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Africa: Histories, Ecologies and Societies

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ABSTRACT

A survey of African environmental history during in the period 1994 to 2004 is is provided and distinctions between the environmental history of Africa and that of other geo-regions are identified. It is argued that the promises of the earlier environmental historiography have not been realised and that an emerging trend embeds Africa's environmental history within the framework of social history and issues around science and changing societies. The article focuses on work that has appeared in *Environment and History*, analysing the trend-setting role that this journal has played.

KEYWORDS

Africa, historiography, environmental history, social history

From its inception in the late 1960s as the formal name for a defined area of historical investigation, environmental history has shown a strong self-reflective streak. It must be seldom (if ever) that practitioners have dissected the historiography at such a proximate stage in its evolution. Since Roderick Nash in 1972 provided environmental history with its name, its justification and its first teaching syllabus,¹ there have been many defences of environmental history, a plethora of suggestions as to its disciplinary boundaries, descriptions of its field of study and arguments for its academic significance and historical relevance.² It is therefore entirely appropriate to celebrate in similar vein, the tenth anniversary of the appearance of *Environment and History*. By attracting articles from renowned established scholars as well as newcomers to the field, this journal that has been both catalyst and forum for reflecting on the dimensions of the historiography in various parts of the globe during that decade.³

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THEORY AND THEME

A considerable literature has developed around the self-conscious analysis of environmental history and the present article augments it with respect to Africa. In its early phases, environmental history was proselytising or promotional, based on a sense that something exciting, innovative and relevant was happening in historical studies. Much of that zealotry was directly related to the eco-politics of the second half of the twentieth century, when profligate use of natural resources, global warming, demographic growth, inappropriate conservation practices and other environmental issues began to have global as well as local and regional impacts. Many of these concerns were not original to environmental history but when, in 1962 Rachel Carson published Silent Spring and drew attention to the environmental damage done to promote short-term human interest and inappropriate notions of 'progress'; when remote places and wild animal populations seemed under threat; when in the late 1960s and early 1970s Lynn White and John Passmore philosophised about Judaeo-Christianity being an ecosystem-unfriendly and nature-destroying belief system;⁴ and when popular ecology vitalised public thinking, the social sciences responded enthusiastically, history among them. Within a Western paradigm 'nature', the 'environment' and 'environmentalism' quickly became strong tropes and environmental history gave them an overtly intellectual and contextual twist.⁵ In a relatively short span of time, environmental history became a vibrant field of study in the United States and historians in other parts of the world began to take note of it.

Not only did environmental history respond to the problems of society and encourage eco-political activism, it went further by appropriating an entirely fresh set of sources. The environment itself was an historical document and one able to suggest new narratives about human society and ideas on how better to understand human action. In short, environmental history was new, committed, intellectual and brought an extended range of sources into the profession. Established academics in the more traditional areas of history were encouraged to accept this newcomer as a valid long-term historical pursuit. Much was claimed for this new field, and by 1990 the overwhelming power of the environment in shaping culture was considered so fundamental that Donald Worster argued that environmental history needed to be accepted as central to the discipline as a whole. Being the very point at which the natural and cultural intersected it could, he believed, consequently not merely be regarded as one of many equal historical fields but one absolutely pivotal to understanding the past.⁶

Over the last decade (and indeed, even earlier) African environmental history has encompassed both these historiographical innovations. Prioritising environmental issues within an international framework alerted historians of Africa to fresh subjects of investigation, issues relating to the exploitation or conservation of natural resources and the effects of climate and specific geographies, while it also promoted thinking about new sources and evidence. In Africa specifically, environmental history originated from a strong African social history paradigm that had much to do with environmental justice: it was more eco-social history than environmentalism.⁷

While discussion over the parameters of environmental history was vibrant and purposeful from the start, its theoretical foundations appear to have been less secure.⁸ This lacuna has been remedied by the December 2003 theme issue of History and Theory devoted to environmental history, a journal that ten years ago ignored the subject entirely.9 In 1995, the year in which Environment and History was launched (and which is the chronological point of departure for the present review essay), History and Theory included an article on the "New" New History: A longue durée structure' in which Ignacio Olabarri discussed the most important 'new histories' of the twentieth century. Environmental history was not mentioned, although it shared a number of common points with the 'new histories' that were acknowledged (the Annales, Marxist history, the Past and Present group in Britain, American 'social science' history and the German Bielefeld school). These included strong elements of social science, an interdisiplinary agenda, an explanatory goal, an emphasis on the collective rather than on the individual and a predictive dimension.¹⁰ With the publication of the recent History and Theory issue environmental history has been treated to a full (though not final) theoretical discussion and this may indicate - as J.R. McNeill believes it does - that the field has 'begun to reap some of the benefits of maturation'.¹¹ Other historians would argue that together with a degree of maturity and theoretical cohesion have also come a number of fresh directions that deserve to be recognised. Tom Griffiths, for example, discusses the 'new environmental history' and identifies those features that differentiate it from the earlier literature.¹² It is evident that there have been changes in environmental history over the last decade that distinguish it from the writings of the 1960s, 1970s and 1980s. Environment and History has both encouraged and reflected this evolution.

As far as Africa is concerned (this observation also holds true for other parts of the world) some of the promises of environmental history have not been realised. For example, interdisciplinarity and the potential to overcome specialisation have not come about. The newer literature suggests that environmental history has retreated into the dominant historiographies of each geo-region, although it has certainly added a fresh dimension to them. If this is what has happened (and I would argue that it has) environmental history should not necessarily be considered a 'failure' for it would still have achieved a significant goal – to make all history more inclusive in its narratives than it has been.¹³ Thus to discuss environmental history as being more 'history' than 'environmental' may in fact strengthen the 'new environmental history' rather than weaken it.

Stroud would agree that environmental history has not been incorporated into the wider body of historical scholarship and that even after decades of existence it remains marginal to historical studies as a whole. Actively bringing it back

within the historical fold may be helpful in giving it a more important place in the academic discipline, while of necessity perhaps compromising its attraction to a wider public audience. But in order to assist environmental history in claiming this larger voice within the academy, Stroud believes that theoretical consensus needs to be addressed about how nature should be historically construed. For example, neither nature nor the environment (these are not synonyms) are categories of analysis, as are class, race and gender. What is needed now, asserts Stroud (and here African environmental history is making a contribution), is to show that paying attention to nature can teach all historians – not only environmental historians – something new about their own work. Stroud therefore argues that the environment should not be extracted from the historical equation, but employed as a site for examining other axes of power.¹⁴ Nancy Jacobs accomplishes this in *Environment, Power, and Injustice: A South African History*.¹⁵ In this respect – the environment as locus of power – African environmental history has given considerable insights to the discipline as a whole.¹⁶

Not everyone would agree with this assessment. In her (2000) review of James McCann's Green Land, Brown Land, Black Land: An Environmental History of Africa, 1880-1990, Amy Dalton refers to African environmental history as a 'rather large can of worms', in a book that raises 'all the problems associated with synthetic historical scholarship ... in the context of a subdiscipline that is one of the least understood in modern academia [that claims] more inherent theoretical ambiguities and methodological dilemmas than any other area of history - and probably more than any of the numerous discipline it butts up against'.¹⁷ Dalton does recognise, however, what is in my opinion one of the most important contributions that environmental history of Africa has made: that to what has been called 'one of the most important and chronically unresolved problems in the philosophy of history'.¹⁸ This is the congruence of human experience and physical science or the merging of what C.P. Snow in 1959 famously called the 'two cultures'.¹⁹ Both David Lowenthal and Donald Worster think that environmental history has the potential to close that gap, at least between the humanities, social sciences and the environmental sciences.²⁰ William Beinart's The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950 is important in this regard,²¹ but all historians have become more sensitive to the tropes and requirements of the natural sciences. At the same time, particularly since jettisoning equilibrium theory and acknowledging disturbance and change, scientists have put history into their work.²² Worster's significant thinking on this subject was aired in Environment and History - but he warned historians against being too humble and merely becoming 'pupils of environmental scientists or their archival assistants',²³ an admonition that environmental historians of Africa have taken heed of.

ORIGINS AND OWNERSHIP

Possibly the most divisive issue among the international community of environmental historians is the debate around whether the field did in fact originate in the United States and the modern popular movement of environmental concern that arose there. It was this matter that gave rise to Environment and History because some historians believed that they lay elsewhere and refused to be subservient to the American literature or to become clones of it. Richard Grove, the founding editor of the journal, was adamant that environmentalism was a consequence of past imperial and colonial eras and not of the modern environmental movement in the United States. He argued for separating clearly the wellsprings of environmental history in the United States (where he conceded that Carson's Silent Spring had been critical to advancing the discipline) from those in the rest of the Anglophone world where ideas around desiccation theory, for example, let alone the colonial enterprise itself, had been far more powerful. Grove promoted environmental history outside of the United States as being more 'interesting and innovative', 'more integrated, outward-looking and comparative ... in uncovering the processes and discourses of colonial expansion and cultural encounter' than the 'ultra-nationalist' perspective so evident in North America.²⁴ When Grove left the editorial collective of Environment and History in 2000 he repeated his belief that there needed to be a 'southern agenda of environmental history' and one that showcased African, Asian, Australasian, Latin American and European scholarship.25

It was thus in the spirit of promoting this agenda - 'to move the environmental history of the rest of the world closer to centre stage and to deliberately encourage the writing of environmental history' elsewhere - that Environment and History was launched.26 Its explicit aim was to prove incorrect the statement that much non-American environmental history was derivative, mere poor examples of applying models from the United States.²⁷ In this way, Environment and History has been a major promoter of African environmental history, empowering it as well as providing a research platform. In fact, applying any over-arching model to a continent such as Africa is impossible. One of the defining features of African environmental history is its wide variety and the difficulty of ascribing any single direction to it. Categories and issues that apply to one part of the continent are quite irrelevant when considering another. But despite Africa's diversity, there are a number of themes and approaches that might distinguish its environmental history from that of the United States, Europe,²⁸ Australasia or South Asia and many of them have been promoted over the last decade in articles that have appeared in Environment and History.

