



**HUMAN ORIGINS AND HUMANITY'S FUTURE:  
PAST, PRESENT, AND FUTURE OF THE ANTHROPOCENE**  
Virtual Public Symposium · Saturday, March 5, 2022

**Co-chairs:**

Leslie Aiello, University College London  
Charles Kennel, Scripps Institution of Oceanography & University of Cambridge

**Sponsored by:**

Center for Academic Research and Training in Anthropogeny (CARTA)

---

**BIOGRAPHICAL SKETCHES: CO-CHAIRS**



**Leslie Aiello** is Professor Emerita, University College London and President Emerita, Wenner-Gren Foundation for Anthropological Research. Her academic interests focus on the evolution of human adaptation as well as on the broader issues of evolutionary theory, life history, energetics, and the evolution of the brain and cognition. She has degrees from the University of California, Los Angeles and from the University of London. She spent the majority of her academic career at University College London (1976-2005) and returned to the US to head the Wenner-Gren Foundation for Anthropological Research (2005-2017). She was president of The American Association of Biological Anthropologists from 2018-2019 and currently serves on the Board of the Smithsonian's National Museum of Natural History. Throughout her career she has been active with the media in the public dissemination of science and has served as consultant and advisor to a variety of international anthropological institutions and initiatives.



**Charles F. Kennel** is distinguished professor, vice-chancellor, and director emeritus at the Scripps Institution of Oceanography at the University of California, San Diego. He was educated in astronomy and astrophysics at Harvard and Princeton. He joined UCLA's Department of Physics and its Institute for Geophysics and Planetary Physics where he pursued research and teaching in theoretical space plasma physics and astrophysics, eventually chairing the Physics Department. From 1994 to 1996, Kennel was Associate Administrator at NASA and leader of its Earth science satellite program. Kennel's experiences at NASA influenced him to change into Earth science, and he became the ninth Director of Scripps Institution of Oceanography, serving from 1998 to 2006. During winter terms 2007, 2010, 2012, 2014, and 2015-2020, he was a Distinguished Visiting Scholar at Christ's College, Cambridge.

**BIOGRAPHICAL SKETCHES: SPEAKERS**



**Veerabhadran Ramanathan** is a distinguished professor emeritus of Atmospheric and Climate Sciences at the Scripps Institution of Oceanography, UC, San Diego. In 1975, he discovered the super greenhouse effect of Chlorofluorocarbons (also known as freons used as refrigerants). Along with R. Madden, he predicted in 1980 that global warming would be detected by 2000. In 1989, Ramanathan led a NASA study that used satellite instruments to show that clouds had a large global cooling effect. He led an international field experiment with Paul Crutzen in the 1990s that discovered the widespread Atmospheric Brown Clouds (ABCs) over South Asia, which have devastating health and climate impacts. Ramanathan developed light-weight unmanned aerial vehicles to track pollution plumes from South Asia, East Asia, and North America. His most recent discovery is that mitigation of short-lived climate pollutants (black carbon, methane, ozone and HFCs) will slow down global warming significantly during this century. The United Nations and 30 countries, including USA, have now adopted this proposal and a new coalition, called the Climate and Clean Air Coalition, is implementing mitigation actions for short-lived climate pollutants. He advised then Governor Jerry Brown to pass a bill to drastically reduce emissions of short-lived climate pollutants in California. He founded Project Surya, to mitigate black carbon and other climate-warming emissions from solid biomass cooking in S. Asia and Kenya and is documenting their effects on public health and environment. At the University of California (CA), he led the most ambitious effort of his career: Bending

the Curve: Climate Change Solutions. The Bending the Curve report written with fifty leading academics at UC outlines ten interdisciplinary solutions to the climate problem. He followed this with an undergraduate educational protocol, named Bending the Curve: Climate Solutions, to educate a million climate warriors and climate stewards, which is being taught at many campuses in the US and abroad. Ramanathan has received numerous prestigious awards and prizes, including being named the 2018 Tang laureate for Sustainability Science and was honored in 2021 with the Blue Planet Prize. He was also the science advisor to Pope Francis' Holy See delegation to the Paris climate summit and is now leading a Pontifical Academy initiative at the Vatican titled: Resilience of People and Ecosystems under Climate Stress.



**Michael Purugganan** is the Silver Professor and Professor of Biology at New York University. He received his B.S. in Chemistry from the University of the Philippines (1985), an M.A. from Columbia University (1986) and a Ph.D. in Botany with a Global Policy minor at the University of Georgia (1993). After obtaining his Ph.D., he did postdoctoral research as an Alfred P. Sloan Molecular Evolution Fellow at the University of California, San Diego, studying the evolution of development (1993-1995). Purugganan is a leader in the field of evolutionary and ecological genomics and his work focuses on identifying the molecular basis for evolutionary adaptations that occur in nature. Prior to joining the NYU faculty in 2006, he was the William Neal Reynolds Distinguished Professor of Genetics at North Carolina State University, where he also won the Outstanding Faculty Research Award and the Sigma Xi Research Prize. He is the recipient of an

Alfred P. Sloan Foundation Young Investigator Award, a Guggenheim Fellowship, is a Kavli Fellow, and in 2005 was elected a Fellow of the American Association for the Advancement of Science. Purugganan has served on the editorial boards of the journals *Molecular Biology and Evolution*, *Molecular Ecology*, *Trends in Plant Science* and the *Annual Review of Ecology, Evolution and Systematics*.



