

**The pursuit of the 'good forest' in Kenya,
c.1890-1963: the history of the contested
development of state forestry within a
colonial settler state.**

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Author's declaration

The work contained in this thesis is entirely my own.

The views expressed are entirely my own, and not those of the University of Stirling.

Abstract

This is a study of the creation and evolution of state forestry within colonial Kenya in social, economic, and political terms. Spanning Kenya's entire colonial period, it offers a chronological account of how forestry came to Kenya and grew to the extent of controlling almost two million hectares of land in the country, approximately 20 per cent of the most fertile and most populated upland (above 1,500 metres) region of central Kenya. The position of forestry within a colonial state apparatus that paradoxically sought to both 'protect' Africans from modernisation while exploiting them to establish Kenya as a 'white man's country' is underexplored in the country's historiography. This thesis therefore clarifies this role through an examination of the relationship between the Forest Department and its African workers, Kenya's white settlers, and the colonial government. In essence, how each of these was engaged in a pursuit for their own idealised 'good forest'.

Kenya was the site of a strong conservationist argument for the establishment of forestry that typecast the country's indigenous population as rapidly destroying the forests. This argument was bolstered against critics of the financial extravagance of forestry by the need to maintain and develop the forests of Kenya for the express purpose of supporting the Uganda railway. It was this argument that led the colony's Forest Department along a path through the contradictions of colonial rule. The European settlers of Kenya are shown as being more than just a mere thorn in the side of the Forest Department, as their political power represented a very real threat to the department's hegemony over the forests. Moreover, Kenya's Forest Department deeply mistrusted private enterprise and constantly sought to control and limit the unsustainable exploitation of the forests. The department was seriously underfunded and understaffed until the second colonial occupation of the 1950s, a situation that resulted in a general ad hoc approach to forest policy. The department espoused the rhetoric of sustainable exploitation, but had no way of knowing whether the felling it authorised was actually sustainable, which was reflected in the underdevelopment of the sawmilling industry in Kenya.

The agroforestry system, *shamba*, (previously unexplored in Kenya's colonial historiography) is shown as being at the heart of forestry in Kenya and extremely significant as perhaps the most successful deployment of agroforestry by the British in colonial Africa. *Shamba* provided numerous opportunities to farm and receive education to landless Kikuyu in the colony, but also displayed very strong paternalistic aspects of control, with consequential African protest, as the Forest Department sought to create for itself a loyal and permanent forest workforce. *Shamba* was the keystone of forestry development in the 1950s, and its expansion cemented the position of forestry in Kenya as a top-down, state-centric agent of economic and social development.

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Introduction

The Kenyan 'good forest'¹

In 1965, W.G. Dyson, Forestry Consultant to the United Nation's Food and Agriculture Organization and a former conservator within the colonial Forest Department of Kenya, recounted a scathing comment that had been directed at him by a development consultant: "from what I have seen of forestry in my travels, it seems to consist mainly of cutting down trees in order to plant more trees." For Dyson, the comment was only a step above the usual question he received: "so you are a forester, what do you do? Plant trees?"² Foresters today may well recognise such comments, but they speak to a deeper phenomenon, of a general ignorance of the importance of forests and forestry in the forging of the modern world. Indeed, as Nancy Langston puts it, "Many people [at least in the West] see forests as little more than attractive backdrops to the real stuff of human history, but our human stories are intimately interconnected with forests."³ Besides their obvious ecological roles, not least in releasing oxygen, forests have very literally fuelled the rise of civilisations and provided timber to allow peoples around the world to reach out across the globe in acts of exploration, trade, war, and settlement.

As Richard Grove has persuasively argued, by the end of the eighteenth century there was a growing awareness within the Western world about the ramifications of the over-exploitation of forests.⁴ Fears of localised climate change, flooding, and, conversely, desiccation became common and began to be addressed by the emergence of systems of forestry embedded within Enlightenment thought. Thus, by the turn of the nineteenth century, the rational, scientific management of forests began to dominate on the continent, particularly in France and Prussia, from where it spread to British India and beyond, despite violent resistance and protest by indigenous

¹ The term comes from C.A. Conte, 'The forest becomes desert: forest use and environmental change in Tanzania's west Usambara mountains', *Land Degradation and Development*, 10, (1999), p. 292. Conte's use of this term, 'good forest', is in large part the inspiration for the research structure employed in this thesis. In his analysis of forest history of the Usambara mountains he emphasises the differing views of what constituted a good forest to different users. He concludes that British foresters' attempts to create a good forest of sustainable timber ultimately failed, leaving a forest that was good for no one. See also Conte's *Highland Sanctuary: Environmental History in Tanzania's Usambara Mountains* (Ohio University Press, 2004), 68–95.