CONTINENTAL CONTOURS

After ten years *Environment and History* now has a history of its own and a reason to reflect on the contribution that this journal has made to vitalising environmental history outside of North America. This publication has played a powerful and encouraging role in illuminating different histories and environmental scenarios to the extent that they now not only compete with the United States but, it could be argued, even inform the work of some American scholars as well as making comparisons and contrasts possible.²⁹

There are many ways in which this reflection might be achieved. It is customary to provide an overview of the field, organise it thematically and explain various contributions to it. With reference to South African environmental history, for example, Phia Steyn straightforwardly divides her subject into nature conservation, exploitation and conservation of natural resources, disease, precolonial societies and modern environmentalism.³⁰ In Social History and African Environments Wiliam Beinart and JoAnn McGregor offer a more sophisticated trio of categories when considering the African literature as a whole: African environmental ideas and practices; colonial science, the state and African responses; and settlers and Africans, culture and nature.³¹ Differently, in Ecology and Empire: Environmental History of Settler Societies, a comparative investigation of a number of geo-regions, Tom Griffiths and Libby Robin identify four themes: Ecologies of invasion; Empire of science; Nature and nation; and Economy and ecology.³² The approach taken here is to discuss some general aspects of the historiography of Africa's environmental history and then focus specifically on the achievements of Environment and History in this regard through the prism of contributions to the journal.

Now that some forty years have elapsed since the first environmental history was written – a literature distinct from the disciplines that McNeill regards as having 'fuzzy' and 'porous' borders with environmental history³³–it has become clear that environmental history generally conforms to the historiographical traditions of each region of study. This is another way of saying that the promises of global reach, multiple international influences and a common environmental history agenda (part of the conversations of the 1970s and 1980s) have not come about. Some might see this as a retreat into older parochialisms, but as far as Africa is concerned, what environmental history has done is enrich existing strands of African history, rather than replace them with anything entirely new.

Environmental history on African topics is diffuse rather than distinctive. It generally lacks the proselytising 'green' political agenda that characterised earlier literature and, in the same way as Tom Griffiths has argued for Australia, it has become more recognisably 'history'.³⁴ There was a time in which environmentalism on a western model was fairly strong in parts of Africa, but environmental thinking has changed and even in the United States the eco-political will has flagged.³⁵ For example, in the late 1980s and early 1990s, a period when South Africa was poised for democracy, environmentalism was relatively powerful. Swelling the enthusiasm of that time was the slogan 'apartheid divides, ecology unites'. After a divided political past, a common cause of taking care of, or restoring, the physical environment across traditional barriers of race was prophesied to be a crucial nation-building exercise. Arguments revolved around the notion that environmentalism of all kinds, unlike authoritarian apartheid, was bottom-up, or grassroots community mobilisation.³⁶ Contrary to expectations however, since liberation in 1994, a declining economy, priorities of state spending on job creation, the provision of essential services, and the need to make nature economically viable (eco-tourism, mining etc.) have become far more important. Optimists describe this as a 'periodic bout of repositioning' while others more pessimistically predict that environmentalism is heading for permanent political obscurity.³⁷

Specific features may be discerned in the environmental historiography of each continent. Australasian writing, for instance, is replete with ideas of nationhood (identity formation) based on landscape and, overall, concentrates on settler/environment dynamics. In the case of Australia ('more a new planet than a new continent'38), how European settlers came to terms scientifically, aesthetically, economically and politically with an unusual and strangely fragile landscape and biota, peopled by Aboriginal Australians with strong links to the 'country' that shapes their identity, are dominating concerns. New Zealand has an important contribution to make because of the speed of ecological transformation, this being 'one of the last significant landmasses to be settled by humans ... the nature of the interactions of people and nature ... have therefore been unusual and dramatic'.³⁹ South Asian environmental history finds its unifying factor in the 'nature and significance of the colonial experience', related particularly to agrarian history and a strong tradition of subaltern studies.⁴⁰ Matt Osborn argues that the overarching framework to environmental history in Britain is rooted in traditional landscape history and historical geography.⁴¹

Africa, however, is a uniquely diverse continent. William Beinart, one of the most prolific and accomplished environmental historians of southern Africa, has deliberately moved Africa's environmental history away from developments in environmental history elsewhere and repositioned it strongly within African history. He believes that African environmental history has contributed to African history in refiguring colonialism in environmental terms, re-evaluating dominant ideologies and outmoded tropes such as 'degradation' and 'decline', and questioning what is meant by precolonial environmental equilibrium.⁴² A close analysis of colonial environmental responsibility and African agency, he argues, influences our understanding of power relations and environmental transformation in Africa. For this reason, more recent environmental history has been able to give us 'more complex readings of the history of science and knowledge'. Thus Beinart regards environmental history, rather than a stand-alone enterprise

on a specific topic or one that is aligned with the concerns of environmental historians in the rest of the world. He argues that environmental sensitivity is a component of a new African historiography that is characterised by an innovative interdisciplinary approach, a corrective anti-colonial perspective, an extension of the range of evidence in terms of new archival sources, by oral fieldwork, by incorporating non-human agency and African cultural constructs.⁴³

Thus rather than marking it off as a defined subfield, African environmental history is being reconceptualised as a sophisticated tool for telling better social, political, economic or any other histories.⁴⁴ In fact, this point of view is not new and was aired in *Environment and History* by Ravi Rajan in 1997 when he called on environmental history to reflect the wider character of professional history in these different areas, to explore specific historiographical genres, and be sensitive to particular historical traditions.⁴⁵ A recent book, *Social History and African Environments*, is explicit (with respect to Africa) in acknowledging one of these traditions, indeed an extremely close connection – that to social history.⁴⁶ In addition to Rajan's provocative article, *Environment and History* has included other theoretical and historiographical pieces that chart ways forward for improved environmental history, including Uekotter's advocacy of a more organisational approach⁴⁷ and Pawson and Dovers's reminder of the challenges of interdisciplinary research.⁴⁸ Many of these ideas, but not all of them, have been taken up by scholars of Africa.⁴⁹

DIVERSITY AND DIFFERENCE

As others have observed, regional strengths and weaknesses in African scholarship are evident⁵⁰ and this is reflected in contributions to *Environment and History* as well as in the literature generally. Some parts of Africa have had extensive and nuanced treatment while others have been virtually ignored. There has, for example, been an impressive special issue on Zimbabwe, a country well studied from many different historical angles by a number of outstanding scholars.⁵¹ There have been two articles each about West Africa⁵² and the Sudan,⁵³ three about East Africa (Tanganyika, Uganda and Malawi),⁵⁴ and one on Madagascar.⁵⁵ The majority of articles in *Environment and History*, however, have reflected the Anglophonic dominance of scholarship relating to southern Africa. These – two articles on Lesotho, one each on Botswana and Namibia and three on South Africa⁵⁶ – have expanded the southern African environmental history considerably.

There are a number of reasons for the uneven coverage. First, researching in many parts of Africa is often hard and financially costly work. There are practical difficulties relating to problematic access both to localities and to specific archives. Second, there are intellectual difficulties around disciplinary boundaries, particularly anthropology-history and archaeology-history. Third,

there are problems for scholarship within cross-cultural issues and language barriers. Fourth, inspiring work by gifted individuals plays a large part in driving and encouraging certain historical literatures so that these are the ones that burgeon, sometimes (although not always) at the expense of others. Enthusiastic and committed scholars like Terence Ranger with respect to Zimbabwe, for example, have guided students and led numerous colleagues to contribute to a specific field.⁵⁷ Some of them, like JoAnn McGregor,⁵⁸ are today's academic leaders. William Beinart, Ranger's successor at Oxford, has a similar ability for enthusing students about South Africa's environmental history and his talented students are coming to prominence.59 In the United States an expert such as James McCann of Boston University has promoted the history of Ethiopia⁶⁰ and encouraged a vibrant African Studies Center at that University with a rich working papers series. It is a pity that so little African environmental history is written by indigenous Africans and so much by people McNeill refers to as 'outsiders'.⁶¹ More forthrightly, Jacobs calls them 'foreigners' and is critical because she believes that many do not have sufficient African insights into environmental issues.⁶² Capacity-building and academic encouragement for black African scholars is a real challenge for future African environmental history.63

Certain African topics feature more prominently than others. Because of Africa's colonial history of subjugation, it is not surprising there is an emphasis on environmental justice and the eradication of eco-racism. These surface in writing about access to resources, to land and fauna and flora in particular⁶⁴ but also to oil.65 A further important theme in African environmental history is its practical relevance in informing and influencing appropriate policies around economic development,⁶⁶ including agriculture (subsistence and commercial cultivation⁶⁷ and land restitution issues), eco-tourism (wildlife reserves and hunting), and the appropriate extraction and export of natural resources. Reference to the colonial experience - so fundamental to many parts of Africa - is proving a most fruitful avenue of investigation, generating nuances and uncovering agencies where none existed before with implications for development policy as well as for historical studies. The cultural history of colonial and imperial science is one of these high-growth areas. It is in the domain of colonial and imperial studies that the source material is strong and some of it accessible in the United Kingdom and Europe. For this reason, Anglophone Africa has received more attention by far than other parts of the continent.

