



Introduction

5 June, 2010: 'Trees for Life'

The 5th of June is a prominent day on Sierra Leone's calendar – it is National Tree Planting Day. On this day in 2010, Sierra Leone's Vice President, Samuel Sam-Sumana, is trekking up the slopes of the Western Area Peninsula Mountains on the outskirts of Freetown, the country's capital city. He is accompanied by the Minister for Agriculture, Forestry and Food Security (MAFFS), the Minister for Land, Country Planning and the Environment (MLCPE), the Minister for Energy and Water Resources (MEWR) and a senior representative from the Environmental Protection Agency (EPA). In addition to this governmental collective, representatives from the European Union, staff from large environmental non-government organisations (NGOs) and journalists from Sierra Leone's major newspapers are in tow.

This is not the Vice President's first hike up the Western Area Peninsula Mountains. In 2008, soon after his party was elected into government, he trekked up for his first National Tree Planting Day as Vice President,¹ and since this time the Vice Presidential pilgrimage up the mountain slope has become almost an annual tradition. The choice of the Peninsula Mountains as the site for tree planting is iconic, as the visibility of the forested mountains from the capital city Freetown provides symbolic and political capital, emphasising his conservation credentials. The Vice President's 2010 trek is in support of a five-year project to improve the management of the Forest Reserve that traverses the forested mountains. The project, funded by the European Union,

is being implemented by the German NGO Welthungerhilfe and was initiated in 2009.

The Vice President and his following entourage finally reach their destination: the physical boundary of the Forest Reserve, where a formal ceremony is initiated. The ceremony begins with a speech by Vice President Sam-Sumana, starting with the leitmotif that over 60 per cent of Sierra Leone's forests have been depleted and destroyed by human activities and that it is incumbent on 'the government of Sierra Leone to protect the forest' and prevent it from being 'destroyed by bad people'.² The peroration of the speech aligns with the day's theme: 'the government is championing the maximization of trees for beneficial purposes' to ensure sound environmental management in Sierra Leone.³ After this initial monologue, the Ministers take their turn to extend the Vice President's jeremiad in their speeches, noting that deforestation is not only caused by people who cut down trees but also by those who purchase the timber.⁴

The ceremony, however, is not just an exercise in oration. The Vice President, after his speech, moves to lay the foundation for the first pillar for the re-demarcation of the Forest Reserve, demonstrating the government's commitment to the environment and to Welthungerhilfe's work. More political support will come in future, with the Sierra Leonean Government re-gazetting the Forest Reserve as a National Park in June 2013, the aim being to provide greater protection for wildlife in the area by further restricting unauthorised human access. After the foundation pillar is laid, the crux of the ceremony is finally reached, with the Vice President planting a *Gmelina arborea* tree – a symbolic gesture to mark not only National Tree Planting Day but also the start of tree planting season. On this day, and over the next three months, thousands of *Gmelina arborea* (known locally as *Yemane*) and other, mainly non-native, fast growing trees will be planted by the Sierra Leonean Government, environmental NGOs, development agencies and school children, among others, as a nationwide attempt to 're clothe' the Sierra Leonean landscape with trees. The theme for the 2010 National Tree Planting day is 'Trees for Life'.

A Political Ecology of Sierra Leone's Forest Conservation History?

The introductory narrative is a concise exemplar of the political ecology of forest conservation in Sierra Leone, the topic of this book. At first glance, the vignette appears to be focused on Sierra Leone's forest future, or on its forest present, with the imperative of improving the country's forest conservation through planting trees and re-establishing protected areas. However, one does not need to dig too deep into the narrative to uncover historical references. The first question to perhaps ask is why is Sierra Leone celebrating National Tree Planting Day on the 5th of June every year? Almost everywhere else in the world that same day is designated as being World Environment Day. Yet in Sierra Leone, the day was renamed to its current moniker in 1985, and afforestation activities have ensued, with one Sierra Leonean forester (perhaps ambitiously) estimating that between 1985 and 2010 the country's Forest Department had succeeded in disseminating over 40 million tree seedlings around the country as a result of annual intense tree planting season initiatives.⁵ Tree planting appears to have become synonymous with environmental conservation in Sierra Leone, but what does this mean? Why is this the case?

