The Planetary Legacy of Colonial Forests in the Anthropocene

Interdisciplinary Workshop

Abstracts

"The mountains produce woods": Forestry bureaus, timber extraction and conservation issues in colonial Philippines

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Mountains provide a crucial window in understanding the historical relations between humans and forests. Indigenous peoples traditionally regarded them as spiritual spaces while colonial forestry viewed them as frontiers for timber and resource extraction. Scientific (colonial) forestry created conflicting human practices in relation to forests use, imposing timber regulations and conservation measures on one hand, yet promoting commercialization and mechanization of woods on the other. I argue that colonial forest frameworks endured in contemporary Philippines allowing for the continuity of extractive operations and problematic conservation agenda that viewed the local cultivators as enemies instead of partners in forest rehabilitation.

This paper examines the changes in the Philippine landscapes and forest ecologies from the eighteenth century to the first half of the twentieth century. As the Philippines experienced three colonial transitions, the essay interrogates the changes and continuities in the regulations, technologies, and perspectives with regards to the utilization of forest resources. Utilizing archival documents, official reports and colonial science publications, it tracks the impact of colonial forestry bureaus' programs and policies in the archipelago and sheds light on the politics of Philippine environmental conservation.

Dispossession through discursive practices in conservation: Forestry discourses in Zimbabwe's protected forests 1900-2000s

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This article analyses century-long continuities in forestry conservation policy and practices despite dramatic changes in the political economic context. I argue that these paradoxical continuities are explained by the maintenance of scientific discourses that inform the management of people and nature. By examining the development of official forestry discourses and contrasting them with those of local people residing within forests, the article reveals that apparently neutral science can and does operate to dispossess people of their rights and access to these forests. This article pays particular attention to the lack of change in forestry policy in the post-independence period when one might have expected transformation to restore a balance between the management of natural resources and giving rights to local people who relied on and live in close proximity to these resources. As such the article argues that forestry bureaucratic practice was maintained and continued to instruct and shape forestry conservation policy through complex scientific dictates and in turn govern nature and the way local people related to that nature.

The historical remaking of human-environment relationship in Kenya's Cherangany region during the colonial period

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Colonial conservation policies, based on controversial and paternalistic science, had a drastic impact on the relationship between people and the environment in different communities in Kenya. Based on laws and regulations, African land use patterns were restricted and restructured. These restrictions existed in different forms in Kenya. This article examines how the colonial government orchestrated a rupture in human-environment relations in the Cherangany region. It begins by highlighting early colonial encounters in Cherangany. It then focuses on the various colonial policies on land, population control, forests and wildlife in the region. These changes had a profound impact on the landscape, population, power dynamics, economy and environment in Cherangany region. The article also explores the tensions that led to rebellions as a result of colonial land and forest regulations. The article draws on a range of sources, including published and unpublished documents, colonial archives and oral histories, to explore the historical evolving perspectives on human-nature relations in the Cherangany.

The Biocultural Heritage of the Llanos de Moxos: From Indigenous Resilience to Global Challenges

Carla Jaimes Betancourt, University of Bonn

The Llanos de Moxos, situated in the southwestern Amazon, have recently yielded significant interdisciplinary insights into the region's extensive indigenous history, marked by linguistic and ethnic diversity and a rich biocultural heritage spanning over 10,000 years. One of the most salient issues addressed by researchers from diverse disciplines is the relationship between humans and the environment over millennia of occupation.

Over centuries, the diverse cultures of the Llanos de Moxos developed sophisticated water and landscape management systems before European colonization. These drainage systems comprised the construction of canals, raised fields, dikes, and water reservoirs, among other infrastructure. The arrival of colonizers led to significant alterations in land use systems, resulting in the displacement of indigenous populations and the promotion of economies based on cattle ranching and, in the last century, monoculture, mining, and deforestation.