Certainly these are important contributions, but nonetheless, great gaps exist in African environmental history and it is true to say that there are both places and subjects that have received very little study. There are, of course, exceptions, but generally speaking, the literature is not strong on disease,⁶⁸ urban studies (ancient or modern)⁶⁹, cultural and visual constructs of the rich African fauna and landscape, mineral and resource extraction, bioregional work (e.g. on trans-national river basins or highlands), explorations of 'deep time' or cultural fire,⁷⁰ and aspects of public history to name but some.⁷¹ World history is also not

strong, although a promising avenue of linkages to global issues – as well as a well-founded and substantial critique of the established literature on ecological imperialism, has appeared in a recent article in *Environment and History* by Beinart and Middleton entitled 'Plant transfers in historical perspective: A review article'.⁷² There is also an overall absence of active collaboration between historians and other disciplines which make use of chronology – archaeology, social and cultural anthropology, palaeoclimatology, palaeobotany and palae-oanthropology, as well as linguistics, visual art and literature, veterinary and other natural sciences, although there are experts of Africa in all these fields.⁷³

While environmental historians of Africa have certainly made use of sources from other discipines, environmental history in Africa has remained distinctly 'history' and has not become what Stephen Dovers argued that it should be: a vibrant interdisciplinary arena.⁷⁴ Despite the fact that Africans share a single continent, the task of interpreting common themes within a common environmental past seems daunting. How can a real historical link be made, for example, between the environmental history of the ancient Nile river, the multiple urban layers evident around the southern rim of the Mediterranean, the transhumance strategies of the Khoikhoi of the western Cape, and the rock art of Botswana's Tsodilo hills? A book such as Shepard Krech's The Ecological Indian would simply not be possible to write for Africa as a whole.⁷⁵ Dealing with a large and diverse continent is probably the greatest factor that has so far prevented African environmental history from being an entirely coherent subject. If African environmental history remains conceptualised as a component of modern, postcolonial African studies, it will not be what Tom Griffiths thoughtfully calls 'a distinctive endeavour ... [that] ... moves audaciously across time and space and species', that 'challenges some of the conventions of history' and 'questions the anthropocentric, nationalistic and documentary bases of the discipline'.⁷⁶ But if Beinart is correct that the environmental history of Africa is a thriving field closely linked with other branches of African studies⁷⁷ then he would probably agree with Griffiths that the strength of 'the new environmental history' is that it prioritises the 'historians' traditional concerns of identity, agency, economy and politics' using the narrative form.78

ENVIRONMENT AND HISTORY

In the ten years that *Environment and History* has been in existence, it has played an outstanding role in promoting and driving the environmental history of Africa. One of the most exciting contributions (and a benchmark for other studies) was included in the very first issue. This was an article by James Fairhead and Melissa Leach who have, it would be justifiable to argue, transformed African environmental history, and their example has been followed by many other scholars eager to apply their models to other parts of Africa.⁷⁹ In 'Read-

ing forest history backwards: The interaction of policy and local land use in Guinea's forest-savanna mosaic' and in their subsequent book *Misreading the African Landscape* and other writings Fairhead and Leach creatively overturned assumptions about the African environment and the role of African people in it. In 1996 Leach and Mearns edited a cleverly entitled volume *The Lie of the Land: Challenging Received Wisdom on the African Environment* that probed 'science and policy based on unfounded narratives of environmental degradation' and showed that many myths sustained over many years and with an extremely influential bearing on matters of policy, were not historically valid.⁸⁰ It was John MacKenzie who first critiqued Edward Said for casting Africans merely in the role of victims and thus denying them power or agency.⁸¹ Beinart refers to a 'struggle to free historiography and social studies from narratives of dependence, victimhood and romanticism'⁸² and the research of Leach, Fairhead, McCann and others has gone a long way to changing historical and current thinking about African issues, particuarly on forests and landscape cover.

Because of its economic significance in the imperial endeavour, agroforestry and indigenous forests in tropical Africa have been the subject of a number of articles in Environment and History. The path-breaking research of Fairhead and Leach has already been mentioned, but forest coverage in the journal has also included Cameroon, Tanganyika, Namibia and the Cape Colony. Productive international links and insights are suggested by some of these articles. Brown's for example, on silviculture in the Cape Colony, shows debts to Grove and MacKenzie on Scottish influence and expands on the career of John Croumbie Brown.⁸³ Harald Witt takes up the story for another colony - Natal - in his chapter, 'The emergence of privately grown industrial tree plantations', published in South Africa's Environmental History.⁸⁴ In an article that suggests comparisons between southern Africa with its British bureaucracy and German Cameroon, Environment and History published an article by Tobias Lanz, 'The origins, development and legacy of scientific forestry in Cameroon', while Roderick Neumann considered the British and German legacy in East Africa in his 'Forest rights, privileges and prohibitions: Contextualising state forestry policy in Tanganyika'.85

Owing to their imperial resonances, forest studies are extremely popular and in 2003 the University of Sussex hosted an 'International Conference on the Forest and Environmental History of the British Empire and Commonwealth'. Many of the papers presented there were innovative in respect of the social and environmental history of forests and forestry in Africa.⁸⁶ Not only is there a large international literature on temperate forests in North America and Europe that invite comparisons with other parts of the world in terms of environmental history, but imperial and colonial state intervention and ideas about 'indigenous trees' versus economically productive 'plantations' of exotics are significant because of the clues they provide to understanding the social, economic and political dynamics of many parts of the English-speaking former colonial world and legacies that persist to this day.

Damian Shaw's article in Environment and History, 'Thomas Pringle's plantation', is not primarily about the colonial bureaucracy, but about a specific settler mentality and literary figure. This is more akin to the settler/identity literature about the Australian environment because it unpacks attitudes to landscape and their effects on artistic productivity, in Pringle's case, poetry. Pringle himself critiqued the use of an English aesthetic model and suggested that improved and more practical environmental information could have been gained by collecting the experiences of 'boors [Boers] and Hottentots'. Local knowledge needed to be acquired.⁸⁷ While settler attitudes to environmental aesthetics comprise a large body of historiography in Australia⁸⁸ this is less explored for Africa.⁸⁹ Shaw's work resonates with Jill Payne's Master's thesis, 'Re-creating home: British colonialism, culture and the Zuurveld environment in the nineteenth century'.⁹⁰ Emmanuel Kreike confronts changing environmental priorities in a chapter in Social History and African Environments, 'Hidden fruits: A social ecology of fruit trees in Namibia and Angola, 1880s-1990s',⁹¹ and in slightly different vein Dahlberg and Blaikie ('Changes in landscape or interpretation?') attempt to come to grips with the slippery history of perceptions and contribute to the history of Botswana.92

While it concerns a relatively small district of Central Africa, Tamara Giles-Vernick's detailed cultural history *Cutting the Vines of the Past* with its explorations of indigenous responses suggests what might be achieved for other areas of Africa.⁹³ Both this book and Henrietta Moore and Megan Vaughan's *Cutting Down Trees* emphasise the gender dimension inherent in natural resource issues in Africa as does an article by Melissa Leach and Cathy Green, 'Gender and environmental history' published in *Environment and History* in 1997.⁹⁴ Ranger explores the gender issue in 'Women and environment in African religion; The case of Zimbabwe'.⁹⁵

Given the vastness of the arid areas of Africa, it is surprising that there is a general absence of the environmental history of desert or arid areas. This was once the case for Australia too, but the work of Libby Robin on how national scientific priorities have taken shape around issues of aridity, has much to inform African studies.⁹⁶ Water politics in Africa, generally, have not had the historical attention that they have been given elsewhere – California and India for example – but this may be changing with the work of Isaacman and Sneddon, Thabane, Jacobs, Forrest, Nemarundwe, Kozanayi and Tempelhoff.⁹⁷

An extremely productive area of southern African environmental research involves plant transfer issues and this also suggests global comparisons. Beinart and Midddleton's review article, 'Plant transfers in historical perspective', has already been mentioned and Lance van Sittert's research on the Cape is important here,⁹⁸ as is Katherine Middleton's on Madagascar,⁹⁹ although cultural attitudes to introduced plants (particularly crops¹⁰⁰) would reward research.

COLONIAL TROPES

Whether implicit or explicit, African environmental history is strong on issues relating to economic development – nature is an economic resource that is extremely important to developing African countries. Ideologically, the environment is, like everything, culture-bound, and much thinking about the African environment is related to the colonial experience. Strong tropes were developed in the colonial discourse and they affect environmental action (and donor funding to Africa) even today. Whether African environments were 'degrading' and 'declining' as so often stated, is a case in point, and international financial interventions, related to providing subsistence for growing populations, are often based on this discourse. Grace Carswell's article in a 2003 issue of *Environment and History* is an excellent example because she links colonial and post-colonial discourses into a seamless narrative. She interrogates closely why these discourses have such a long life and concludes that 'development' in different historical contexts remains externally driven.¹⁰¹

Some of the most exciting historical research relates to soil erosion and *Environment and History* has given voice to work in this field.¹⁰² The alpine kingdom of Lesotho, where the scarred landscape has invited academic and development comment, was the subject of two articles in 2000, Meena Singh's 'Basutoland: A historical journey into the environment' that prioritises missionary sources, and Thackwray Driver's modern political framework, 'Anti-erosion policies in the mountain areas of Lesotho: The South African connection'. In a different ecosystem, Harri Siiskonen analyses 'Deforestation in the Owambo region, north Namibia, since the 1850s'. Christian Kull's article of the same year links ideas about deforestation, erosion and fire in Madagascar, questioning rangeland myths, delving into deep time and unearthing mistaken ideas about presettlement environments.¹⁰³ Increasing, as well as decreasing, tree cover is ecologically and socially important and Jacob's work, 'Grasslands and thickets', on bush encroachment and herding in the arid areas around Kuruman in the northern Cape links rangeland management and oral evidence in an innovative way.¹⁰⁴

Politics (local and imperial/colonial), culture and environmental science are considered together in much of the new African environmental history and this is a vibrant area of research and writing. Beinart's *The Rise of Conservation in South Africa* is the most recent and most detailed work that melds these disciplines into an historical whole.¹⁰⁵ This theme – imperial science – is one (climate is another¹⁰⁶) that can be taken up on a continental canvas, at least as far as the British colonies in Africa are concerned. Leading scholars include Peder Anker, whose stimulating book *Imperial Ecology: Environmental Order in the British Empire*, *1895-1945* conjoins a number of important environmental themes under the rubric of discussing an epistemological alliance between the emerging disciplines of human and natural ecology within the international context of the British Empire. The main thesis of this book is to contrast the colonial

periphery with the imperial metropole and to argue that ecological science, as we know it today, was shaped largely by the tension between South African idealists who believed that nature's economy was fixed and British mechanists who believed that it that it could be planned and altered. The argument is provocative and encourages thinking on the burgeoning science of ecology in the colonial endeavour, ranging across Freud, racism, Jan Smuts, pasture science, wildlife observations, economics, ethology, and imperialism all interfaced in totally fluid ways.¹⁰⁷ Helen Tilley, historian of the African Survey of the 1930s (with which Anker's book is also concerned), analyses the bureaucracy of the time carefully¹⁰⁸ and in turn, there are fascinating connections with Saul Dubow's analysis of the period with reference to South Africa, 'A commonwealth of science: The British Association in South Africa, 1905 and 1929'.¹⁰⁹