The Vice President's choice of tree, *Gmelina arborea*, is in itself steeped in history and ambition. This book traces the genealogy of the sapling that the Vice President planted in 2010 back to a packet of seeds shipped to the Sierra Leonean colonial Forestry Department from India in 1920. Conservation day, in Sierra Leone, is therefore marked by the government advocating, almost without knowing, the introduction of foreign tree species. It is an act that is not limited to one day. Non-native tree species, and *Gmelina arborea* in particular, seem to be favoured for tree planting programmes due to their fast growth rates and rapid germination. This, therefore, proffers a series of questions including: does the Vice President know where his *Gmelina arborea* sapling originally came from? How does he know that 60 per cent of the forests in Sierra Leone have been destroyed? But, most importantly, what sort of forested landscape does the Sierra Leonean Government (and its predecessor the British Colonial Government) desire to create and why?

The rhetoric of the day casts Sierra Leone's environment as being heavily degraded, backed by speculative statistics about Sierra Leone's

forest past, and argues the need for demarcated Forest Reserve boundaries as a tool to arrest deforestation. This rhetoric is all the product of Sierra Leone's forest history. Even the mountainous forested slopes, where the tree planting ceremony was held, has long been a focal point for environmental conservation discourse and activity in Sierra Leone. Since the 1790s, concerns about its deforestation have been a key source of discussion among senior colonial officials,⁶ culminating in the establishment of a forest reserve in 1916. The founder of the reserve was Sierra Leone's first Conservator of Forests (i.e. Forestry Department Head) Charles Lane-Poole. Like Vice President Sam-Sumana, Lane-Poole described the establishment of Forest Reserves as being an urgent necessity for Sierra Leone as '99% of the colony's forests had been destroyed by the activities of the native population'.⁷ The 2010 National Tree Planting Day is not the result of an apolitical desire to enhance Sierra Leone's forest cover, but rather it is the product of the 'forest conservation' environmental history shaping the discourses and praxis surrounding the country's forests.

This book unravels the complex forest conservation history in Sierra Leone in order to provide a better understanding of how contemporary forest conservation has emerged. As Bruce Braun has noted, there is an ultimate need to recognise forests as being inherently epistemic, cultural and political spaces.⁸ National Tree Planting Day in Sierra Leone is not simply the product of an innate desire to have more trees on the Sierra Leonean landscape; it is the product of a complex history of ideas and practices. Likewise, forest conservation should not be viewed simply as a system of managing and protecting a collection of trees, rather it needs to be viewed as a social process shaped by the complex political economy. A *critical* history of forest conservation, therefore, is not simply about recounting policies and initiatives to manage Sierra Leone's forests; it is about attending to the complicated social, economic and political contexts that have shaped approaches to forest management initiatives over time.

In this book, I adopt an interpretative analytical approach to understanding Sierra Leone's forest history. It is grounded in a critical realist epistemology in the sense that it recognises that although the forests of Sierra Leone represent a physical entity and are the site of socio-human interactions, their 'conservation' is ultimately realised through a mixture of socially constructed perceptions and institutional forces. In doing so, the book draws upon insights from the broad fields of 'environmental history' and 'political ecology'. Environmental history, as a

field, has helped to reorientate historical narratives to ensure that the progression of human–nature interactions becomes a key focal area,⁹ thus providing a distinctive way of looking at the past to provide a context for environmental change.¹⁰ Works in political ecology have had more of a focus on understanding how seemingly localised environmental situations are linked to the broader political economy, both materially and discursively.¹¹ As such, it is a conceptual approach that seeks to unravel the forces at work in shaping environmental access, management and transformation.¹² Political ecology, therefore, is not so much focused on reframing history (as environmental history is) but rather on interrogating key themes and apparent contradictions in Sierra Leone’s forest history to reveal the complexities behind forestry conservation programmes and policies, including power, politics and multi-scalar forces.