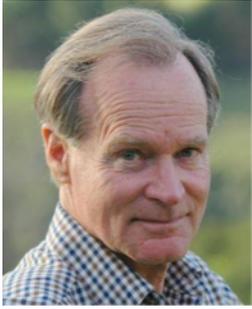
**Mark Moffett** is a biologist who has spent the last several years studying the organization of societies in humans and other animals while on sabbatical at the National Evolutionary Synthesis Center in Durham and as a visiting scholar at the Department of Human Evolutionary Biology at Harvard University. Moffett completed his doctorate at Harvard on the evolution and social organization of an ant species with army ant behaviors under the ecologist Edward O. Wilson and is currently Research Associate in Entomology at the National Museum of Natural History. Before that he held a research position at the Museum of Vertebrate Zoology at University of California, Berkeley and spent two years as an assistant curator in charge of the ant collection at Harvard's Museum of Comparative Zoology. His work in over 100 countries has resulted not only in academic publications but achievements in public outreach that have included major museum exhibits and books such as *The Human Swarm: How Our Societies Arise, Thrive, and Fall* (Basic Books, 2019).



**Vanessa Ezenwa** is a Professor in the Department of Ecology and Evolutionary Biology at Yale University. Her research focuses on the ecology and evolution of infectious diseases in wild animal populations. She has a long-standing interest in understanding how host social behavior and interactions between co-occurring pathogens influence the consequences of infectious diseases at multiple scales of biological organization. Ezenwa received her B.A. in Biology from Rice University and Ph.D. in Ecology and Evolutionary Biology from Princeton University. She was a National Research Council Fellow at the USGS before joining the faculty at the University of Montana in 2005. From 2010 to 2021, she held joint appointments in Odum School of Ecology and Department of Infectious Diseases at the University of Georgia, where she was appointed a Georgia Athletic Association Professorship. Vanessa currently serves as a senior editor at *Ecology Letters* and second president-elect of the Animal Behavior Society.

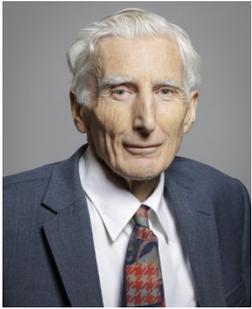


**Nancy Knowlton** is a coral reef biologist who spent much of her career at the Smithsonian, in Panama at the Smithsonian Tropical Research Institute and at the National Museum of Natural History in Washington, DC, prior to moving to Brooksville in Maine. She was also a professor at Yale and the Scripps Institution of Oceanography, University of California, San Diego, where she founded and led the Center for Marine Biodiversity and Conservation. Knowlton is a global board member of The Nature Conservancy, was the Editor-in-Chief of the Smithsonian's *Ocean Portal*, and helped lead the Census of Marine Life coral reef program. In 2013, she was elected to the American Academy of Arts and Sciences and to the U.S. National Academy of Sciences. Knowlton is a winner of the Peter Benchley Prize, the Heinz Award, the Women's Aquatic Network 2018 Woman of the Year award, the National Marine Sanctuary Foundation Lifetime Achievement Award, and the International Coral Reef Society's Darwin Medal. She is the author of *Citizens of the Sea* (National Geographic, 2010) and helped launch #OceanOptimism on Twitter, where you can follow her at @SeaCitizens.



**David (Jonah) Western** has directed the Amboseli Conservation Program in Kenya since 1967, and his work led to community-based conservation based on the coexistence of people and wildlife. Western directed Wildlife Conservation Society programs internationally, established Kenya's Wildlife Planning Unit, chaired the African Elephant and Rhino Specialist Group, and was founding president of The International Ecotourism Society. He is former adjunct professor in Biology at the University of California and director of the Kenya Wildlife Service, and founded the African Conservation Centre in Nairobi. His books include *Conservation for the Twenty-first Century* (Oxford University Press, 1992); *Natural Connections: Perspectives in Community-based Conservation* (Island Press, 1994); *In the Dust of Kilimanjaro* (Island Press, 2001); *Kenya's Natural Capital: A Biodiversity Atlas* (Government of Kenya, 2015), and *We Alone: How Humans*

*Have Conquered the Planet and Can Also Save it* (Yale University Press, 2020). He is the recipient of the World Ecology Award and the Life-time Achievement Award for Ecotourism.



**Martin Rees** is a Fellow of Trinity College and Emeritus Professor of Cosmology and Astrophysics at the University of Cambridge. He holds the honorary title of Astronomer Royal and also Visiting Professor at Imperial College London and at Leicester University. After studying at the University of Cambridge, he held post-doctoral positions in the UK and the USA before becoming a professor at Sussex University. In 1973, he became a fellow of King's College and Plumian Professor of Astronomy and Experimental Philosophy at Cambridge (continuing in the latter post until 1991) and served for ten years as director of Cambridge's Institute of Astronomy. From 1992 to 2003 Rees was a Royal Society Research Professor, and then from 2004 to 2012 Master of Trinity College. In 2005 he was appointed to the House of Lords, and he was President of the Royal Society for the period 2005-10. Rees is also one of the co-founders of The Cambridge Centre for

the Study of Existential Risk (CSER).