² W.G. Dyson, *The Justification of Plantation Forestry in the Tropics*. (Bib. Orton IICA / CATIE, 1965), 1.

³ Nancy Langston, 'Global Forests', in *A Companion to Global Environmental History*, ed. J. R. McNeill and Erin Stewart Mauldin (John Wiley & Sons, 2015).

⁴ Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge University Press, 1996).

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populations, by the late nineteenth century.⁵ In what is probably the most widely read piece of work that discusses this development, James Scott's *Seeing like a State* conceptualises this scientific forestry as an embodiment of the modernising, simplifying tendency of the state.⁶ Within this formulation, the complex ecosystems of forests are abstracted, simplified, and categorised according to their use to the state. Through the eyes of the state, forests became reserves isolated from local peoples, their previous multifarious economic and social functions cast aside in favour of the creation of monocultural fields of timber and fuel to be harvested and resown.

This thesis uses this focus on the state as a tool to analyse the development of scientific forestry within Kenya between 1895 and 1963. The pursuit of the 'good forest'⁷ is thus the tale of how an idealized but limited conception of forestry was applied to the forests of a British settler colony. Consequently, the research explores how foresters and their African employees, colonial politicians and civil servants, sawmillers, scientists, and settlers pursued various, sometimes competing and sometimes complimentary visions of what a good, useful, and valuable forest was in colonial Kenya. Significantly, this is an approach to understanding forestry in Kenya that is lacking in the current literature on the environmental, political, and economic history of colonial Kenya. Fundamentally this is an exploration of how the management of Kenya's forests changed – for many were managed before 1895 – over an almost seventy-year period in which a colonial and subsequent nation state with a capitalist economy was created.

Colonial Kenya is the ideal context for an investigation such as this, firstly because of the substantial gap in knowledge relating to the history of forestry in Kenya, and secondly because of the complex dynamics of the actors involved. The chief difference between Kenya and the other British East African colonial territories (essentially modern-day Uganda and Tanzania) was the political and economic dominance of white, European agricultural settlers. While in some cases African political elites participated in the power dynamics of local forest reservation, the African majority of the colony were essentially excluded from the competing visions of land use held by the Forest Department and the European settlers that were filtered through a sometimes hostile or ambivalent central administration. The narrative presented in this thesis is therefore ultimately an internal power struggle between the private sphere and the state. The large political influence that the settler group wielded and the agricultural and industrial potential of the colony, as perceived by the colonial administration and Colonial Office, as well as political crises such as the infamous Mau Mau insurrection, meant that the barriers to forestry were high in colonial Kenya. Thus, Kenya

⁵ S. Ravi Rajan, *Modernizing Nature: Forestry and Imperial Eco-Development 1800-1950* (Oxford: OUP, 2006); Ramachandra Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*, Revised edition (University of California Press, 2000); Ramachandra Guha and Madhav Gadgil, 'State Forestry and Social Conflict in British India', *Past & Present*, no. 123 (1989): 141–77; Thaddeus Raymond Sunseri, *Wielding the Ax: State Forestry and Social Conflict in Tanzania, 1820-2000* (Ohio University Press, 2009).

⁶ James C. Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (Yale University Press, 1999).

⁷ See footnote 1 for the origin of this term.

represented a stringent test of whether the forestry ideal of a rational, sustainable good forest could be realised.

Historiographical Context

Kenya was a settler state; its land and climate were racially defined, as its fertile highland regions appealed to white Europeans seeking to replicate sedentary extensive agricultural systems of cattle and sheep and grow the crops demanded by the industrialised metropole. Kenya's highlands offered a warm temperate climate that promised to make Kenya the next Australia, New Zealand, Canada, or South Africa. Because of this appeal to white settlers, Berman and Lonsdale have argued that the colonial state that was established in Kenya was, at least until the 1930s, a contradiction. It was incoherent, more hydra-like than a strong and singularly focused leviathan because of conflicting policies that sought to create a modern, capitalist 'white-man's country' and develop and protect African agriculture.⁸ As historians such as Kennedy and Lonsdale have indicated, the settlers that came to Kenya were extremely eclectic in character and eventual success, but overwhelmingly moneyed. Kenya was not to be a colony of poor whites, for even when many settlers experienced financial dire straits, they still upheld a strong sense of class, of aristocracy, and kept alive the dream that Kenya would achieve self-rule and become a dominion not a protectorate or colony, a true 'white-man's country'.⁹ Of course, the settlers owed their position within Kenya to their ability to leverage support for white settlement in the UK parliament, which was successful enough to block objectors to white settlement within the Colonial Office and the nascent colonial government in Kenya. As Murphy argues, the establishment of white settlement in Kenya linked the country's early capitalist development with those white settlers. This was a system of massive alienation of prime agricultural and forest land, restricting Africans to reserves, and invoking legislation and infrastructure that relied on the creation of often brutally oppressive African clients, the chiefs, to aid the formation of an African labour supply to support white settlement.¹⁰