Despite the significant alterations, numerous indigenous communities in the Llanos de Moxos have shown remarkable resilience. They have managed to maintain a significant degree of continuity in their traditional knowledge systems. This knowledge encompasses sustainable agricultural practices, responsible management of forest resources, and a different ontological understanding of nature. These landscapes are not merely physical entities; they are conceived as living entities with agency. To address the complex challenges of the Anthropocene, it is essential to integrate different knowledge systems. Historical and archaeological perspectives help us understand how ecological and human systems have changed over time, while anthropological and ethnographic methods shed light on current local knowledge and practices. But how can we use these insights to create a more sustainable future? And is it even possible, given the rapid destruction of the Amazon?

Plantation Worlds

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What might it mean to query planetary transformation not just from the Global South but from the South within the South? And what bearings does this have for thinking about habitability in the present and in the future? Drawing on historical and ethnographic work on forestry and tea in Assam, northeast India, this talk aims to formulate a grammar for grappling with the legacies of plantations and their persistence as a coercive duration. It identifies how plantation logics - including the exploitation and expropriation of life, the violent imposition of spatial binaries, the simplification of ecology, and the generation of ruins - took grip and enhanced colonial rule. The talk then turns to the ways in which plantation logics operate in the present, notably in terms of a necropolitics of capital, the continued expansion of the plantation form and through new conservation paradigms. In conclusion, and through the world views of one's interlocutors, it hints at situated ways in which these coercive logics might be undone. The talk is presented in both a narrative and visual mode.

Colonial forests, commoning, and meaning making in the Anthropocene

Arun Agrawal, Fiona Gladstone

The planetary legacies of colonial forest protection, use, and exploitation include diverse local to national responses to such strategies. Such responses and their unfolding consequences hold unexplored promise for imagined alternatives to the continuing appropriation of life and being by market-state instruments that are regulating subjectivities during the Anthropocene. In particular, the presentation examines the role of commoning as a means to broaden the domain of meaning making and to expand possibilities to co-create shared purpose in the lived realities of the everyday. This paper illustrates the promise of commoning by focusing on different examples of "resistance movements" to strategies of forest control during the colonial period in India. The review of two examples - in colonial Kumaon and Madras - directs attention in particular to the interplay between efforts of commoners to carve out spaces for imagined material, social, and communal gains, and those of the colonial state to dampen protest while pursuing its strategic and commercial interests in India's forests. Variations in the durability and persistence of commoning outcomes offer lessons that retain relevance for redirecting and reconfiguring market-state strategies characteristic of the Anthropocene.

Deforestation and British Influence in South Asia and Brazil, 1700-1947

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While deforestation patterns in colonial South Asia and Brazil have been studied on a regional level, the relationships and parallels between these two processes has received less attention. This study traces this joint history, drawing on both contemporary satellite imagery and archival material from Brazil, Portugal, India, the United Kingdom and the United States, with a particular focus on the Atlantic Rainforest in Brazil and the forests of Bengal and Assam in South Asia. The ecological and political histories of Brazil and India became linked in the eighteenth century, when the British East India Company used gold extracted from the Atlantic Rainforest to finance its conquest of Bengal (1757–1773). Over the subsequent decades,

Britain, the rising hegemon of the capitalist world-economy, brought both Brazil and India into its orbit, the first through indirect debt mechanisms and the latter through direct political domination. In the nineteenth century, British investments sparked the advance of the coffee frontier through southeast Brazil and, more famously, the tea frontier in Assam.

This paper analyses these processes, through the creation of land use and land cover maps for Bengal/Assam and Southeast Brazil in the 1780s, 1880s and 1940s. Through this comparative and relational method, the paper seeks to assess key questions, such as: did British East India Company rule in Bengal cause more or less deforestation than plantation slavery in Brazil? How did deforestation rates under Company rule (until 1858) compare to those under imperial rule (1858–1947) in South Asia, and how did clearing levels in colonial Brazil (until 1822) compare to the Brazilian Empire (1822–1889) and republican Brazil (after 1889)? To what degree did the introduction of railways accelerate deforestation in both regions? To what extent have post-1947 deforestation trajectories been influenced by earlier patterns? And what impact, if any, did the resistance of local forces to European colonization have on the rate and direction of deforestation in both regions? These are questions of ongoing relevance: the structural legacies of colonisation continue in Brazil and India today, with both countries still clearing their forests to export cash crop products such as sugarcane, coffee, tea and soy.