ECO-RACISM

Implicit in much of the literature relating to colonialism and the environment is eco-racism. This is a focus of environmental history that has not changed or become more neutral¹¹⁰ in political tone since 1995 and it is surely an outgrowth of the strong social history tradition in African history since the 1970s. In many respects, this, like social history, is often an engaged history, dealing as it does either with issues of exploitation or the correction of that exploitation. In this regard, access to indigenous wildlife or to national parks and protected areas is a popular topic and it, too, has implications for development policy through transfrontier natural resource conservation, community conservation and sustainable extraction. As MacKenzie demonstrated so well in *The Empire of Nature: Hunting, Conservation and British Imperialism*¹¹¹ the hunting culture is a subject that also brings regions of Africa together within a single environmental narrative, although there are differences between various colonial histories and to date, there is no synthetic work that links east, west, north and south Africa.¹¹²

Wildlife and 'wilderness' protection forms part of the global debate on what constitutes sustainable development, a buzzword in development policy as well as in the conservation arena. This is controversial, and as discussion around the trade in endangered species convention (CITES) indicates, often divides the 'developed' from the 'developing' world. (The special issue of *Environment and History* on Zimbabwe included an article specifically on this theme: Hill's 'Conflicts over development and environmental values: The international ivory trade in Zimbabwe's historical context'.)¹¹³ The literature, especially the popular literature, also fragments along racial lines, because nature protection is often considered to be a 'white' concern, and also because protected areas are expected to deliver material benefits to local communities and regional economies. Land re-distribution and, in the case of South Africa land restitution through legal redress, add to the mix of issues around wildlife protection/utilisation and land

set aside for biodiversity conservation. This certainly embeds the environment as a locus for struggles over political and economic power that reflects a history of the nexus between western environmentalism and colonialism. As expressed in *Social History and African Environments*, there are 'explicit claims about who best understands African environments, and who should have the right to control them – whether scientists, national governments or local people. Such arguments have become centrally important as bases for intervention, conservation and regulation. Environmentalists sometimes emphasise … responsibility to future generations for the well-being of the planet … Africanists by contrast, sometimes see access to resources as the critical issue for communities … All such approaches imply both historical investigation and historical judgment.'¹¹⁴ It is through careful and sophisticated historical scholarship that the postcolonial trap of simplistic divides that Sachs believes has crippled environmental history will be avoided and fresh perspectives on colonial and other power structures unearthed.¹¹⁵

Some of these fresh perspectives include the cultural importance of 'indigenous' versus introduced or 'exotic' animals and plants. Both Van Sittert and Beinart have considered changing settler values and attitudes around jackal *Canis mesomelas*¹¹⁶ and Gordon and Swart analyse historical emotions over the African dog, argued by some to be a separate domestic dog species, *Canis africanus*.¹¹⁷ Cultural ideas around sport-fishing have been introduced into the southern African literature by Malcolm Draper in an article about masculinity, colonialism and trout.¹¹⁸ Jacobs considered the economic as well as the cultural importance of donkeys in an article that appeared in *The American Historical Review* entitled 'The Great Bophuthatswana Donkey Massacre: Discourse on the ass, politics of class and grass'.¹¹⁹

The historiography of indigenous animals has highlighted some of the early history of colonial field sciences and this is growing field of interest, in line with the cultural turn in the humanities as a whole. Entomology is one area of study and work by Harries on missionary H.-A. Junod, Brown on economic ornithology and Swart on the nationalistic and identity implications of the study of termites by Eugene Marais are informative and important.¹²⁰ Ornithology is also beginning to attract attention, as it has in the United States and Australia¹²¹ and there is preliminary work by Jacobs and Carruthers in this regard.¹²² While it is a rich vein in the humanities and social sciences, it has to be said that so far, the natural scientists and protected area managers have not yet begun to incorporate this historiographical and humanistic dimension into their research work or management plans and 'Postmodernism and African conservation science' by Attwell and Cotterill that appeared in *Biodiversity and Conservation* in 2000 is an exception.¹²³

Most of the writings about nature focus on contests over large mammals and the localities in which they are confined. Here the literature is rich and varied. Southern and East Africa come in for most attention, although articles on the

Sudan have appeared in *Environment and History* by way of colonial biography and property rights,¹²⁴ while Leach has published an article on hunting in West Africa.125 For obvious reasons, the protected areas in which large mammals are conserved are prioritised in the literature, the Kruger and other national parks in southern Africa among them, 126 although more careful study of regions within colonial South Africa is also being given.¹²⁷ The historiography of Zimbabwe's protected area policy is well advanced, perhaps because of the CAMPFIRE scheme for community conservation in that country that has both admirers and critics.¹²⁸ Interestingly, in a review of Chenje's State of the Environment in the Zambezi Basin 2000, Jacobs regarded as a limitation the fact that the biophysical environment was conceived of only in terms of a developmental resource and/or tool and that indications of any non-utilitarian value at all were absent. Duffy's Killing for Conservation: Wildlife Policy in Zimbabwe is also interesting for its perspective on social equity within a global conservation arena and problems generated by dividing conservation management and policy objectives between rural development and poverty alleviation on the one hand, and the gratification of aesthetic enjoyment of wealthy foreign tourists on the other.¹²⁹

Central and east Africa have also generated historical work over the past decade and *Environment and History* has facilitated its advance. Morris, for example, provided an overview of Malawi's colonial wildlife protection experience, contrasting the opposing images of Africa either as 'unspoilt Eden' or as 'hopeless political and ecological crisis' and suggesting that there are sensitive and practical management strategies that could be followed to bring the two together.¹³⁰ McCracken's subject 'Conservation and resistance in colonial Malawi: The "dead north" revisited', in *Social History and African Environments*, while also situated within the same country, is more agriculturally focussed and illuminates resistance to colonialism expressed as reaction to agrarian conservation rather than to wildlife policy.¹³¹ Two important pieces of research relate to Kenya, Reuben Matheka's Ph.D. thesis, 'The political ecology of wildlife conservation in Kenya, 1895-1975', and Mackenzie's *Land, Ecology and Resistance in Kenya*, 1880-1952.¹³²

Over the past decade *Environment and History* has more than met the challenge that its founding and subsequent editors set for it. The journal has been pathbreaking in showcasing creative thinking about the environmental history of Africa as well as in other parts of the world. From the outset, the journal has done a remarkable job of encouraging and attracting articles by leading and emerging environmental historians of Africa that deal with a variety of themes, many of which have entered the mainstream of African studies and expanded the historiography of the continent. Certainly, African history can never revert to its pre-environmental history socio-political paradigm and *Environment and History* has been a major avenue in reconfiguring and even revitalising historical thinking about Africa. While there is much to celebrate and much that is new, there remain certain elements that Nash alluded to in 1972 that would still

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seem to apply to the genre generally and that add to environmental history's resilience. More than other aspects of history, environmental history has purpose. It is responsive to the problems of society, it has a strong intellectual thrust and it is concerned with matters of morality and moral judgement.¹³³

NOTES

¹R. Nash, 'American environmental history: A new teaching frontier', *Pacific Historical Review*, 41(3), 1972, pp. 362–72.

² One of the latest of these is 'Forum: Environmental history, retrospect and prospect', *Pacific Historical Review*, 70(1), 2001, see, in particular, R. White, 'Afterward: Environmental history, watching a historical field mature', pp. 103–11.

³ See references below, but also A.R. Main, 'Ghosts of the past: Where does environmental history begin?', *Environment and History*, 2(1), 1996, pp. 97–114.

⁴ L. White, 'The historical roots of our ecologic crisis', *Science*, 155, 10 March 1967, pp. 1203–1207; J. Passmore, *Man's Responsibility for Nature: Ecological Problems and Western Traditions* (New York, Charles Scribners Sons, 1974).

⁵ See, for example, D. Worster, ed., *The Ends of the Earth* (New York, Cambridge University Press, 1988); A.W. Crosby, 'The past and present of environmental history', *American Historical Review*, 100, 1995, pp. 1177–89; 'A round table: Environmental history', *Journal of American History*, 76(4), 1990; R. White, 'American environmental history: The development of a new historical field', *Pacific Historical Review*, 54, 1985, pp. 297–337; D. Worster, 'Nature and the disorder of history', *Environmental History Review*, 18(2), 1994, pp. 1–15; D. Worster, 'World without borders: The internationalizing of environmental history', *Environmental Review*, 6, 1982, pp. 8–13; P. Coates, 'Clio's new greenhouse', *History Today*, August 1996, pp. 15–22; S.P. Hays, 'Toward integration in environmental history' Profile of a developing field', *The History Teacher*, 31(3), 1998, pp. 351–68; T. Steinberg, 'Down to earth: Nature, agency and power in history', *The American Historical Review*, 107(3), 2002, pp. 798–820.

⁶ See Richard White, 'Environmental history, ecology and meaning', in 'A round table: Environmental history', *Journal of American History*, 76(4), 1990, p. 1111.

⁷ A. Taylor, 'Unnatural inequalities: Social and environmental history', *Environmental History*, 1(4), 1996, pp. 6–19; N. Jacobs, *Environment, Power, and Injustice: A South African History* (Cambridge, Cambridge University Press, 2003) p. 1; p. 206.

⁸ For other theoretical disciplinary uncertainties, see P. Mandler, 'The problem with cultural history', Debate Forum, *Cultural and Social History*, 1(1), 2004, pp. 94–117.

⁹ *History and Theory*, Theme Issue 'Environmental history: Nature at work', 42, December 2003.

¹⁰ I. Olabarri, "New" New History: A longue durée structure', *History and Theory*, 34(1), 1995, pp. 1–29.