The approach of this book sits within the broader collection of political ecology works that Paul Robbins categorises as engaging with the ‘Conservation and Control Thesis’,¹³ the focus being on revealing how environmental conservation knowledge and practice in many parts of the world has less to do with science and an empirically grounded understanding of environmental change and more to do with the competing claims emerging from political and bureaucratic institutional arrangements. Much of the focus of political ecology, in this area, therefore, has been on understanding the historical processes of colonialism and its influence in shaping contemporary structural relations between the state, civil society and markets.¹⁴ It is important to note that the conservation and control thesis is not against the defence (and conservation) of ecological systems, biodiversity and wildlife. Rather, it emphasises the degree to which such objectives have historically failed, primarily because approaches to conservation have systemically disenfranchised rural communities and have enforced the desires and benefits of elites who only have a limited understanding of ecosystem process, landscapes or local places.¹⁵ There is thus a normative purpose to political ecology in this area in that its objective is to radically reorientate conservationist thinking.

A key concern of political ecology scholarship has been to challenge hegemonic ideas about the environment, and therefore many works have used an historical lens to unpack discursive legacies of conservation. There is thus an entangled political and environmental history approach – what has been termed Historical Political Ecology – as Karl Offen usefully summarises: ‘historical political ecology can be

characterized as a field-informed interpretation of society-nature relations in the past (e.g. material, ideological, legal, spiritual), how and why those relations have changed (or not changed) over time and space, and the significance of those interpretations for improving social justice and nature conservation today.¹⁶ Thus, in many ways it represents a ‘history of the present’,¹⁷ as this approach has a focus on conceptual genealogies to formulate an understanding about how current geographical, social and political relations and conditions have emerged.¹⁸ Tim Forsyth notes that such an approach involves interrogating narratives ‘using poststructuralist and historical analysis to indicate how environmental explanations carry many hidden normative values’.¹⁹ By understanding the philosophical and social roots of a hegemonic discourse and/or material practices we are in a better position to deconstruct them. This has been a particularly popular approach in political ecology works seeking to critically challenge forestry and forest conservation activities in postcolonial states.²⁰ It is the approach that this book has adopted for its analysis; it aims to destabilise current approaches and ideas surrounding forest conservation in Sierra Leone by illustrating their close relationship to earlier colonial constructions of the African environment rather than by exploring empirical grounded knowledge of Sierra Leone’s forested environs – constructions that led to the establishment of particular institutional arrangements to promote forest conservation.

Given this approach, in this book I mobilise the idea of ‘environmental history’ (or perhaps more accurately ‘environmental histories’) in two distinct ways to historically understand forests and forestry in Sierra Leone during the colonial era. The first is to build on the broader academic project of environmental history. While, as Douglas Wiener poignantly reminds us,²¹ environmental history is a relatively eclectic field, it nevertheless is at its greatest strength when it helps to elevate environmental questions into our historical narrative and subsequently into public debate.²² As Tom Griffiths succinctly opines, in history writing the environment problematically has often just been a ‘stage and setting for the human drama’. To correct this, environmental historians therefore seek to enrol ‘an active nature in the narrative’.²³ Environmental history thus offers a different lens through which to understand the past, providing new perspectives for engaging in historical and contemporary debates.²⁴ This is a particularly important project in Africa, as the environmental history field has thus far arguably been biased towards research from Europe and North America, due to the historical threads of its intellectual foundations. The environmental

history project in Africa is ultimately much more nascent and threadbare,²⁵ especially in West Africa,²⁶ and therefore this book is part of an effort to move the field into new grounds. Indeed, despite the vast majority of Sierra Leone's population relying direct on its forests for either livelihoods or commercial opportunities,²⁷ as well as the presence of an active Forestry Department for more than 100 years, there has been no book dedicated to its forest history.