The impacts of settler colonialist and native communities' activities on Kenya's central highland forests during and after the colonial period

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The montane forests of Kenya play key roles as biodiversity hotspots and freshwater water catchment areas, providing freshwater to downstream ecosystems and urban areas. All major river systems originate from these montane ecosystems and ensure the sustenance of all freshwater related ecosystem services. These forests are also some of the most threatened in eastern Africa, seeing forest loss, increased fire frequencies, and fluctuations in the reliability of rainfall. In a contemporary context, forest loss in the region has been strongly associated with post-independence land use change and encroachment by small holder farmers and local communities. However, this neglects the large-scale excisions of native forest and conversion to plantation forests, large scale farms, infrastructural development and exploitation for both timber and fuelwood, as well as forced resettlement of local communities, during the colonial period (1900-1963).

A holistic, historical assessment of the montane forest dynamics and associated land use changes spanning the past 120 years is needed to provide more context and clarity on the current trajectory of the native forest loss in these montane areas and ecosystem degradation in their ecological integrity. In this study we assess the impacts of settler colonialist and native communities' activities on Kenya's central highland forests during and after the colonial period, compiling available archival documents related to forest extent, land use, settlement patterns and climate change. We aim to determine how conversion of montane forest through land-use change, introduction of exotic species, large scale farming and colonial land policies and population relocation impacted montane forest ecosystems, leaving legacies in the form of contemporary degradation and hydrological change. We are of the view that a better understanding of the long-term spatial distribution of forest extent and composition is vital in providing current and future plans in forest conservation and supporting restoration initiatives.

Human-Climate Interactions and Late Holocene Landscape Evolution in the African Tropics: Insights from Saiwa Swamp, Kenya

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The tropical African landscapes we see today have been shaped by a complex interplay of climate and human activity, operating across diverse spatial and temporal scales. The late Holocene provides a critical window for examining environmental responses to human influence. This study investigates paleoenvironmental changes in the African tropics over the past 3,500 years using proxy data—including pollen, fungal spores, loss-on-ignition, and microscopic charcoal—extracted from core SS4 collected from Saiwa Swamp in western Kenya. The findings indicate that Afromontane forests, dominated by taxa such as Podocarpus, Olea, Celtis, and Juniperus, persisted throughout much of the late Holocene, despite environmental conditions favoring the expansion of savanna-like vegetation and drought-tolerant species. Evidence from the charcoal record reveals continuous fire activity, raising questions about the role of human-induced burning in shaping the landscape. The presence of Sordaria fungal spores in the record, dated between approximately 925 BCE and 970 CE, points to early human settlements engaging in livestock farming. However, these anthropogenic activities did not lead to widespread forest clearing, suggesting a nuanced and balanced interaction between human influence and natural ecosystems during this period.

Notably, the Saiwa Swamp record shows minimal changes in deforestation and sedimentation rates following British settlement in the region. This challenges the widely held assumption of increased deforestation and land degradation associated with European colonization. This study emphasizes the importance of integrating both natural and human dimensions when interpreting environmental change. It highlights the intricate relationships among climatic, ecological, and anthropogenic factors that have shaped the evolution of landscapes and vegetation dynamics in the African tropics.