⁸ John Lonsdale and Bruce Berman, 'Coping with the Contradictions: The Development of the Colonial State in Kenya, 1895-1914', *The Journal of African History* 20, no. 4 (1979): 487-505; Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination* (London: James Currey, 1990).

⁹ Dane Keith Kennedy, *Islands of White: Settler Society and Culture in Kenya and Southern Rhodesia, 1890-1939* (Duke University Press, 1987); John Lonsdale, 'Home County and African Frontier', in *Settlers and Expatriates: Britons Over the Seas*, ed. Robert Bickers (Oxford: OUP, 2010), 75-111. See also, Brett L. Shadle, *The Souls of White Folk: White Settlers in Kenya, 1900s-20s* (Manchester University Press, 2015); John Overton, 'War and Economic Development Settlers in Kenya, 1914-1918', *The Journal of African History* 27, no. 1 (1 January 1986): 79-103; Paul Mosley, *The Settler Economies: Studies in the Economic History of Kenya and Southern Rhodesia, 1900-1963* (Cambridge University Press, 1983); Ian Spencer, 'Settler Dominance, Agricultural Production and the Second World War in Kenya', *The Journal of African History* 21, no. 4 (1 January 1980): 497-514; Kenneth Good, 'Settler Colonialism: Economic Development and Class Formation', *The Journal of Modern African Studies* 14, no. 4 (1 December 1976): 597-620, doi:10.2307/160148; Paul van Zwanenberg, 'Kenya's Primitive Colonial Capitalism: The Economic Weakness of Kenya's Settlers up to 1940', *Canadian Journal of African Studies / Revue Canadienne Des Études Africaines* 9, no. 2 (1 January 1975): 277-92, doi:10.2307/484084.

¹⁰ John F. Murphy, 'Legitimation and Paternalism: The Colonial State in Kenya', *African Studies Review* 29, no. 3 (1 September 1986): 55-65, doi:10.2307/524083; Gavin Kitching, *Class and Economic Change in Kenya: The Making of*

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By the 1920s, the colonial state had defined the country spatially; settlers had access to much of the best agricultural land that was in close proximity to the Uganda Railway. The railway was the essential artery of the whole colonial project in East Africa, enabling imports to flow into Kenya and Uganda and exports to flow out; it made white settlement a practical reality. This spatial segregation was, as Overton has argued, the foundation of the state's support for settler capitalism upon which were built policies that limited African access to lucrative agricultural products, such as coffee, and directed African labour onto settler farms.¹¹ As an element of the state, forestry within Kenya functioned within this contradictory framework. Indeed, as Overton has indicated, forestry allowed the colonial state to increase the spatial segregation of Kenya by a further 1.3 million hectares of land, an area that was approximately half as large as the more infamous land alienations that were made to settlers.¹² In itself, this indicates that the modernist state tendencies of calculating and abstracting the value of nature, an important feature of the state made clear by Scott, was very much present in Kenya.¹³ Yet, no work has explored forestry in Kenya as an expression of state power. The most comprehensive consideration of the nature of the colonial state in Kenya is provided by Berman and Lonsdale, but to them the technical departments of the colonial state in Kenya, which included forestry, were "preoccupied with servicing settler accumulation. ... [And] [t]he state never ceased to try to provide the conditions for the reproduction of settler capitalism... ." ¹⁴ However, the fact that 98 per cent of the then known forests of Kenya were appropriated as Crown Land by 1922 rather than being made available for purchase to settlers suggests that forestry in Kenya was not just acting as the servant of settler capital.¹⁵ Indeed, Castro has argued in his extensive work on the impact of state forestry in Kenya on Kikuyu peoples that the forested upland slopes of Mount Kenya were reserved in 1910 "to protect the forest from supposedly destructive indigenous land-use practices *and* to prevent white land speculators from obtaining private ownership."¹⁶ There is no other discussion of this aspect of state control and forestry or its relation to white settlement within the historiography on Kenya, although these themes are present in discussions of Kenya's and Tanzania's savannah areas and the removal of