Second, it is also important to appreciate that, beyond academia, environmental histories already exist in many forms in Africa. Existing knowledges and stories of environments and environmental change already are constructed across different scales and have had implications in terms of policies and project interventions. At the national and transnational scale, these environmental history narratives have often been problematic. As Diane Davis has noted in her research in North Africa, colonial powers were often involved in constructing certain kinds of environmental histories to justify significant parts of their colonial projects. And, despite the 'colonial science' rhetoric, often these constructed histories were far from being 'scientifically' accurate. Even more problematic, these colonial environmental history narratives, rather than being questioned or investigated by the postcolonial states, have often become the dominant postcolonial environmental history as well.²⁸ James Fairhead and Melissa Leach come to similar conclusions with their research on West Africa's forests, describing these as 'false forest histories'²⁹ – stories of environmental change that have emerged from populist hegemonic discourse, not from actually 'reading' the landscape carefully.³⁰ Dominant environmental historical narratives that have emerged in the colonial era in Africa have thus been sullied by confusions, misunderstandings, misinterpretations and falsehoods.³¹ James McCann simply describes these as 'apocryphal environmental narratives' that have emerged across Africa telling a 'plausible story' of environmental degradation that places (quite problematically) blame on poor, rural populations.³² Colonial environmental histories, ultimately, are still dominant narratives in many parts of Africa.

As such, the work of this book, and arguably the broader project of political ecology- informed environmental history, is about attending to the competing and conflicting environmental histories that already exist, whether they are presented in the form of academic works, formal government policy documents or popular discourse. As William Beinart notes, 'new' environmental histories of Africa effectively adopt an 'essentially corrective and anti-colonial approach' that tends to

emphasise ‘African initiative in the face of European conquest and capitalist exploitation’.³³ Environmental history in Africa is thus very much a radical project. It is not just about telling the environmental history of Sierra Leone’s forests but also understanding the genealogy behind why different environmental histories already exist. And why they might be problematic.

Colonial forestry history in Africa, and other parts of the world, has been an increasingly active area of scholarship in recent years, garnering the attention of a range of historians, geographers, anthropologist and foresters. In terms of grandiose arguments about the legacy of colonial forestry, there are two key broad threads that sit somewhat in tension. The first is a notion of colonial foresters being early environmentalists, laying down the institutions, laws and philosophies that would form a critical basis for the environmental movement that would emerge in the latter part of the twentieth century. Foresters, among other things, were the progenitors of sustainable resources, and their philosophies and dedication to protected area developments would later become mainstream.³⁴ The second thread paints colonial foresters as being a much more destructive force, arguing that after arriving (from Europe) to the tropics, they misunderstood and misread local landscapes, dismissed existing knowledge systems as ignorant and ultimately created policies that had negative (and sometimes devastating) impacts on local populations and environments.³⁵

These two threads, at first glance, seem quite disparate – foresters as pioneers of environmentalism, or as accomplices of imperial devastation. However, in this book I will look to bring the two threads together, specifically with the question: *what* kind of environmentalism did colonial forestry help to craft in Africa? An important consideration for this is a recognition of how the notion of what is ‘environmentalism’ is contested. Joan Martinez-Alier’s typologies of environmentalism are instructive in this regard: environmentalism can be characterised as the protection of economic resources (e.g. timber in forests); it can be characterised as the protecting of intrinsic values (e.g. forests as a place for other species); and it can be characterised as an environmental justice issue (e.g. poorer groups’ rights to have control over their local forest areas).³⁶ In this book, I argue that Sierra Leonean forest conservation can best be understood as being the tension of such environmentalisms. Colonial forestry undoubtedly helped to bring a utilitarian (colonial) environmental ethic to Africa, as well as arguably providing a foundation for later wilderness conservation initiatives such as the creation of

national parks. However, this imposed environmentalism has created numerous environmental injustice outcomes across the continent.