6,000 Years of Indigenous Land Use, Fire Management, and Colonial Impacts in the Southwestern Amazon Rainforest Ecotone

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The southwestern Amazon Rainforest Ecotone (ARE), a transitional landscape between the tropical forest and seasonally flooded savannahs of the Bolivian Llanos de Moxos, features high biodiversity and early records of human occupation and plant domestication in Amazonia. While Indigenous legacies are known in other Amazon regions, how past human–environment interactions shaped ARE landscapes remains unclear. This study examines 6,000 years of archaeological and palaeoecological data from Laguna Versalles (LV) and Laguna Ignacito (LI) in Bolivia to explore historical land use and colonial legacies. Throughout the Holocene, both LV and LI were dominated by stable rainforest vegetation. Evidence of maize cultivation and cultural burning appears after 5700 cal yr BP, followed by polyculture cultivation of maize, manioc, and leren around 3400 cal yr BP, and the formation of Amazonian Dark/Brown Earth (ADE/ABE) soils around 2400 cal yr BP. ADE/ABE soil formation is linked to agroforestry practices, increased edible palms like Mauritia flexuosa and Attalea sp., and record levels of burning. Fire played a crucial role in maintaining landscapes by altering forest composition and structure. In the 18th century, Spanish colonization included Jesuit missions near the Blanco River, aiming to control Indigenous populations. These missions were abandoned and destroyed in the late 18th century, reflecting regional colonial instability. The Iténez (Guaporé)

River marked the border between Spanish and Portuguese colonies, highlighting the region's geopolitical importance. Indigenous peoples faced significant exploitation and marginalization, shaping socio-economic dynamics. The colonial period disrupted Indigenous land use and fire management practices, leading to changes in the ecological and cultural landscapes that persist today. This research integrates archaeological, palaeoecological, and anthropological perspectives to understand the impacts of Indigenous land use and colonial interventions on current forest ecologies. It provides insights into how historical human-forest interactions influence present-day environmental and socioeconomic challenges in the ARE, emphasizing the importance of combining archival, laboratory, and fieldwork methods to address contemporary issues in the Anthropocene.

Understanding the legacy of the colonial resettlement policy on historic forest recovery in the Ivindo landscape of Gabon (ForHist)

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Tropical forests cover about 10% of Earth's land surface, yet bear the legacies of human activities over time, including agriculture, migration, trade and human disease. Despite evidence of anthropogenic influences on vegetation, ecologists have not yet systematically included anthropogenic forest history in their plot-based protocols or analyses, rendering some conclusions uncertain. Ecologists use standard plot protocols to enable cross-site comparisons. We aim to improve these cornerstone plot methodologies and related data interpretation by accounting for anthropogenic forest history and recovery over time. This talk will present the ForHist (Forest History in English/Forêt-Histoire in French) project, a newly funded SNSF project which addresses century-old legacies resulting from the colonial resettlement policy, while proposing a standardized ecological method. Our innovative collaboration between ecologists and the social and historical sciences applies the Indigenous Peoples & Local Communities Landscape Transformation framework to explore legacies of historic natural resource management systems on forest structure and diversity. We focus on the last 300 years, in line with the colonial context of the study area. ForHist, will achieve two major objectives: create a ForestGEO plot protocol integrating socio-historical methods and contribute to understanding how management practices and colonial resettlement policy shapes present-day Gabonese forest structure and diversity. ForHist focuses on ecology, using a historical ecology approach to interpret forest research in light of the social and historical sciences, collaboratively collecting data and conducting analyses with local communities. We focus on two key types of anthropogenic forest disturbance: swidden agriculture and establishment and abandonment of former village sites. The study site is in Gabon's Ivindo National Park. A 25-ha permanent plot will be installed to explore an in-depth case of forest recovery at a former village site using the standardized Smithsonian ForestGEO protocol and complemented by transects using the Missouri Botanical Garden protocol,

enabling historical ecological research in Central Africa for decades. We work with the ForestGEO network which prioritises data analysis and systematically invests in the careers of scientists from the regions where they work. ForHist will shape a new generation of students and will contribute to understanding how former management practices and resettlement colonial policy shape Gabonese forest structure and diversity.

