

Carole L Crumley, ex. officio, is Professor of Anthropology (emerita)

at the University of North Carolina, Chapel Hill (USA) and Visiting Professor at the Centre for Biodiversity, Swedish University of Agricultural Sciences (Uppsala). She has been with IHOPE since 2003. Her PhD (Anthropology, University of Wisconsin-Madison) was preceded by training in archaeology, classics, geology, climatology, and ecology; she is a founder of historical ecology. She began fieldwork in North America and the Near East but soon focused on Europe, where with colleagues she studies long-term landscape change in Burgundy, France. Long active in international global change programs, she writes about complex dynamic systems in the social sciences, issues in transdisciplinary research, integrated global-to local-scale historical ecology, climate history, landscape evolution, social inequality, social memory and the future of the past.



Anneli Ekblom's main research interest the last years has been

centred on socio-environmental dynamics; an interdisciplinary study residing in the intersection between Environmental History, Historical Ecology and Archaeology.

Her PhD thesis (Ekblom 2004) presented an analysis of the socio-environmental history of a village, Chibuene, situated in coastal Mozambique and this work has been expanded recently submitted paper (Ekblom 2008, Ekblom 2012, Ekblom et al 2014). She is thus currently involved in a VR project that looks on the long term socio-environmental history of Limpopo National Park, Mozambique (Ekblom, Gillson, Notelid 2011) as well as also a number of other projects, see below.

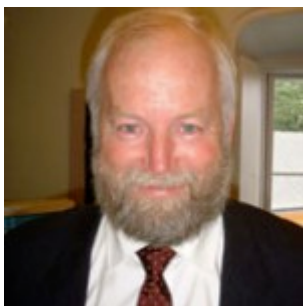
- Project leader for the research node **Mind & Nature**
- **IHOPE** Scientific steering committee member
- Boardmember of **Societas Archeologica Upsaliensis**, SAU.
- Coordinator for the **Ma programme in Global environmental History**, The 2 year masters programme in Global Environmental History provides students with advanced theoretical and empirical knowledge on the relationship between people and nature, from the perspective of the social sciences and the humanities.



Innocent Pikirayi is a Professor in archaeology and Head of the Department of Anthropology and Archaeology at the University of Pretoria. His research focuses on the rise, development and demise of states societies in Southern Africa since the early second millennium AD. He is currently conducting geoarchaeological investigations around Great Zimbabwe to document the ancient city's water resources, and assess the role of water in sustaining urban growth in the region. His other research interests lie in the relevance of the discipline of archaeology to contemporary societies in southern Africa.



Joseph A. Tainter is Professor of Sustainability in the Department of Environment and Society, Utah State University, having previously served as Department Head. He received his Ph.D. in Anthropology from Northwestern University in 1975. He worked on issues of sustainability before the term became common, including his acclaimed book *The Collapse of Complex Societies* (Cambridge University Press, 1988). He is co-editor of *The Way the Wind Blows: Climate, History, and Human Action* (Columbia University Press, 2000), a work exploring past human responses to climate change. With T. F. H. Allen and T. W. Hoekstra he wrote *Supply-Side Sustainability* (Columbia University Press, 2003), the first comprehensive approach to sustainability to integrate ecological and social science. His most recent book is *Drilling Down: The Gulf Oil Debacle and Our Energy Dilemma*, with Tadeusz Patzek (Copernicus Books, 2012). Tainter has taught at the University of New Mexico and Arizona State University. Until 2005 he directed the Cultural Heritage Research Project in Rocky Mountain Research Station.



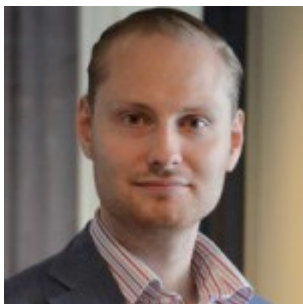
Paul Sinclair, Co-Chair, is Professor of African Archaeology, and has been particularly interested in evidence based spatial analysis of material culture

distributions in regional and landscape perspectives. He has worked on socio-environmental interactions in farming community and urban contexts in the central African and Indian Ocean regions. The complexity of linear and non-linear processes operating in multi-scalar contexts underline the need for joint research teams and therefore he has been engaged in comparative work in Mozambique, Madagascar and Sri Lanka. Sinclair has also been involved in re-thinking the role of Africa in the Indian Ocean trading networks resulting from the recent identification of 1st millennium BC Harappan and early Buddhist ceramics on the coast of East Africa. 400 dated sites from the last 12 000 years are viewed in time series in relation to soils and vegetation covers and provide a comparative basis for comparison with similar data from the Amazon region and from South East Asia.



