

## Lunch break science: Digestible human origins videos by the Leakey Foundation

On June 25, 2020, the Leakey Foundation launched a new online outreach effort: Lunch Break Science. The explicit goal of this effort is exploring questions related to human origins and “hearing about the exciting research Leakey Foundation grantees are conducting all over the world through short lectures or interviews with Leakey Foundation scientists,”<sup>1</sup> followed by Q&A with the online audience. As the participants are all Leakey Foundation grantees, an implicit goal of this series is to highlight research funded by the Foundation. This virtual series is part of a broader response to COVID-19 by the Leakey Foundation to offer online content given the inability to hold in-person events. There are currently 33 episodes of Lunch Break Science freely available for viewing as a playlist on the Leakey Foundation YouTube channel,<sup>2</sup> and each episode has between 200 and over 1800 total views (as of September 15, 2021). The videos range in length from 29:58 to 1:14:36. These programs are facilitated by a host, Arielle Johnson, a Leakey Foundation employee. They are initially aired live at 11:00 a.m. PT/2:00 p.m. ET; given this time slot, these programs seem targeted to a US audience, as it is not “lunch time” for all interviewees or audience members. They are viewable on YouTube, Twitter, Facebook, and the Leakey Foundation Live website. This multi-platform broadcast is a great means to increasing audience numbers. The Leakey Foundation's other main online outreach efforts include longer, more formal Leakey Foundation Lectures (currently 30 lectures available), and a podcast series “Origins Stories” (currently 45 episodes available), all available on their website<sup>3</sup> or their YouTube channel.<sup>4</sup> What the Lunch Break Science videos offer that are different from their other online outreach efforts is that they are more concise than the formal lectures, and they include visuals, audience Q&A, and discussion topics such as career paths which the podcasts do not.

To undertake this review, I chose five of the 32 currently available episodes to watch. This was not a random sample; I deliberately chose episodes featuring scholars whose research areas I was familiar with so that I could view a variety of topics (paleoecology, genomics, primate behavior, archaeology, and human skeletal biology); scholars from early, mid, and later career stages; and episodes from early on in the series to more recent. I chose Episode 3: Chalachew Seyoum (34:19) “Explore the adaptation of early humans' diet to their environments with Leakey Foundation grantee Chalachew Seyoum. He also discusses his discovery of the oldest *Homo* specimen, dated 2.8 Ma”; Episode #8, Anne Stone (41:16) “Explore the evolution of pathogens with Leakey Foundation grantee Anne Stone”; Episode 13, Catherine Markham (48:00) “Meet Leakey Foundation grantee Catherine

Markham and learn about the social competition in primate groups and her science outreach program Shutterbug Science. This special episode of Lunch Break Science is part of the Bay Area Science Festival”; Episode 22, Naomi Cleghorn (54:54) “Meet Leakey Foundation grantee Naomi Cleghorn and learn about the archaeology of Knysna Cave in South Africa”; and Episode 30, Habiba Chirchir (58:23) “Meet Leakey Foundation scientist Habiba Chirchir and learn what changes in the skeletal anatomy of our ancestors tell us about their behavior.” As far as I can tell, the Leakey Foundation has made an effort to include topics from across the range of research areas that their grantees undertake related to human origins.

The format of these programs can be summarized as follows: First, the Leakey Foundation host introduces the program, and then asks the scientist a few questions that allow them to explain the basics of their research and establish foundational background knowledge for the audience. From my sample of episodes, I found that this introductory part of the program in more recent episodes also includes a question to the scientist about how they got interested in their research and their career path; I really like this addition as it personalizes and humanizes the interviewee scientist. This part of the program is “two talking heads”—the host and the scientist—with some images often interspersed with the dialogue. Following this, the host invites the scientist to give their presentation, which in all of the episodes I watched except Episode 3 included a PowerPoint (or similar) slideshow of varying length. Audience members can ask questions or make comments during the live event, and the host indicates that the earlier an audience member enters a question, the more likely it will be asked. Questions are mainly asked at the end; they appear in text on screen (including the name of the person who asked the question) and are read by the host to the featured scientist, who then answers the question. The length of the Q&A varies by episode, presumably due to the number of questions submitted and the length of time of the program by the time the Q&A segment occurs. Regarding accessibility, the English language closed captions can be turned on and off when viewing the videos on YouTube. The captions are generally accurate, though some technical terms are incorrect (which is a fairly common occurrence in videos), likely because the captions seem to be auto-generated; it would be useful for the Leakey Foundation to have someone check these captions and fix any errors. I did not see any associated downloadable transcripts available. While links that include some related content or resources are viewable in the video

chat on the side, it could be useful to also include these links in the information below each YouTube video. That would make it easier for educators to build lectures, lessons, or homework assignments around these videos.

The content in all of the episodes I watched was generally accessible to broader audiences, but would still be useful for undergraduate-level courses. Chirchir in particular did an excellent job of defining technical terms and outlining her research methods. I particularly liked how scientists included “behind the scenes” or more informal information. For example, Seyoum talked about “lots of handshakes and hugs” that were given when he found the fossil jaw fragment of what is now known as the earliest member of the genus *Homo*; Cleghorn's presentation included compelling video and drone footage and explained a lot about the process of archaeological excavation. The scientists were also invited to talk about their outreach or other non-research related efforts, including Seyoum's establishment of a comparative skeletal collection at the National Museum of Ethiopia; Markham's science outreach program including downloadable primate coloring sheets; and Chirchir's efforts introducing curriculum materials on human evolution to Kenyan high school biology teachers.

In sum, the Leakey Foundation's Lunch Break Science is a series of videos featuring interviews with and presentations by scientists that are accessible to general audiences but still have a lot to offer to experts, enthusiast audiences, and undergraduate students.

LUNCH BREAK SCIENCE: Interviews and short educational talks from Leakey Foundation scientists. <https://www.youtube.com/playlist?list=PLy-s5bLMlx0uvjwQ9jZEp4htWlGk3shel>

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#### ENDNOTES

- <sup>1</sup> <https://leakeyfoundation.org/summer-virtual-series-lunch-break-science-launches-june-25/>
- <sup>2</sup> <https://www.youtube.com/playlist?list=PLy-s5bLMlx0uvjwQ9jZEp4htWlGk3shel>
- <sup>3</sup> <https://leakeyfoundation.org/>
- <sup>4</sup> <https://www.youtube.com/user/TheLeakeyFoundation>