Mastery and Misrecognition in the Anthropocene: Lessons from Euclides da Cunha's Os Sertões on the 'Insurrection of the Earth'

Jonathan DeVore, University of Cologne

This paper conceptualizes the misrecognition involved in claims about mastery over human and other nature in the Anthropocene, drawing comparative insight from one of the most important pieces of Brazilian literature from the turn of the 20th century, Euclides da Cunha's Rebellion in the Backlands [Os Sertões]. This famous book draws on da Cunha's first-hand account of the Brazilian state's military campaigns to destroy a multi-ethnic millenarian movement that formed near the rural town of Canudos (Bahia) in the 1890s. The first three campaigns were decisive failures, according to da Cunha, because the infamously harsh sertão environment of the Brazilian Northeast fought alongside the rebels. Historians such as Fernand Braudel have frequently remarked on how people marginalized by dominant social orders often escaped to mountains, forests, deserts, and other regions of refuge. Yet Braudel and other scholars implicitly view such landscapes as mere stages of social struggle. Drawing on da Cunha's thick descriptions of the "insurrection of the earth" during the Canudos campaigns, this paper reconsiders such environments as active and sublime powers to develop a critique of the Anthropocene concept. Evidence for these powers can be traced materially and archaeologically recovered from the landscape. While highlighting human geological agency, the import of the Anthropocene is drawn into relief by the powers of nature that humans unleash against themselves, threatening the end of their world – or, at least, the end of friendly Holocene nature that permitted Anthropos to thrive and, apparently, to master nature.

Becoming a pest: colonialism, forest change and the making of the "leafcutter problem" in Brazil

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Even though it is associated with a mass extinction crisis, the Anthropocene allows some nonhuman generalist species to flourish. Despite its name, the Anthropocene itself was/is constituted by entanglements of people and other creatures, including the flourishing generalists. This paper addresses one such group of organisms, namely the Neotropical leaf-cutting ants (LCA), focusing on their role as coproducers of what has been seen – perhaps mistakenly – as the 'Age of Humans'. LCA cultivate a symbiotic fungus using plant biomass they extract from the surroundings of their gigantic underground nests. Having emerged around 12 mya, when they evolved leafcutting, LCA went on to become ecosystem engineers, shaping soils and plant assemblages. When humans started practising slash-and-burn agriculture in the Neotropics, sometime between eight and five thousand years ago, LCA benefited from the heightened landscape heterogeneity, as it increased the abundance of the

pioneer plants whose leaves are most appreciated for making fungus substrate. At the same time, LCA encouraged Amerindian agricultural itinerancy, as infestation stimulated garden abandonment. With the arrival of Europeans in 1492 AD – and especially from the mid-19th century, when global trade accelerated exponentially – export agriculture intensified deforestation and forest fragmentation, leading to habitat improvement for LCA. Today, land clearing in the Amazon is propelling LCA proliferation at an unprecedented rate, which feeds back positively into deforestation dynamics and enhances greenhouse gas emissions directly by accelerating carbon cycling. The LCA case shows that rather than a unilateral result of human activity, the Anthropocene consists of complex webs of relational empowerments with asymmetrical outcomes that must be traced historically and closely monitored.

Thinking the Anthropocene from the forest: colonial histories and more-than-human futures in Kenya's Tugen Hills

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Forests are homes, ecosystems where species meet and coexist, and politically contested landscapes. British colonialism left deep traces in Kenya's forests: in forest ecologies and state management, but also in the histories of local residents, their relationships with the forest, and their political struggles for redress. How do these multiple dimensions play out in contemporary forest politics? And how can this multiplicity be accounted for? This presentation draws on the case of the Katimok forest in Kenya's Tugen Hills. The socio-ecology of Katimok has been shaped by a colonial and post-colonial history of local dispossession, but the forest remains a more-than-human assemblage in which people (living at the forest's boundaries), trees, land, non-human animals and others interact, live and become together. Inhabitants' intimate connections to the forest are as political as their use of its resources, culminating in their claims for recognition of historical dispossession. These struggles invoke colonial histories, intimate connections to the land and the forest, and environmental justice. They highlight the need to recognise the local human connections that are part of forest ecologies in political decisions about the future of forests, in a world beset by global biodiversity and climate crises and fragmented governance. Beyond the specific case of Katimok, this presentation proposes thinking the Anthropocene from the forest as a multidimensional and highly political site where more-than-human futures are negotiated and emerging.