Valentina Caracuta Archaeobotanist, Palaeoecologist,

Palaeoclimatologist currently employed as Researcher at the Laboratory of Archaeobotany and Palaeoecology. University of Salento-Lecce, Italy. My research focuses on the Southern Levant, and I aim to identify the environmental changes between the Late Pleistocene and the Early Holocene, and to study the adaptive strategies developed by the prehistoric humans in response to the changing environment. In the course of my research, I use archaeological plant remains to investigate a wide range of human behaviour and to identify short-term climate changes driven by both natural and anthropogenic agents. I systematically apply radiocarbon dating to the plant macrofossils to measure the temporal extent of environmental change or to compare climatic events on an absolute chronological scale. I measure the stable carbon isotope ratio ($\delta^{13}\text{C}$) of archaeological plant remains to obtain information about the water input received by the plant during its life cycle, which in turn provide insights into local changes in precipitation. The combination of ^{14}C and $\delta^{13}\text{C}$ dating of the archaeological plant remains allows me to identify changes in the regional palaeorainfall regime directly from plant material collected in the archaeological layers, and thus provides a critical and unique insight into the history of past climate. Over the years, I have explored the potential of such a methodology to infer information about the palaeoclimate and agricultural practices across a large number of key sites in Syria, Italy, Egypt and Israel.



Fredrik Charpentier Ljungqvist is Secretary for the

Centre of Medieval Studies at Stockholm University, Sweden, and is a medieval historian and palaeoclimatologist. He is affiliated to the Bolin Centre for Climate Research, Stockholm

University, and is Core Team Member in the *Past Global Changes*(PAGES) 2k Consortium Euro/Med2k Working Group, focusing on reconstructing past climate in the Europe and the Mediterranean over the last 2,000 years. He is author or co-author of over 20 peer reviewed articles in English and have published two books in Swedish. Currently, he is engaged in several research projects in both medieval history and palaeoclimatology.



Maurits Ertsen is Associate Professor at Water Resources, Delft University of Technology. In his research, Irrigation is closely associated with the start of human civilization; it also has been a major technology in colonial rule and development cooperation. Irrigation is gaining renewed recognition with current climate variability. Ertsen seeks to explore how irrigation realities emerge from the many short-term actions of human agents and am fascinated how central planning is met by farmer responses. He is engaged in projects in the USA, Peru, Kenya, the Netherlands, Kurdistan, Vietnam and China and treasurer of the International Water History Association and secretary of the Dutch Association of Water History. With Heather Hoag (University of San Francisco), he is also the editor of *Water History* , the journal of IWHA.



John Finnigan received a BSc in aeronautical engineering from the University of Manchester in 1968 and a PhD in micrometeorology from the Australian National University in 1978. From 1989 to 1995 he was Head of the CSIRO Centre for Environmental Mechanics, an interdisciplinary research unit organised around the flow of material and energy through the soil-plant-atmosphere continuum. In 2004, he founded the Complex Systems Science Centre at CSIRO and has continued to lead Complex Systems Science in the organisation since that time. His current activities include both global integrated assessment modelling of energy and climate mitigation and extending the Planetary Boundaries concept to the intersection of the biophysical and Social domains. This involves construction of conceptual models of the human-earth system that contrast the dynamics of the pre-industrial 'Malthusian age' with those of industrial and post-industrial times. He is a Visiting Professor at the School of Geophysical Sciences, University of Edinburgh, Scotland, an Affiliate Scientist at the National Center for Atmospheric Research (NCAR),

Boulder Colorado, USA, a Fellow of the American Geophysical Union and a Fellow of the Australian Academy of Science.



Tim A. Kohler

Kohler applies method and theory from the study of complex adaptive systems to the study of prehistoric societies. He received his A.B. in General Studies from New College of Sarasota, and his M.A. and Ph.D. degrees in Anthropology from the University of Florida. His dissertation research on Weeden Island societies involved sampling the McKeithen village in North Florida. Since arriving at WSU, he has increasingly specialized in Southwestern archaeology. In the late 1970s through the mid-1980s, he collaborated with William D. Lipe on the Dolores Archaeological Program in southwestern Colorado. Since then, he has directed excavations in Bandelier National Monument in New Mexico, and coordinates the interdisciplinary NSF Coupled Natural & Human Systems-funded “Village Ecodynamics Project” to understand the causes for changes in settlement systems in the eastern Southwest between A.D. 600 and 1760. He is a Research Associate at the Crow Canyon Archaeological Center, Cortez, and an External Professor and member of the Science Board at the Santa Fe Institute, New Mexico.