In bringing a critical eye to the impacts of colonial forestry in Sierra Leone, it is important to take care in not overstating the influence of colonial forestry. As Brett Bennett has noted, many historians have often ascribed a hegemonic-like power to foresters, failing to 'take into account the political, social, economic, and environmental constraints limiting the power of professional foresters'.³⁷ Thus we should not 'conflate policy intent with practical outcome':³⁸ foresters had grand ideas about how the African landscape should be managed and utilised; however, their influence was curtailed in many ways. British Imperialism was not a totalising force, and colonial forestry even less so. While colonial foresters were able to trumpet their self-claimed superior knowledge of forestry and attempted to justify their activities in a broader scientific, economic and moral framework, their ability to realise their vision in sub-Saharan Africa was hindered, as European control over the African landscape was never absolute.³⁹ While the European powers had been militarily successful in securing territories in Africa at the end of the nineteenth century, control and access to resources involved a much longer process of negotiation with local Indigenous elites. This was especially the case in West Africa, where, unlike other parts of Africa and the colonial world where a settler approach was favoured, an indirect rule and local autonomy system was adopted by the British and French Governments.⁴⁰ Thus, instead of directly claiming land as European property in this region, they instead predominantly relied on co-opting existing African chieftom governance structures as a means of gathering taxes and overseeing land-tenure arrangements. This was especially the case in rural areas. This meant that colonial governments were in a weak position with respect to establishing 'environmental hegemony' across the region.⁴¹ Sara Berry describes this as being 'hegemony on a shoestring' – the British Empire wanted to control its colonies; however, it wanted to invest as little as possible to realise this desire.⁴² Thus, while the powers of chiefs were subordinated to those of colonial state authority – for example, in relation to duties of tax collection and labour recruitment for military and public works – they were often greatly increased in relation to their subjects. Therefore, the colonial refashioning of the chieftaincy infused executive, legislative and judicial powers of 'customary' authority over rural areas.⁴³ Chiefs in colonies such as Sierra Leone, Nigeria and Ghana were able to carve out an important and influential position

in the colonial governance system, and, as will be shown, they were in turn able to frustrate processes like the Forestry Department's efforts to achieve 'scientific forestry'.

Further compounding the weakness of indirect rule was the fact that the short colonial experiment in Africa occurred during a globally volatile period – both economically and politically. Between the establishment of Forestry Departments across Africa during the early 1900s and independence being realised by most colonies during the 1950s and 1960s, the world experienced two major wars that were interceded by a period of economic downturn. Preoccupation with such events ultimately had reverberations on how much time and capital could be spent on securing the natural resources of the Empire's colonies.

Thus, as the book title metaphorically notes, the weakened *seeds* of colonial forestry were planted in African *soil*, and therefore the contemporary environmentalism *tree* that has emerged is shaped by this tension: European ideas and praxis being imposed in an African context. This tension, I argue, is ultimately what continues to characterise forest conservation in contemporary Sierra Leone and much of sub-Saharan Africa: postcolonial elites (governments, NGOs, aid donors etc.) are still very much trying to develop a colonial ideal of conservation in a defiant African context. When the Sierra Leonean Vice President Samuel Sam-Sumana planted his *Gmelina arborea* tree while declaring there is a need to protect the forest from an ignorant local population, he was continuing the quest laid out by the colonial Forestry Department some 100 years earlier – a Sisyphean quest to displace African practice with a European epitome. And, therefore, contemporary forest conservation in Sierra Leone and much of Africa ultimately embodies a range of conflicting pre-colonial, colonial and postcolonial ideals.

To understand these tensions that characterise contemporary forest conservation in Africa – as well as to stretch the book title's metaphor as far as possible – the following chapters will examine the *seeds* of colonial forest conservation in Sierra Leone.

Chapter 1 provides a contextual early history of Sierra Leone, detailing its early colonial settlement and the broader imperial processes that led to the establishment of the Sierra Leonean Forestry Department. It includes an overview of Sierra Leone's vegetation and wildlife geography. Chapter 2 focuses on the first major policy and programme area of the Forestry Department: reservationism, the haphazard process that colonial foresters underwent in trying to transform large sections of Sierra Leone's land and forest resources into