¹¹ J.R. McNeill, 'Observations on the nature and culture of environmental history', *History and Theory*, 42, 2003, p. 41.

¹² T. Griffiths, 'How many trees make a forest? Cultural debates about vegetation change in Australia', *Australian Journal of Botany*, 50(4), 2002, pp. 375–89.

¹³ Worster, *The Ends of the Earth*, p. 290.

¹⁴ E. Stroud, 'Does nature always matter? Following dirt through history', *History and Theory*, 42, 2003, pp. 75–81.

¹⁵ Jacobs, Environment, Power, and Injustice.

¹⁶ See also, D.S. Moore, J. Kosek and A. Pandian, eds, *Race, Nature and the Politics of Difference* (Durham NC, Duke University Press, 2003).

¹⁷ A.L. Dalton, book review, 'On African environmental history: *Green Land, Brown Land, Black Land: An Environmental History of Africa, 1800–1990* (Portsmouth, NH, Heinemann, 1999)', in *Current History*, May 2000, pp. 231–2.

¹⁸ K. Blaser, 'The history of nature and the nature of history: Stephen Jay Gould on science, philosophy and history', *The History Teacher*, 32(3), 1999, pp. 411–30.

¹⁹ See S.J. Gould, *The Hedgehog*, the Fox, and the Magister's Pox: Mending and Minding the Misconceived Gap between Science and the Humanities (London, Jonathan Cape, 2003); E.O. Wilson, *Consilience: The Unity of Knowledge* (New York, Knopf, 1998).

²⁰ D. Worster, 'The two cultures revisited: environmental history and the environmental sciences', *Environment and History*, 2(1), 1996, pp. 3–14; D. Lowenthal, 'Environmental history: From genesis to apocalypse', *History Today*, 51(4), 2001, pp. 36–44.

²¹ W. Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment* 1770–1950 (Oxford, Oxford University Press, 2003).

²² See, for example, J. Du Toit, K. Rogers and H. Biggs, eds, *The Kruger Experience: Ecology and Management of Savanna Heterogeneity* (Washington, Island Press, 2003); S. Budiansky, *Nature's Keepers: The New Science of Nature Management* (New York etc., The Free Press, 1995); G.C. Daly, ed., *Nature's Services: Societal Dependence on Natural Ecosystems* (Washington, Island Press, 1997) or even L.H. Gunderson and C.S. Holling, eds, *Panarchy: Understanding Transformations in Human and Natural Systems* (Washington, Island Press, 2002).

²³ Worster, 'The two cultures revisited', p. 9.

²⁴ R. Grove, 'North American innovation or imperial legacy?: Contesting and re-assessing the roots and agendas of environmental history 1860–1996', unpublished paper presented at the Colloquium on the Environment, Research School of Social Sciences, Australian National University, Canberra, February 1996 and R. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism* (Cambridge, Cambridge University Press, 1995).

²⁵ R. Grove, Editorial, Environment and History, 6 (2), 2000, pp. 127-9.

²⁶ R. Grove, Editorial, *Environment and History*, 1(1), 1995, pp. 1–2.

²⁷ Responding to an accusation that African environmental history consisted merely of poor examples modelled on American work, Greg Maddox defended African environmental history by mentioning a number of books and by ending his comments with 'Environmental history is alive and well outside of America; it's just that Americanists don't read it, or at least enough of it'; H-ASEH, 24 October 1996.

²⁸ Also M. Bess, M. Cioc and J. Sievert, 'Environmental history writing in southern Europe,' *Environmental History*, 5(4), 2000, pp. 545–56; M. Cioc, B.-O. Linner and M.

Osborn, 'Environmental history writing in northern Europe', *Environmental History*, 5(3), 2000, pp. 396–406.

²⁹ For instance, P. Coates and W. Beinart, *Environment and History: The Taming of Nature in the USA and South Africa* (New York, Routledge, 1995); S.T. Phillips, 'Lessons from the Dust Bowl: Dryland agriculture and soil erosion in the United States and South Africa, 1900–1950', *Environmental History*, 4(2), 1999, pp. 220–44.

³⁰ P. Steyn, 'A greener past? An assessment of South African environmental historiography', *New Contree*, 46, November 1999, pp. 7–27. See also, P. Steyn, 'Environmental management in South Africa: Twenty years of governmental response to the global challenge', *Historia*, 46(1), 2002, pp. 25–53; P. Steyn and A. Wessels, 'The emergence of new environmentalism in South Africa, 1988–1992', *South African Historical Journal*, 42, 2000, pp. 210–31; P. Steyn, 'Popular environmental struggles in South Africa, 1972–1992', *Historia*, 47 (1), 2002, pp. 125–58. See also J. Carruthers, 'Environmental history in southern Africa: An overview', in Dovers, Edgecombe and Guest, eds, *South Africa's Environmental History*, pp. 3–15 and N. Jacobs, 'Latitudes and longitudes: Comparative perspectives on Cape environmental history', *Kronos*, 29, 2003, pp. 7–29.

³¹ W. Beinart and J. McGregor, eds, *Social History and African Environments* (Oxford, James Currey, 2003).

³² T. Griffiths and L. Robin, eds, *Ecology and Empire: Environmental History of. Settler Societies* (Edinburgh, Keele University Press, 1997).

³³ McNeill, 'Nature and culture of environmental history', pp. 9–11.

³⁴ Griffiths, 'How many trees make a forest?', p. 376.

³⁵ See, for example, A. Bramwell, *The Fading of the Greens: The Decline of Environmental Politics in the West* (New Haven and London, Yale University Press, 1994).

³⁶ J. Cock and E. Koch, eds, *Going Green: People, Politics and the Environment in South Africa* (Cape Town, Oxford University Press, 1991), p. 15; E. Koch, D. Cooper and H. Coetzee, *Water, Waste and Wildlife: The Politics of Ecology in South Africa* (London, Penguin, 1990); T. le Quesne, 'The divorce of environmental and economic policy under the first ANC government, 1994–1999', *Journal of Environmental Law and Policy*, 7(1), 2000, p. 3; B. Huntley, R. Siegfried and C. Sunter, *South African Environments into the 21st Century* (Cape Town, Human and Rousseau Tafelberg, 1989); B. Huntley, ed., *Biotic Diversity in Southern Africa: Concepts and Conservation* (Cape Town: Oxford University Press, 1989).

³⁷ J. Porritt, 'Environmental politics: The old and the new', in M. Jacobs, ed., *Greening the Millennium: The New Politics of the Environment* (Oxford, Blackwell, 1997), p. 62 and N. Carter, 'Prospects: The parties and the environment in the United Kingdom', in Jacobs, ed., *Greening the Millennium*, p. 192; Le Quesne, 'The divorce of environmental and economic policy', pp. 1–20.

³⁸ J. Dargavel, Editorial, Special issue: Australia, *Environment and History*, 4(2), 1998, quotation from Eric Rolls, p. 127.

³⁹ T. Booking and E. Pawson, 'Editorial: New Zealand environmental histories', Special issue: New Zealand, *Environment and History*, 9(4), 2003, p. 375.

⁴⁰ M. Rangarajan, 'Environmental histories of South Asia: A review essay', Special issue: South Asia, *Environment and History*, 2(2), 1996, p. 129.

⁴¹ M. Osborn, 'Sowing the field of British Environmental History', www.h-net.org/ ~environ/historiography/british.htm.

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⁴² G. Maddox, "Degradation narratives" and "population time bombs": Myths and realities about African environments', in S. Dovers, R. Edgecombe and B. Guest, eds, *South Africa's Environmental History: Cases and Comparisons* (Athens: Ohio University Press, 2003).

⁴³ W. Beinart, 'African history and environmental history', *African Affairs*, 99, 2000, pp. 269–302.

⁴⁴ Stroud, 'Does nature always matter?', History and Theory, 42, 2003, p. 80.

⁴⁵ S.R. Rajan, 'The ends of environmental history: Some questions', *Environment and History*, 3(2), 1997, pp. 245–7.

⁴⁶ Edited by W. Beinart and J. McGregor.

⁴⁷ F. Uekotter, 'Confronting the pitfalls of current environmental history: An argument for an organisational approach', *Environment and History*, 4(1), 1998, pp. 31–52.

⁴⁸ E. Pawson and S. Dovers, 'Environmental history and the challenges of interdisciplinarity: An Antipodean perspective', *Environment and History*, 9(1), 2003, pp. 53–76.

⁴⁹ See J. McCann, *Green Land, Brown Land, Black Land: An Environmental History of Africa* (Portsmouth, Heinemann, 1999) and J. McCann, 'Climate and causation in African history', *International Journal of African Historical Studies*, 32(2–3), 1999, pp. 261–79 for interdisciplinary allusions.

⁵⁰ Beinart and McGregor, 'Introduction', *Social History and African Environments*, p. 9.

⁵¹ R. Grove and J. McGregor, eds, Special Issue: Zimbabwe, *Environment and History*, 1(3), 1995; J. McGregor, 'The Victoria Falls 1900–1940: Landscape, tourism and the geographical imagination', *Journal of Southern African Studies*, 29(3), 2003, pp. 717–37; D.S. Moore, 'Subaltern struggles and the politics of place: Remapping resistance in Zimbabwe's Eastern Highlands', *Cultural Anthropology*, 13 (3), 1998, pp. 344–81; W.M. Munro, *The Moral Economy of the State: Conservation, Community Development, and State Making in Zimbabwe* (Athens, Ohio University Center for International Studies, 1998); I. Pikirayi, 'Environmental data and historical process: Historical climatic reconstruction and the Mutapa state 1450–1862', in Beinart and McGregor, eds, *Social History and African Environments*; there are many others.

⁵² J. Fairhead and M. Leach, 'Reading forest history backwards: The interaction of policy and local land use in Guinea's forest-savanna mosaic', *Environment and History*, 1(1), 1995, pp. 55–92; T.J. Lanz, 'The origins, development and legacy of scientific forestry in Cameroon', *Environment and History*, 6(1), 2000, pp. 99–120.