Much of his work involves quantitative analysis of archaeological data or simulation of aspects of prehistoric behavior. He is especially interested in cooperative behavior, reciprocity, and other processes with evolutionary implications in Neolithic societies, and large-scale patterning in prehistoric societies. At the graduate level he regularly teaches ANTH 530 (Archaeological Method and Theory). In April 2004 he completed a four-year term as editor of *American Antiquity*. He also serves on the Board of Directors of Digital Antiquity, an initiative to aggregate and preserve archaeological digital data and make it broadly accessible.

He is the only scholar ever to have been recognized with both the Alfred Vincent Kidder Award for Eminence in the Field of American Archaeology (AAA, 2014) and the SAA’s Award for Excellence in Archaeological Analysis (2010).



Anna Shoemaker is a doctoral student at the Department of Archaeology and Ancient History, Uppsala University under prof. Paul Lane. Her research

forms part of a larger *Resilience in East African Landscapes* project ([REAL](#)). REAL uses a multidisciplinary approach to provide longer-term historical perspectives on human-environmental interactions in Kenya and Tanzania to enable sustainable landscape and resource use. Shoemakers contribution to the initiative includes researching patterns in pastoral settlement, mobility, economic change, and interaction over the past 500 years in the Amboseli basin of Kenya.



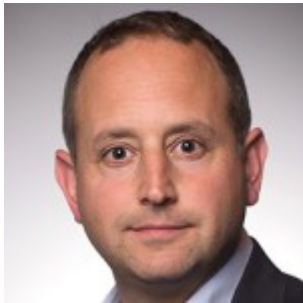
Sarah Cornell is the Coordinator of the Planetary Boundaries research laboratory and the co-convenor of the international Planetary Boundaries Research Network, PB.net Sarah joined the center in 2011, bringing considerable experience in hybrid roles of scientific coordination and research linked to the major international global change programs. She was a science manager for the UK [NERC's QUEST](#), a multi-consortium program for Earth system science, hosted by the University of Bristol. Previously, she worked in various centers at the University of East Anglia, progressively building up experience in use-oriented transdisciplinary sustainability research. Her research background is in marine and atmospheric biogeochemistry (PhD awarded in 1996), and environmental assessment, management and governance.

Her current research has a particular focus on conceptualisations of humans in the Earth system. Her main interests are in obtaining a multidimensional understanding of anthropogenic global changes and the associated changes in risks, and the philosophy and methodology of integrative research.

She has served as a reviewer and contributing author to Assessment Reports of the International Panel on Climate Change, and was a contributing author to the Millennium Ecosystem Assessment. She is currently a member of the Scientific Steering Committee of [IHOPE](#), an associate editor of the journal *Environmental Science and Policy*, and a member of the editorial advisory board of the *Journal of Critical Realism*. Her links with the business sector are strong, and she is a regular speaker and expert advisor on sustainability issues in industry and policy forums. She is a vice-president of the international institute of Marine Engineering, Science and Technology, and currently serves as the vice-chair of its Board of Trustees.



Joel Gunn is currently a lecturer in the Department of Anthropology, University of North Carolina at Greenboro. His interest is centred around the impact of global climate change on regional cultures around the margins of the Bermuda-Azores Subtropical High, which is to say Maya Lowlands, southeastern United States, and southwestern Europe. Gunn is currently analyzing ecological and social network data on the Maya Lowlands collected by the IHOPE-Maya working group. The objective is to characterize long term processes as products of agency-based decision making, in other words dynasties, and translate those decisions into advice for the modern world economic and cultural system.



Jed Kaplan is European Research Council Professor in the Institute of Earth Surface Dynamics in the faculty of Geosciences and Environment at the University of Lausanne. His research interests include human-environment interactions and the long-term impact of anthropogenic land cover change on global biogeochemical cycles and climate. He is the leader of the European Research Council project COEVOLVE on understanding the record of atmospheric greenhouse gas concentrations in the preindustrial Holocene, and the Swiss National Science Foundation project ACACIA on the anthropogenic transformation of African landscapes during the Iron Age.



Uno Svedin is a Senior Research Fellow at the Stockholm Resilience Centre and former Director of International Affairs at the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas). He has a PhD in Physics

from Stockholm University and has been a Scholar in the Swedish Secretariat of Future Studies. His field of interest lies in the interface between science and policy. The scientific part deals with a complex of issues related to systems understanding of environmental challenges and sustainable development, specifically the interconnections between natural science and social science/humanities (risk studies, governance studies, cultural and "human dimensions" including environmental ethics). The policy part of his field of interest focuses on how scientifically generated information connects to policy advice functions in an interactive way (system of knowledge production).

Svedin has published a number of books and articles on environmental issues, future studies, sustainable development and research policy.

Before taking on the position as Director of International Affairs at Formas, Svedin was the Director of Research at the Swedish Council for Planning and Coordination of Research (FRN). He has also worked as Professor in Water and Environmental Studies at the University of Linköping.