formalised Forest Reserves – a process that was ‘supposed’ to secure a large forest estate for the Forestry Department. The chapter shows how reservationism as a process – but even more importantly as an imaginary – has arguably had a profound impact in terms of how conservation is conceived of and approached in Sierra Leone; most notably, the idea that forest in Sierra Leone can only be protected through a protected area management approach. Chapter 3 focuses on the Department’s second major programme: plantations. If Forest Reserves were about securing forest resources, then plantations were about ensuring that forest-land was filled with ‘useful’ trees for colonial forestry activities, and therefore the chapter maps out the history and experiments of changing the forestscape of Sierra Leone by planting more trees en masse. This chapter, in particular, looks at the imported (from South Asia) tree species of *Gmelina arborea*, known locally as *Yemane*, and how it came to dominate the Sierra Leone forestscape due to a range of ecological and social dynamics. The fourth chapter, ‘Exploitation’, focuses on the third policy of Sierra Leone’s Forestry Department – the one that completes the logic of colonial forestry. Reservation secured land and plantations helped to ensure it was full of ‘useful’ trees, while exploitation focused on harvesting these spaces for colonial profit. Chapter 4 thus explores the struggles of the Forestry Department to transform its operations into a profit-making venture, a key colonial imperative. The chapter explores the massive boom in forest exploitation activities by the Forestry Department that occurred during and after World War II, kick-starting a burgeoning commercial forestry industry in the country. This is followed by an analysis of its decline during the 1970s and 1980s due to the changing political economy of Sierra Leone.

Chapter 5, ‘Wildlife Conservation’, focuses on the Department’s final programme, one that emerged in the postcolonial era although with earlier colonial threads. It is a programme that represents a distinct shift in philosophy for the Department in that forests were increasingly being promoted as places of intrinsic (rather than just utilitarian) value – as places where non-human species live. This chapter is a striking example of the dynamics of wildlife conservation in West Africa, where, unlike other parts of sub-Saharan Africa, wildlife conservation became a subprogramme of broader forestry governance, rather than acting as its own department. This chapter therefore looks at the tensions, politics and processes that were involved in overlaying wildlife conservation initiatives upon the institutional infrastructure of colonial

forestry. Finally, the *epilogue* then reflects on what this history means for the contemporary endeavour of environmentalism and forest conservation in Sierra Leone.

The research for this book was conducted between 2009 and 2012, and its main source of information was derived from a wide range of library and archival sources from Sierra Leone (i.e. Fourah Bay College (University of Sierra Leone) Library, Freetown Public Library, Njala University College Library, Sierra Leone National Archives); the United Kingdom (i.e. Adeilad Deiniol Library, Bodleian Library, British Library, British Library of Political & Economic Science, Foyle Reading Room, Harrison Institute, Radcliffe Science Library, School of Oriental and African Studies (SOAS) Library, Senate House Library, Sherardian Library of Plants, The British Library, The National Archives, University College London (UCL) Library); and Australia (i.e. National Library of Australia, New South Wales State Library). Materials from this research included diaries, colonial forestry reports and colonial forestry communications, among other work. This archival research was complemented with eleven oral histories, including that of a former Chief Conservator of Forests, colonial foresters who worked in Sierra Leone in the 1960s and 1970s, primatologists who worked on wildlife conservation initiatives in the 1970s and 1980s and foresters and academics currently involved in forest conservation in Sierra Leone. Extensive time was also spent in Sierra Leone, which included visits to different historical conservation sites.

After collection, the data was sorted thematically and temporally in a computer database: thematically along the lines of the Forestry Department's four historical major programme areas – reservation (Chapter 2), plantations (Chapter 3), exploitation (Chapter 4), wildlife conservation (Chapter 5) – which make up four of this book's chapters; and temporally in terms of the date of the publication (or the specific dates that it discusses); each database section contained twenty-year intervals (e.g. 1900 to 1919; 1920 to 1939 etc.). This was done in such a manner as to allow for a comprehensive evaluation of the data. The duplication of material that crossed thematic or temporal categories proved to be manageable and even helped to reinforce findings across the different chapters. The data in each section of the database was systemically analysed in thematic and temporal order (i.e. starting with 'reservation: 1900 to 1919' and finishing with 'wildlife conservation 2000 to present'). From this data a historical narrative was developed for each of the book's chapters.