⁵³ J. Carruthers, 'Lessons from South Africa: War and wildlife protection in the Southern Sudan, 1917–1921', *Environment and History*, 3(3), 1997, pp. 299–322; G. Kibreab, 'Property rights, development policy and depletion of resources: The case of the central rainlands of Sudan, 1940s-1980s', *Environment and History*, 7(1), 2001, pp. 57–108.

⁵⁴ G. Carswell, 'Communities in environmental narratives: The case of Kabale, Uganda, 1930–2000', *Environment and History*, 9(1), 2003, pp. 3–30; B. Morris, 'Wildlife conservation in Malawi', *Environment and History*, 7(3), 2001, pp. 357–72; R.P. Neumann, 'Forest rights, privileges and prohibitions: Contextualising state forestry policy in Tanganyika', *Environment and History*, 3(1), 1997, pp. 45–68.

⁵⁵ C.A. Kull, 'Deforestation, erosion, and fire: Degradation myths in the environmental history of Madagascar', *Environment and History*, 6(4), 2000, pp. 423–50.

⁵⁶ T. Driver, 'Anti-erosion policies in the mountain areas of Lesotho: The South African connection', *Environment and History*, 5(1), 1999, pp. 1–26; H. Siiskonen, 'Deforestation in the Owambo region, north Namibia, since the 1850s', *Environment and History*, 2(3), 1996, pp. 291–308; K. Brown, 'The conservation and utilisation of the natural world: Silviculture in the Cape Colony, c.1902–1910', *Environment and History*, 7(4), 2001, pp. 427–48; A.C. Dahlberg and P.M. Blaikie, 'Changes in landscape or interpretation? Reflections based on the environmental and socio-economic history of a village in NE Botswana', *Environment and History*, 5(2), 1999, pp. 127–74; N. Jacobs, 'Grasslands and thickets: Bush encroachment and herding in the Kalahari thornveld', *Environment and History*, 6(3), 2000, pp. 289–316; D. Shaw, 'Thomas Pringle's plantation', *Environment and History*, 5(3), 1999, pp. 309–24; M. Singh, 'Basutoland: A historical journey into the environment and *History*, 6(1), 2000, pp. 31–70.

⁵⁷ Ranger is extremely prolific: on nature and culture see, for example, T. Ranger, *Voices from the Rocks: Nature, Culture and History in the Matopos Hills of Zimbabwe* (Oxford, Oxford University Press, 1999). See also *Journal of Southern African Studies*, 23(2), 1997, 'Special issue for Terry Ranger' that details his works and achievements.

⁵⁸ See, for example her chapter, 'Living with the river: Landscape and memory in the Zambezi Valley, northwest Zimbabwe', in Beinart and McGregor, eds, *Social History and African Environments*, pp. 87–106.

⁵⁹ For example, Karen Brown, 'Political entomology: The insectile challenge to agricultural development in the Cape Colony, 1895–1910', *Journal of Southern African Studies*, 29(2), 2003, pp. 529–50; Dan Gilfoyle, 'Veterinary resarch and the African rinderpest epizootic: The Cape Colony, 1896–1898', *Journal of Southern African Studies*, 29(1), 2003, pp. 133–54.

⁶⁰ J. McCann, *People of the Plow: An Agricultural History of Ethiopia, 1800–1990* (Madison, University of Wisconsin, 1995); J. McCann, 'The Plow and the Forest: Narratives of Deforestation in Ethiopia, 1840–1992', *Environmental History* 2,1997, pp. 138–59.

⁶¹ McNeill, 'Observations on the nature and culture of environmental history', p. 25.

⁶² See Jacobs's review of M. Chenje, *State of the Environment in the Zambezi Basin 2000* (Maseru, Lusaka and Harare, SADC, IUCN, ZRA and SARDC, 2000) at http://www.h-net.org/reviews/showrev.cgi?path=281691011631624.

⁶³ Black scholars are involved in African environmental history, for example, Reuben Matheka, 'The political ecology of wildlife conservation in Kenya, 1895–1975', Ph.D. thesis, Rhodes University, 2001, and C. Mavhunga, "'If they are as thirsty as all that, let them come down to the pool"; Unearthing "wildlife" history and reconstructing "heritage" in Gonarezhou National Park, from the late nineteenth century to the 1930s', *Historia*, 47(2), 2002, pp. 531–58, and others, but the representation of indigenous African historians is not demographically proportional.

⁶⁴ J. Carruthers, 'Past and future landscape ideology: The Kalahari Gemsbok National Park', in Beinart and McGregor, eds, *Social History and African Environments* and D. Bunn, 'An unnatural state: Tourism, water and wildlife photography in the early Kruger National Park', in Beinart and McGregor, eds, *Social History and African Environments*. Many articles on this theme appear in the journal *Capitalism, Nature and Socialism*, see in particular, issues 30, 1997, 44, 2000 and 52, 2002.

⁶⁵ P. Steyn, 'Propaganda and environmental struggles: A case study of Ken Saro-Wiwa and the Ogoni in Nigeria', *New Contree*, 47, 2000, pp. 7–33.

⁶⁶ See for example C.M. Thompson, 'Ranchers, scientists, and grass-roots development in the United States and Kenya', *Environmental Values*, 11(3), 2002, pp. 303–26; C. Twyman, 'Livelihood opportunity and diversity in Kalahari wildlife management areas, Botswana: Re-thinking community resource management, *Journal of Southern African Studies*, 26(4), 2000, pp. 783–806; D. Potts, 'Worker-peasants and farmer-housewives in Africa: The debate about "committed" farmers, access to land and agricultural production', *Journal of Southern African Studies*, 26(4), 2000, pp. 807–32; B. Cousins, 'Livestock production and common property struggles in South African agrarian reform', *Journal of Peasant Studies*, 23(2–3, 1996, pp. 166–208; J.D. Hackel, 'A case study of conservation and development conflicts: Swaziland's Hlane Road', *Journal of Southern African Studies*, 27(4), 2001, pp. 813–32.

⁶⁷ For example, G. Carswell, 'African farmers in colonial Kigezi, Uganda, 1930–1962: Opportunity, constraint and sustainability', D.Phil thesis, School of Oriental and African Studies, University of London, 1997.

⁶⁸ See L. Hughes, "Go completely to the south, and you may die there": Perceptions of disease and ecological impacts following the Maasai Moves, British East Africa' and S. Doyle, 'Management or separation: Ideas about nature and the ecology of disease in colonial Uganda', papers presented to the International Conference on the Forest and Environmental History of the British Empire and Commonwealth, University of Sussex, 2003.

⁶⁹ See J. Beall, O. Crankshaw and S. Parnell, 'Victims, villains and fixers: The urban environmental and Johannesburg's poor', *Journal of Southern African Studies*, 26(4), 2000, pp. 833–56 and G.C. Phiri, 'Environmental aspects of Umtali's urbanisation, 1890 to 1923, an analysis', paper presented to the International Conference on the Forest and Environmental History of the British Empire and Commonwealth, University of Sussex, 2003.

⁷⁰ Similar to the work of Stephen Pyne, for example, *Fire in America: A Cultural History of Wildland and Rural Fire* (Washington, Washington University Press, 1997); *Burning Bush: A Fire History of Australia* (New York, Henry Holt, 1991); *World Fire; The Culture of Fire on Earth* (New York, Henry Holt, 1995). In *Culture of Fire* Pyne has tantalising and brief references to Africa. The two chapters that deal with fire in Dovers, Edgecombe and Guest, eds, *South Africa's Environmental History* are local and biological: J. McAllister, 'Fire and the South African grassland biome' and E. Kotze, 'Wakkerstroom; Grasslands, fire and war – past perspectives and present issues'.

⁷¹ See *The Public Historian*, 26(1), 2004: special issue 'Public history and the environment'.

⁷² W. Beinart and K. Middleton, 'Plant transfers in historical perspective: A review article', *Environment and History*, 10(1), 2004, pp. 3–30.

⁷³ A book such as Du Toit *et al*, eds, *The Kruger Experience* is exceptional.

⁷⁴ S. Dovers, 'On the contribution of environmental history to current debate and policy', *Environment and History*, 6(2), 2000, pp. 131–50.

⁷⁵ New York, Norton, 1999.

⁷⁶ Griffiths, 'How many trees make a forest?', p. 377.

⁷⁷ Beinart, 'African history and environmental history', pp. 269–302.

⁷⁸ Griffiths, 'How many trees make a forest?', pp. 376–8.

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⁷⁹ For West Africa, see M. De Bruijn and H. Van Dijk, 'Ecology and power in the periphery of Maasina: The case of the Hayre in the nineteenth century', *Journal of African History*, 42(2), 2001, pp. 217–38; A.F. Clark, 'Environmental decline and ecological response in the Upper Senegal Valley, West Africa, from the late nineteenth-century to World War 1', *Journal of African History*, 36(2), 1995, pp. 197–218.

⁸⁰ J. Fairhead and M. Leach, 'Desiccation and domination: Sciences and struggles over environment and development in Colonial Guinea', *Journal of African History*, 41(1), 2000, pp. 35–54; Melissa Leach and Robin Mearns, eds, *The Lie of the Land: Challenging Received Wisdom on the African Environment* (Portsmouth, N.H., Heinemann, 1996); J. Fairhead and M. Leach, *Reframing Deforestation: Global Analyses and Local Realities: Studies in West Africa* (London, Routledge, 1998).

⁸¹ J. MacKenzie, 'Edward Said and the historians', *Nineteenth Century Contexts*, 18, 1994, pp. 9–25. McKenzie's insight has been overlooked in books about nature conservation where 'victimhood' most often infuses the literature and dictates policy direction, see for example, W.M. Adams and M. Mulligan, *Decolonizing Nature: Strategies for Conservation in a Post-Colonial Era* (London, Earthscan, 2003), while C.A.M. Attwell and F.P.D. Cotterill, 'Postmodernism and African conservation science, *Biodiversity and Conservation*, 9, 2000, pp. 559–77 and J. Terborgh, C. van Schaik, L. Davenport and M. Rao, eds, *Making Parks Work: Strategies for Preserving Tropical Nature* (Washington, Island Press, 2002) are more critical and also more helpful.

