonio Barceló (Universitat Autònoma Bellaterra), Andrew Kandel (University of Tübingen), and Hélène Timpoko Kienon-Kaboré (University Felix Houphouët-Boigny). We have been using Zoom on a regular schedule to discuss and identify those case studies for which we have the most information. As you can see, it is a typical Zoom meeting across eight time zones from Denver to Tübingen to Abidjan, with occasional protests from family members as our meeting interrupts mealtime. We have been selecting our initial cases, and we will expand the analysis once we get through these first examples and have developed a more specific procedure for how to carry out the analysis.

So far, we have been zeroing in on the distinctions across three contexts for migration. The first is in situations of practically no social barriers to migration, such as the expansion of *Homo sapiens*, who only had to contend with geographic barriers. A second category is of migrations in contexts in which some social barriers existed that would have prevented or structured or funneled migrations, such as movements to cities in the ancient world. The third category is in situations of very significant legal, political, and other barriers, best known from the modern world. Looking across these

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Too early for conclusions, but we found that one effective way of dividing up our cases was to look at the presence of barriers to movement.

- Geographic barriers with low densities of people
  - *Homo sapiens* expanding from Africa into Europe and meeting Neanderthals
- Social barriers among people living in towns, cities
  - Migrations associated with political centralization at the third century Mexican city of Teotihuacan and the medieval Mali Empire of West Africa
- Political and legal barriers between people living in bureaucratic states
  - Post WWII Jewish refugees out of Europe

very different contexts should allow our group to isolate the different important factors to begin understanding how successful migrations occurred. So for instance, the first group may not have had any barriers to movement, but they also did not have any prior knowledge about distant areas and no connections to that valley over the mountains. In a modern setting, we might have substantial connections to the place we want to go—family members might live there, we might have information about that place—but there are much more narrow legal and political pathways to get there.

So it's early days. Archaeologists study human beings, and so our tendency was to try to meet in person. The coronavirus seriously interrupted our plans to get together, however, and in some ways I think that current events lit a fire under us to find alternate ways to move forward on the project right now rather than scheduling physical meetings in the summer. The important thing for us is that we do this carefully and methodically to develop truly evidence-based findings that can be passed on to policy makers like our host here today.



Thank you all very much for your time, and I hope everyone learned something new about archaeology and how it might be applied to modern issues of importance.

## WHAT WE'RE READING

As with many of you, we've been reading a lot these past few months. Much has been published that is relevant to CfAS' projects and, more generally, to its mission. Here, we list just a few of our favorites.

### Technical Studies

A new kind of relevance for archaeology, by Scott Ortman

<https://www.frontiersin.org/articles/10.3389/fdigh.2019.00016/full>

An archaeological strontium isoscape for the prehistoric Andes: Understanding population mobility through a geostatistical meta-analysis of archaeological  $^{87}\text{Sr}/^{86}\text{Sr}$  values from humans, animals, and artifacts, by Beth Scaffidi and Kelly Knudson

<https://www.sciencedirect.com/science/article/pii/S0305440320300431?via%3Dihub>

Future of the human climate niche, by Chi Xu, Timothy Kohler, Jens-Christian Svenning, and Marten Scheffer

<https://www.pnas.org/content/117/21/11350>

The Importance of Spatial Data to Open-Access National Archaeological Databases and the Development of Paleodemography Research, by Eric Robinson, Christopher Nicholson, and Robert Kelly

<https://www.cambridge.org/core/journals/advances-in-archaeological-practice/article/importance-of-spatial-data-to-openaccess-national-archaeological-databases-and-the-development-of-paleodemography-research/8B9109C4C9ECA4FE5A0C2F8C702808E9>

Archaeology, climate, and global change [Special Feature], by Torben Rick and Daniel Sandweiss (eds.)

[https://www.pnas.org/archaeology\\_climate\\_global](https://www.pnas.org/archaeology_climate_global)

### Public Opinion

The elites were living high. Then came the fall, by Annalee Newitz

<https://www.nytimes.com/2020/05/11/opinion/sunday/coronavirus-inequality-history.html>

Billions could live in extreme heat zones within decades, study finds, by Henry Fountain

<https://www.nytimes.com/2020/05/04/climate/heat-temperatures-climate-change.html>

Thank you to Senator Donovan and her staff, and to my colleagues in the Coalition



Codex Boturini, sixteenth century, and the migration of the Aztecs into central Mexico

As Himalayas warm, Nepal's climate migrants struggle to survive, by Bhadra Sharma, Kai Schultz, and Rebecca Conway

<https://www.nytimes.com/2020/04/05/world/asia/nepal-himalayas-glacier-climate.html?searchResultPosition=3>

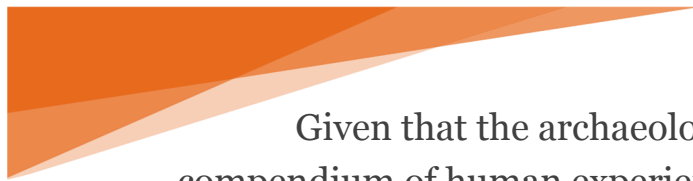
Who is responsible for migrants?, by Felipe Filomeno

<https://theconversation.com/who-is-responsible-for-migrants-108388>

Native people did not use fire to shape New England's landscape, by Wyatt Oswald, David Foster, and Elizabeth Chilton

<https://theconversation.com/native-people-did-not-use-fire-to-shape-new-englands-landscape-129429>

Of course, this is just the tip of the iceberg. If you have others, please let us know and we'll supply the links to CfAS Partners and Associates.



Given that the archaeological record is the most extensive compendium of human experience there is, it seems only natural that the results of archaeological research should have an impact on discussions concerning contemporary issues. But so far there seems to have been limited success in this regard. Why is this? What would an archaeology that has practical relevance beyond archaeology look like? How would it be different from the archaeology many of us practice right now?

**Scott Ortman – A New Kind of Relevance for Archaeology**



# Coalition for Archaeological Synthesis



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*Fostering Synthesis in Archaeology  
to Advance Science and Benefit  
Society*

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