Notes

1. P. Munro, 'Deforestation: Constructing Problems and Solutions on Sierra Leone's Freetown Peninsula', *The Journal of Political Ecology* 16 (2009), 104–24.
2. K.I. Dumbuya, 'Sierra Leone: Environmental Forum – VP Sumana Plants Trees and Lays Pillar for Western Area Peninsular Forest Reserve', *Concord Times* (2011) 13 June.
3. Dumbuya, 'Sierra Leone'.
4. Dumbuya, 'Sierra Leone'.
5. E.K. Aliou, 'Building on Local Foundations: Enhancing Local Community Support for Conservation', *Unasylva* 61 (2010): 22–27.
6. A. Afzelius, *Adam Afzelius Sierra Leone Journal 1795–1796* (Almqvist and Wiksell, 1967); R. Clarke, 'Sketches of the Colony of Sierra Leone and its Inhabitants', *Transactions of the Ethnological Society of London* 2 (1863): 320–63; J.L. Wilson, *Western Africa: Its History, Condition and Prospects* (Sampsons Low, 1856).
7. C.E. Lane-Poole, *Report on Forests of Sierra Leone* (Waterlow & Sons, 1911), 4.
8. B. Braun, *The Intemperate Rainforest: Nature, Culture, and Power on Canada's West Coast* (University of Minnesota Press, 2002).
9. G.H. Endfield, 'Environmental History', in N. Castree, D. Demeritt, D. Liverman and B. Rhoads (eds), *A Companion to Environmental Geography* (Blackwell, 2009), 223–37.
10. S.P. Hays, *Explorations in Environmental History* (University of Pittsburgh Press, 1998).
11. R.P. Neumann, *Making Political Ecology* (Hodder Arnold, 2005); S. Batterbury, 'Political Ecology', in N. Castree, M. Hulme, & J.D. Proctor (eds), *Companion to Environmental Studies* (Routledge, 2018), 439–42.
12. P. Robbins, *Political Ecology*, Vol. 2 (Wiley-Blackwell, 2012).
13. For example, see J. Fairhead and M. Leach, *Reframing Deforestation: Global Analyses and Local Realities with Studies in West Africa* (Routledge, 1998); J. Fairhead and M. Leach, 'Reconsidering the Extent of Deforestation in Twentieth-Century West Africa', *Unasylva* 192 (1998), 38–46; R.P. Neumann, *Imposing Wilderness: Struggles over Livelihood and Nature Preservation in Africa* (University of California, 1998); R.L. Bryant, *The Political Ecology of Forestry in Burma 1824–1994* (Hurst & Company, 1997); N.L. Peluso, *Rich Forests, Poor People: Resources Control and Resistance in Java* (University of California Press, 1992).
14. Neumann, *Making Political Ecology*.
15. Robbins, *Political Ecology*.
16. K.H. Offen, 'Historical Political Ecology: An Introduction', *Historical Geography* 32 (2004), 19–42.
17. N.L. Peluso and P. Vandergeest, 'Genealogies of the Political Forest and Customary Rights in Indonesia, Malaysia, and Thailand', *The Journal of Asian Studies* 60 (2001), 761–812.