an African Petite Bourgeoisie 1905-1970 (London: Yale University Press, 1980); John Overton, 'The Colonial State and Spatial Differentiation: Kenya, 1895-1920', *Journal of Historical Geography* 13, no. 3 (1 July 1987), <http://search.proquest.com.ezproxy.stir.ac.uk/docview/1300171895?accountid=14755>. Murphy also provides a clear overview of the development of the idea of the contradictory colonial state and how this view came to dominate over the earlier conceptions of the colonial state as a mere organ of metropolitan capital (dependency theory) or the colonial state as a puppet of the European settlers. For a discussion of these themes across a broader African context, see Naomi Chazan et al., *Politics and Society in Contemporary Africa* (Macmillan Education, 1988); Sara Berry, 'Hegemony on a Shoestring: Indirect Rule and Access to Agricultural Land', *Africa* 62, no. 3 (July 1992): 327-355, doi:10.2307/1159747.

¹¹ Overton, 'The Colonial State and Spatial Differentiation'.

¹² *Ibid.*, 272.

¹³ Scott, *Seeing like a State*.

¹⁴ Lonsdale and Berman, 'Coping with the Contradictions', 504.

¹⁵ R.L. Robinson, 'Forestry in the Empire', *Empire Forestry* 1 (March 1922): 23.

¹⁶ Alfonso Peter Castro, 'The Political Economy of Colonial Farm Forestry in Kenya: The View from Kirinyaga', in *Tropical Deforestation: The Human Dimension*, ed. Leslie E. Sponsel, Thomas N. Headland, and Robert C. Bailey (New York: Columbia University Press, 1996), 127. Emphasis added.

Africans to form the ‘wildernesses’ of national parks.¹⁷ In particular, Neumann has considered these statist processes as creating what he terms artefactual nature, in that these are wild places created “not by nature, but by human hand and that is an artefact of the state’s assertion of territorial ownership and control.”¹⁸ Clearly, the role of the state in defining its own sovereignty is vitally important for understanding how the colonial state functioned and this is therefore a theme of major significance in discussing forestry in Kenya. The above discussion suggests that forestry in Kenya was caught in the middle of the contradictions of the colonial settler state. The goal of forestry within this confused state apparatus is, therefore, the core theme that this thesis seeks to explore through an examination of the relationship between the Forest Department, Kenya’s white settlers, and the colonial government; in essence, how each of these were engaged in a pursuit for their own idealised ‘good forest’.

Looking more widely, the agenda of development – how a colony would be changed primarily in terms of its economy and politics – formed an important constituent of colonial rule across Africa but was clouded by ambivalence. As Hodge has argued within the context of development, “Out of the complex and dialectical intersection of ideas, expertise, and bureaucratic power emerged a collective imperial agenda torn by inconsistency, indecisiveness, and objectives pulling in divergent and often conflicting directions.”¹⁹ Anderson’s research into Lembus forest of Baringo, Kenya, offers an example of these colonial confusions that stretched across the whole colonial period. Lembus was alienated to white settlers in the first decade of the twentieth century despite the protests of the Forest Department, which would spend the next 50 years trying to wrest control of the forest from settler hands and the Africans who lived within it. The attempted improvement of agricultural land in wider Baringo district was also symptomatic of this ambivalence, as although the scheme was much lauded by the government through the 1930s it was severely underfunded and understaffed; key factors in its failure.²⁰

The issue of the fiscal weakness of colonial rule was indeed often at the heart of the contradictions within that rule. Berry has argued that this weakness was expressed in Kenya’s

¹⁷ John M. MacKenzie, *The Empire of Nature: Hunting, Conservation and British Imperialism* (Manchester University Press, 1997); E. I. Steinhart, *Black Poachers, White Hunters: A Social History of Hunting in Colonial Kenya* (Oxford, 2006); Roderick P. Neumann, ‘Nature-State-Territory: Toward a Critical Theorization of Conservation Enclosures’, in *Liberation Ecologies: Environment, Development and Social Movements*, ed. Richard Peet and Michael Watts, 2nd ed. (London: Routledge, 2004), 193–217; Aneesa Kassam and Ali Balla Bashuna, ‘Marginalisation of the Waata Oromo Hunter-Gatherers of Kenya: Insider and Outsider Perspectives’, *Africa* 74, no. 2 (2004): 194–216, doi:10.3366/afr.2004.74.2.194; W.K. Lindsay, ‘Integrating Parks and Pastoralists: Some Lessons from Amboseli’, in *Conservation in Africa: Peoples, Policies and Practice*, ed. David M. Anderson and Richard H. Grove (Cambridge, 1989), 149–60; Roderick P. Neumann, ