EuroSEAS 2021 Panel Proposal

1). Panel Title: *Transforming Tropical Forests and Islands: Human Management of the Environments of the Philippine Archipelago in Long Time*

2). Panel Convener: Dr. David Max Findley. Max Planck Institute for the Science of Human History (MPI-SHH), Germany.

3). Panel Abstract

The tropical forests of the Philippines have played a fundamental role in the character of the archipelago for millennia, providing sustenance and resources to indigenous peoples and offering high quality resources for commerce and construction. Now, their increasing absence as a result of mass-deforestation quickens erosion and amplifies the vulnerability of the islands to storms, landslides, and nutrient depletion. A straightforward narrative of accelerating and capacious environmental devastation coincides with 'Anthropocene' tropes, but also unconsciously advances a myth of the pristine and ancient forest prior to the industrial era. The forests of the Philippines archipelago and their veritable bounties of endemic flora and fauna have experienced anthropogenic manipulation and exploitation since at least 2,500-2,000 BCE, when agriculture first arrived in the Philippines. From the selective cultivation of various plant species by nomadic peoples to the practice of swidden agriculture in permanent settlements, from the construction of vessels from *molave* to the mass clearing of forests inspired by regional and global market demand, the character of Philippine forests has been altered and maintained by humans. Studying how these forests have transformed in the previous four millennia requires interdisciplinary collaboration that utilizes palaeobotanical, archaeological, and archival data. This panel draws upon case studies in history and archaeology to focus on moments of change and transition, when shifting anthropogenic demands and knowledge of forests prompted local and ultimately regional ecological transformations. By exploring this socio-environmental relationship over the long-term, from the beginnings of agriculture in the archipelago through the proto-historic and colonial periods, this panel will take a first step towards contextualizing twenty-first century Philippine deforestation within the larger story of how humans actively modify tropical forests they inhabit to meet their biological and commercial needs.

4). List of Participants for Double Session (Synopses and Titles for prospective talks on next page)

Session 1: Paleobotany of the Philippine Forest

Patrick Roberts (MPI-SHH)
Grace Baretto-Tesoro (University of the Philippines) and Vito Hernandez (Flinders University, Australia)
Rebecca Hamilton-Jenner (MPI-SHH)

Session 2: History of the Colonial Philippine Forest

Greg Bankoff (Hull University, UK)
Kathleen Gutierrez (University of California Santa Cruz, USA)
David Max Findley (MPI-SHH)

Dr. Patrick Roberts. MPI-SHH, Germany.
Title: *A multidisciplinary approach to changing tropical land-use in the Philippine Archipelago – the PANTROPOCENE project*
Synopsis: Determination of pre- and post-colonial changes in tropical land-use has become a major area of interest for researchers pursuing the origins and tempo of the 'anthropocene'. However, uneven distribution of archaeological, palaeoecological, and historical analysis across space and time has made it difficult to properly comprehend the varying scale and nature of the impacts of past human societies in the tropics on earth systems. Focusing on the often-neglected centre of the Spanish East Indies, the Philippine Archipelago, the PANTROPOCENE project seeks to undertake novel archaeological, archaeobotanical, archaeozoological, environmental coring, remote sensing, and archival research to build more detailed insights into changing human-environment interactions in this part of the world over the last 2,000 years.

Prof. Grace Barretto-Tesoro. University of the Philippines, Philippines; Mr. Vito Hernandez. Flinders University, Australia
Title: *Inferring precolonial agriculture in Luzon Island (Philippines) through insect and weed ecology*
Synopsis: Geoarchaeological analyses of soil and sedimentary units from excavations in Central Luzon, Philippines dated to at least 1300 years BP provide a securely dated understanding of geomorphic evolution and dynamics. Identification of macrobotanical remains demonstrate a shift from mangrove and closed forest environment to open paddy environments, and entomoarchaeological remains from identified paddy environments suggest agriculture as a possible cause of this shift. Our work presents potentially the oldest known agricultural fields in the Philippines, highlighting the importance of Central Luzon in the study and understanding of precolonial settlements in Philippine history.

Dr. Rebecca Hamilton-Jenner. MPI-SHH, Germany.
Title: *Making a biodiversity hotspot? Tracing human footprints in Philippine montane rainforests.*
Synopsis: This paper draws on 4,500 year-long ecological and environmental data from lake sediments (Ambulalacao) extracted from the heart of the Philippine Cordillera Central moist forests in Luzon to determine the extent to which traditional land-use, including swiddening, contributes to creating and maintaining the composition, floral diversity and resilience of upland tropical forests. The results will be used as an evidence base to inform the conservation of resilient, high-value forests both within the Philippine uplands and global tropic forests more broadly.

Prof. Greg Bankoff, Hull University, UK.
Title: *Fire in the Colonial Forest: Pyro-human relationships and the nature of woodlands in the Philippines, 1565-1946.*
Synopsis: This paper examines the role that anthropogenic fire has played in shaping the nature and extent of forests in the Philippines. It examines the relationship between fire, colonialisms and cultures and how the forest was shaped by interaction of human activities and natural forces.

Prof. Kathleen Gutierrez. University of California Santa Cruz, USA.
Title: *A Tactical Combination toward the Seizing of Mindanao*
Synopsis: This presentation examines the Spanish and U.S. colonial scientific pivot toward Mindanaoan forests that began in the mid-nineteenth century, when botanists tactically

combined forestry and botany to enhance operation efforts for mass exploitation of Mindanao's terrain. Their efforts ensured, among other things, a careful accounting of woody and non-woody species that could not only contribute to market potential but also prevent the complete denuding of forests.

Dr. David Max Findley. MPI-SHH, Germany.
***Title*:** *Historic Forests, Climates, and Land Use: Modelling Forest Cover in the Colonial Philippines, 1565-1898.*
Synopsis: Detailed historic earth systems modelling is reliant upon knowledge of historic tropical forest cover. Current models of forest cover, however, are primarily informed by ecological parameters and exclude human influences, despite increasing acknowledgement that human-inhabited tropical forests are highly managed environments. This presentation describes a modelling technique, Circle Diagrams, specifically adapted to account for anthropogenic and ecological causes of deforestation in the Spanish Colonial Philippines by utilizing research in paleobotany, archaeology, and history.