⁸² Beinart, 'African history and environmental history', p. 302.

⁸³ Brown, 'The conservation and utilisation of the natural world: Silviculture in the Cape Colony, c.1902–1910'; R. Grove, 'Scotland in South Africa: John Croumbie Brown and the roots of settler environmentalism', in T. Griffiths and L. Robin, *Ecology and Empire: Environmental History of Settler Societies* (Edinburgh, Keele University Press, 1997); J.M. MacKenzie, *Empires of Nature and the Nature of Empires: Imperialism, Scotland and the Environment* (East Linton, Tuckwell Press, 1995).

⁸⁴ H. Witt, 'The emergence of privately grown industrial tree plantations', in Dovers, Edgecombe and Guest, eds, *South Africa's Environmental History* and H.A. Witt, 'An economic, social and environmental study of afforestation: A case study of tree-growing in Natal', Ph.D. thesis, University of Natal, 1999; and for the Eastern Cape, J. Tropp, 'Accessing the special powers of trees: Colonial forest reservation and contested social and cultural resources in the Transkei, South Africa', paper presented at the Annual Meeting, American Society for Environmental History, Providence RI, March 2003; J. Tropp, 'Displaced people, replaced narratives: Forest conflicts and historical perspectives in the Tsolo District, Transkei', *Journal of Southern African Studies*, 29(1), 2003, pp. 207–34.

⁸⁵ Neumann, 'Forest rights, privileges and prohibitions: Contextualising state forestry policy in Tanganyika', *Environment and History*, 3(1), 1997, pp. 45–68. For Tanzania, see also G. Maddox, 'Networks and frontiers in colonial Tanzania', *Environmental History*, 3(4), 1998, pp. 436–59; G. Maddox, H. Giblin and I. Kimambo, eds, *Custodians of the Land: Ecology and Culture in the History of Tanzania* (Athens, Ohio University Press, 1996).

⁸⁶ For example, R. Cline-Cole, 'Scientific forestry as transnational/translocal (histories and geographies of) development, West Africa, c1930s-1960s'; U. Usuanlele, 'Misconceptions, management and deforestation of Benin Division (Nigeria) rainforest 1899–1945'; D.A. Wardell, 'Historical review of the development of forest policy in the northern territories

of the Gold Coast Colony 1901–1957'; J. Schafer, "Perpetual exploitability": The establishment of forest reserves in former Portuguese colonies'; M. Thabane, "Deforestation" and 'afforestation" in Lesotho, 1830–1970'; T. Sunseri, 'Forestry and social engineering in the Miombo woodlands of southeast Tanganyika 1900–1961', papers presented to the International Conference on the Forest and Environmental History of the British Empire and Commonwealth, University of Sussex, 2003.

⁸⁷ D. Shaw, 'Thomas Pringle's plantation', *Environment and History*, 5(3), 1999, pp. 309–24, compare this with T. Bonyhady, 'Artists with axes', *Environment and History*, 1(2) 1995, pp. 221–39.

⁸⁸ Tim Bonyhady's *The Colonial Earth* (Melbourne, Melbourne University Pess, 2000). is a case in point.

⁸⁹ See J. Carruthers, 'From "land" to "place": Communities and conservation in the Magaliesberg area, South Africa', *Kleio*, 34, 2002, pp. 72–103, and T. Goetze, 'Table Mountain: South Africa's natural national monument', *Historia*, 47(2), 2002, pp. 457–87.

⁹⁰ Rhodes University, 1998.

⁹¹ E. Kreike 'Hidden fruits: A social ecology of fruit trees in Namibia and Angola, 1880s-1990s' in Beinart and McGregor, eds, *Social History and African Environments*, pp. 27–42.

⁹² A.C. Dahlberg and P.M. Blaikie, 'Changes in landscape or interpretation? Reflections based on the environmental and socio-economic history of a village in NE Botswana', *Environment and History*, 5(2), 1999, pp. 127–74; also A.C. Dahlberg, 'Landscape(s) in transition: An environmental history of a village in north-east Botswana', *Journal of Southern African Studies*, 26(4), 2000, pp. 759–82.

⁹³ Cutting the Vines of the Past: Environmental Histories of the Central African Rain Forest (Charlottesville, University Press of Virginia, 2002); 'Doli: Translating an African environmental history of loss in the Sangha River basin of Equatorial Africa', Journal of African History, 41 (3), 2000, pp. 373–94; also 'Leaving a person behind: History, personhood, and struggles of forest resrouces in the Sangha Basin of Equatorial Africa', International Journal of African Historical Studies, 32 (2–3), 1999, pp. 311–38. For work in this vein on East Africa, see Y.Q. Lawi, 'Where physical and ideological landscapes meet: Landscape use and ecological knowledge in Iraqw, Northern Tanzania, 1920s-1950s', International Journal of African Historical Studies, 32(2–3), 1999, pp. 281–310.

⁹⁴ Cutting Down Trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890–1990 (Portsmouth etc., Heinemann, 1994); M. Leach and C. Green, 'Gender and environmental history', *Environmental History*, 3(3), 1997, pp. 343–70. See also, B. Dodson, 'Searching for a common agenda: Ecofeminism and environmental justice in Sout Africa' and A. Goebel, 'Women and gender through the environment in southern African studies', papers presented to the Canadian Association for African Studies Conference, Quebec City, May 2001. Issues around masculinity were discussed by M. Draper, 'Zen and the art of garden province maintenance: The soft intimacy of hard men in the wilderness of KwaZulu-Natal, South Africa, 1957–1997', *Journal of Southern African Studies*, 24(4), 1998, pp. 801–28.

⁹⁵ T. Ranger, 'Women and environment in African religion: The case of Zimbabwe' in Beinart and McGregor, eds, *Social History and African Environments*, pp. 72–86.

⁹⁶ See, for example, L. Robin, *The Flight of the Emu: A Hundred Years of Australian Ornithology* (Melbourne: Melbourne University Press, 2001); *Defending the Little*

Desert: The Rise of Ecological Consciousness in Australia (Melbourne: Melbourne University Press, 1998); 'Birds and environmental management', Australian Journal of Environmental Management, 8(2), 2001, pp. 105–13.

⁹⁷ N. Jacobs, 'The flowing eye: Water management in the upper Kuruman valley, South Africa, c.1800-1962', Journal of African History, 37, 1996, pp. 237-60; A. Isaacman and C. Sneddon, 'Toward a social and environmental history of the building of Cahora Bassa Dam', Journal of Southern African Studies, 26(4), 2000, pp. 597-632; M. Thabane, 'Shifts from old to new social and ecological environments in the Lesotho Highlands Water Scheme; Relocating residents of the Mohale Dam Area', Journal of Southern African Studies, 26(4), 2000, pp. 633-54; J.B. Forrest, 'Water use, environmental preservation and political conflict in post-independence Namibia', paper presented to the Canadian Association for African Studies Conference, Quebec City, May 2001; J. Tempelhoff, 'Time and the river: Observations on the Vaal River as source of water to the Witwatersrand 1903-24', *Historia*, 46(1), May 2001, pp. 247-70. As is often the case, the Zimbabwe historiography is in the forefront of this subject for Africa, see "Water used to be scattered in the landscape": Local understandings of soil erosion and land use planning in southern Zimbabwe', 'Water as a weapon: The history of water supply development in Nkayi District, Zimbabwe', in Special Issue: Zimbabwe, Environment and History, 1(3), 1995, and N. Nemarundwe and W. Kozanayi, 'Institutional arrangements for water resource use: A case study from southern Zimbabwe', Journal of Southern African Studies, 29(1), 2003, pp. 193–206. It is proposed to hold a conference 'Flows from the past: A trans-disciplinary conference on the history of water in Africa' in South Africa in December 2004.

⁹⁸ L. van Sittert, "'The seed blows about in every breeze": Noxious weed eradication in the Cape Colony, 1860–1899', *Journal of Southern African Studies*, 26(4), 2000, pp. 655–74 L. van Sittert, 'From "mere weeds" and "bosjes" to a Cape floral kingdom: The re-imagining of indigenous flora at the Cape, c1890–1939', *Kronos*, 28, 2002, pp. 102–26.

⁹⁹ K. Middleton, 'Who killed "Malagasy cactus"?: Science, environment and colonialism in southern Madagascar 1924–1930', *Journal of Southern African Studies*, 25(2), 1999, pp. 215–48.

¹⁰⁰ See W.K. Storey, 'Making canes credible in colonial Mauritius', in S. Dubow, ed., *Science and Society in Southern Africa* (Manchester, Manchester University Press, 2000), pp. 42–66 and J.A. Carney, 'African rice in the Columbian exchange', *Journal of African History*, 42(3), 2001, pp. 377–96.

¹⁰¹ Carswell, 'Communities in environmental narratives', *Environment and History*, 9(1), 2003, pp. 3–30.

¹⁰² See also S. Schirmer and P. Delius, 'Soil conservation in a racially divided society', *Journal of Southern African Studies*, 26(4), 2000, pp. 719–42 and F. Khan, 'Soil wars: The role of the African National Soil Conservation Association in South Africa, 1953–1959', *Environmental History*, 2(4), 1997, pp. 439–59.

¹⁰³ Kull, 'Deforestation, erosion and fire: Degradation myths in the environmental history of Madagascar'; Singh, 'Basutoland: Historical journey into the environment'; Driver, 'Anti-erosion policies in the mountain areas of Lesotho'.

¹⁰⁴ Jacobs, 'Grasslands and thickets: Bush encroachment and herding in the Kalahari thornveld'; see also S. Archer, 'Technology and ecology in the Karoo: A century of windmills, wire and changing farming practice' in S. Dovers, R. Edgecombe and B.

Guest, eds, *South Africa's Environmental History: Cases and Comparisons* (Athens: Ohio University Press, 2003) and S. Archer, 'Technology and ecology in the Karoo: A century of windmills, wire and changing farming practice' in *Journal of Southern African Studies*, 26(4), 2000, pp. 655–74.