18. Neumann, *Making Political Ecology*; I. Vaccaro, O. Beltran and P.A. Paquet, 'Political Ecology and Conservation Policies: Some Theoretical Genealogies', *The Journal of Political Ecology* 20 (2013), 255–72.
19. T. Forsyth, 'Politicising Environmental Explanations: What Can Political Ecology Learn from Sociology and Philosophy of Science?', in M.J. Goldman, P. Nadasdy and M.D. Turner (eds), *Knowing Nature: Conversations at the Intersection of Political Ecology and Science Studies* (University of Chicago Press, 2011), 31–46.
20. For example, Fairhead and Leach, *Reframing Deforestation*; Neumann, *Imposing Wilderness*; Bryant, *The Political Ecology of Forestry*; Peluso, *Rich Forests, Poor People*; P. von Hellermann, *Things Fall Apart?: The Political Ecology of Forest Governance in Southern Nigeria* (Berghahn Books, 2013).
21. D. Weiner, 'A Death-Defying Attempt to Articulate a Coherent Definition of Environmental History', *Environmental History* 10 (2005), 404–20.
22. K. Asdal, 'The Problematic Nature of Nature: The Post-constructivist Challenge to Environmental History', *History and Theory* 42(4) (2003), 60–74.
23. T. Griffiths, 'The Humanities and an Environmentally Sustainable Australia', *Australian Humanities Review* 43 (2007).
24. P.G. Munro and M. Melo Zurita, 'The Role of Cenotes in the Social History of Mexico's Yucatan Peninsula', *Environment and History* 17 (2011), 583–612.
25. G.H. Maddox, 'Africa and Environmental History', *Environmental History* (1999), 162–67.
26. A notable exception is Pauline von Hellermann's excellent monograph *Things Fall Apart? The Political Ecology of Forest Governance in Southern Nigeria*.
27. P.G. Munro and G. van der Horst, 'Breaks with the Past: Conflict, Displacement, Resettlement and the Evolution of Forest Socio-Ecologies in Sierra Leone', in J. Lahai and T. Lyons (eds), *African Frontiers: Insurgency, Governance and Peacebuilding in Post-colonial States* (Ashgate Publishing, 2015), 119–30.
28. D.K. Davis, 'Desert "Wastes" of the Maghreb: Desertification Narratives in French Colonial Environmental History of North Africa', *Cultural Geographies* 11 (2004), 359–87.
29. J. Fairhead and M. Leach, 'False Forest History, Complicit Social Analysis: Rethinking Some West African Environmental Narratives', *World Development* 23 (1995), 1023–35.
30. J. Fairhead and M. Leach, *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic* (Cambridge University Press, 1996).
31. C.A. Kull, 'Deforestation, Erosion, and Fire: Degradation Myths in the Environmental History of Madagascar', *Environment and History* (2000), 423–50.
32. J.C. McCann, 'The Plow and the Forest: Narratives of Deforestation in Ethiopia, 1840–1992', *Environmental History* 2 (1997), 138–59; also see J.C. McCann, *Green Land, Brown Land, Black Land: An Environmental History of Africa, 1800–1990* (Heinemann, 1999).
33. W. Beinart, 'African History and Environmental History', *African Affairs* 99 (2000), 269–302.

34. For example, see G.A. Barton, *Empire Forestry and the Origins of Environmentalism* (Cambridge University Press, 2002); Richard Grove traces this history even earlier but also sees colonial foresters playing a critical role: R. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860* (Cambridge University Press, 1995).
35. For example, see Fairhead and Leach, *Reframing Deforestation*; Peluso, *Rich Forests, Poor People*; Bryant, *The Political Ecology of Forestry*.
36. J. Martinez-Alier, *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* (Edward Elgar Publishing, 2003).
37. B. Bennett, *Plantations and Protected Areas: A Global History of Forestry Management* (MIT Press, 2015), 46.
38. K. Sivaramakrishnan, *Modern Forests: Statemaking and Environmental Change in Colonial Eastern India* (Stanford University Press, 1999), 243.
39. R.A. Cline-Cole, 'Redefining Forestry Space and Threatening Livelihoods in Colonial Northern Nigeria', in R.A. Cline-Cole and C. Madge (eds), *Contesting Forestry in West Africa* (Ashgate, 2001), 38.
40. M. Crowder, 'Indirect Rule: French and British Style', *Africa* 34(3) (1994), 197–205; K. Good, 'Settler Colonialism: Economic Development and Class Formation', *The Journal of Modern African Studies* 14(4) (1976), 597–620.
41. R. Grove and T. Falola, 'Chiefs, Boundaries, and Sacred Woodlands: Early Nationalism and the Defeat of Colonial Conservationism in the Gold Coast and Nigeria, 1870–1916' *African Economic History* 24 (1996), 1–23.
42. S. Berry, 'Hegemony on a Shoestring: Indirect Rule and Access to Agricultural Land', *Africa* 62 (1992), 327–27.
43. H. Bernstein and P. Woodhouse, 'Telling Environmental Change Like It Is? Reflections on a Study in Sub-Saharan Africa', *Journal of Agrarian Change* 1(2) (2001), 283–324.