¹⁰⁵ See also, D. Nell, "'You cannot make the people scientific by an Act of Parliament": Farmers, the state, and livestock enumeratins in the north-western Cape, c.1850–1900', M.A. thesis, University of Cape Town, 1998; D. Nell, "'For the public benefit": Livestock statistics and expertise in the late nineteenth-century Cape Colony, 1850–1900', in S. Dubow, ed., *Science and Society in Southern Africa* (Manchester, Manchester University Press, 2000), pp. 100–115.

¹⁰⁶ See J. McCann, 'Climate and causation in African history', *International Journal of African Historical Studies*, 32(2–3), 1999, pp. 261–79; I. Pikirayi, 'Environmental data and historical process: Historical climatic reconstruction and the Mutapa state 1450–1862', in Beinart and McGregor, eds, *Social History and African Environments* and Jan-Bart Gewald, 'El Negro, El Niño, witchcraft and the absence of rain in Botswana', *African Affairs*, 100, 2001, pp. 555–80. Work in progress includes Australia's 'Climate and culture in Australia', conference papers being reconfigured for publication and plans for a conference 'Trees, rain and politics in Africa' at St Antony's College, Oxford, in the latter part of 2004.

¹⁰⁷ P. Anker, *Imperial Ecology: Environmental Order in the British Empire*, 1895–1945 (Cambridge MA, Harvard University Press, 2001).

¹⁰⁸ H. Tilley, 'African environments and environmental sciences: The African Research survey, ecological paradigms and British colonial development', in Beinart and McGregor, eds, *Social History and African Environments*, pp. 109–30; H. Tilley, 'Africa as a living laboratory', D.Phil thesis, Unviversity of Oxford, 2001.

¹⁰⁹ S. Dubow, 'A commonwealth of science: The British Association in South Africa, 1905 and 1929', in S. Dubow, ed., *Science and Society in Southern Africa* (Manchester, Manchester University Press, 2000), pp. 11–42.

¹¹⁰ McNeill, 'Observations on the nature and culture of environmental history', p. 35.

¹¹¹ J.M. MacKenzie, *The Empire of Nature: Hunting, Conservation and British Imperialism* (Manchester, Manchester University Press, 1988).

¹¹² But see R.P. Neumann, *Imposing Wilderness: Struggles over Livelihood and Nature Preservation in Africa*. (Berkeley, University of California Press, 1997).

C.C. Gibson, *Politicians and Poachers: The Political Economy of Wildlife Policy in Africa* (Cambridge: Cambridge University Press, 1999).

¹¹³ See K.A. Hill, Conflicts over development and environmental values: The international ivory trade in Zimbabwe's historical context', Special Issue: Zimbabwe, *Environment and History*, 1(3), 1995, pp. 335–50.

¹¹⁴ Beinart and McGregor, 'Introduction', *Social History and African Environments*, p. 2.

¹¹⁵ A Sachs, 'The ultimate "other": Post-colonialism and Alexander von Humboldt's ecological relationship with nature', *History and Theory*, 42, 2003, pp. 111–35.

¹¹⁶ L. van Sittert, "Keeping the enemy at bay": The extermination of wild carnivora in the Cape Colony, 1889–1910', *Environmental History*, 3(3), 1998, pp. 333–56; W. Beinart, 'The night of the jackal: Sheep, pastures and predators in the Cape', *Past and Present*, 158, 1998, pp. 172–206

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¹¹⁷ R.J. Gordon, 'Fido: Dog tales of colonialism in Namibia', in W. Beinart and J. Mc-Gregor, eds, *Social History and African Environments* (Oxford, James Currey, 2003), pp. 240–54; J. Tropp, 'Dogs, poison and the meaning of colonial intervention in the Transkei, South Africa', *Journal of African History*, 43(3), 2002, pp. 451–72; J. Gallant, *The Story of the African Dog* (Pietermaritzburg, University of Natal Press, 2002). See also 'Feature: *Canis familiaris* – a dog history of South Africa', *South African Historical Journal*, 48, 2003, pp. 138–251 and M. Poland, D. Hammond-Tooke and L. Voigt, *The Abundant Herds: A Celebration of the Nguni Cattle of the Zulu People* (Cape Town, Fernwood, 2003).

¹¹⁸ M. Draper, 'Going native? Trout and settling identity in a rainbow nation', *Historia*, 48(1), 2003, pp. 55–94.

¹¹⁹ Nancy Jacobs, 'The Great Bophuthatswana Donkey Massacre: Discourse on the ass, politics of class and grass', *The American Historical Review*, 108, 2001, pp. 485–507.

¹²⁰ K. Brown, 'Science, the agricultural environment and the evolution of economic entomology in the Cape Colony, 1895–1910', paper presented at the Annual Meeting of the American Society for Environmental History, Providence RI, March 2003; S. Swart,' The ant of the white soul: Popular natural history, the politics of Afrikaner identity and the entomological writings of Eugene Marais', in W. Beinart and J. McGregor, eds, *Social History and African Environments* (Oxford, James Currey, 2003); P. Harries, 'Field sciences in scentific fields: Entomology, botany and the early ethnographic monograph in the work of H-A Junod', in S. Dubow, ed., *Science and Society in Southern Africa* (Manchester, Manchester University Press, 2000), pp. 11–42.

¹²¹ See, for example P.L. Farber, *The Emergence of Ornithology as a Scientific Discipline*, *1760–1850* (Dordrecht, D. Riedel,1982); L. Robin, *The Flight of the Emu: A Hundred Years of Australian Ornithology 1901–2001* (Melbourne, University of Melbourne Press, 2001); M.V. Barrow, *A Passion for Birds: American Ornithology after Audubon* (Princeton, Princeton University Press, 1998); L. Mayo, 'Birds and the Hand of Power: A Political Geography of Avian Life in the Gansu Corridor, Ninth to Tenth Centuries', *East Asian History*, 24, 2002, pp 1–66.

¹²²N. Jacobs, 'European ornithology and indigenous knowledge in southern Africa', paper presented at the Annual Meeting of the American Society for Environmental History, Providence RI, March 2003; J. Carruthers, "Our beautiful and useful allies": Aspects of ornithology in 20th-century South Africa', *Historia*, 41(1), 2004, pp. 89–109; see also C.K. Brain, *Austin Roberts: A Lifelong Devotion to South Africa's Birds and Beasts* (Cape Town, John Voelcker Bird Book Fund, 1998).

¹²³ C.M. Attwell and F.P.D. Cotterill, 'Postmodernism and African conservation science', *Biodiversity and Conservation*, 9, 2000, pp. 559–577. But see also A. Hall-Martin and J.Carruthers, eds, *South African National Parks; A Celebration* (Johannesburg, Horst Klemm, 2003) for a move in this direction.

¹²⁴ Carruthers, 'Lessons from South Africa: War and wildllife protection in the Southern Sudan, 1917–1921', *Environment and History*, 3(3), 1997, pp. 299–322 (see also J. Carruthers, *Wildlife and Warfare: The Life of James Stevenson-Hamilton* (Pietermaritzburg, Natal University Press, 2001) and Kibreab, 'Property rights, development policy and depletion of resources: The case of the central rainlands of Sudan, 1940s-1980s', *Environment and History*, 7(1), 2001, pp. 57–108.

¹²⁵ M. Leach, 'New shapes to shift: war, parks and the hunting person in modern West Africa', *Journal of the Royal Anthropological Institute*, 6(4), 2000, pp. 577–95.

¹²⁶ J. Carruthers, *The Kruger National Park: A Social and Political History* (Pietermaritzburg, University of Natal Press, 1995); J. Carruthers, 'Past and future landscape ideology: The Kalahari Gemsbok National Park', in Beinart and McGregor, eds, *Social History and African Environments*, pp. 255–66; J. Carruthers, 'Nationhood and national parks: Comparative examples from the post-imperial experience', in Griffiths and Robin, eds, *Ecology and Empire*, pp. 125–38; Mavhunga, "'If they are as thirsty as all that, let them come down to the pool"; Unearthing "wildlife" history and reconstructing "heritage" in Gonarezhou National Park', *Historia*, 47(2), 2002, pp. 531–58.

¹²⁷ See K. Brown, 'Cultural constructions of the wild: The rhetoric and practice of wildlife conservation in the Cape Colony at the turn of the twentieth century', *South African Historical Journal*, 47, 2002, pp. 75–95; W. Wolmer, 'Transboundary conservation: The politics of ecological integrity in the Great Limpopo Transfrontier Park', *Journal of Southern African Studies*, 29(1), 2003, pp. 261–78; Shirley Brooks, 'Changing Nature: A Critical Historical Geography of the Umfolozi and Hluhluwe Game Reserves, Zululand, 1887–1947', PhD thesis, Queens University, 2001; S. Brooks, 'Re-reading the Hluhluwe-Umfolozi Game Reserve: Constructions of a "Natural" Space', *Transformation*, 44, 2000, pp. 63–79.

¹²⁸ V. Dzingarai, "CAMPFIRE is not for Ndebele migrants": The impact of excluding outsiders from CAMPFIRE in the Zambezi valley, Zimbabwe', *Journal of Southern African Studies*, 29(2), 2003, pp. 445–60.

¹²⁹ R. Duffy, *Killing for Conservation: Wildlife Policy in Zimbabwe* (Oxford, James Currey, 2000); see Jacobs's review of Chenje, *State of the Environment*.

¹³⁰ Morris, 'Wildlife conservation in Malawi', *Environment and History*, 7(3), 2001, pp. 357–72.

¹³¹ J.M. McCracken, 'Conservation and resistance in colonial Malawi: The "dead north" revisited', in W. Beinart and J. McGregor, eds, *Social History and African Environments* (Oxford, James Currey, 2003), pp. 155–74.

¹³² Reuben Matheka, 'The political ecology of wildlife conservation in Kenya, 1895–1975', Ph.D. thesis, Rhodes University, 2001; A.F.D. Mackenzie, *Land, Ecology and Resistance in Kenya, 1880–1952* (Edinburgh, Edinburgh University Press, 1998).

¹³³ Nash, 'American environmental history', pp. 362–72.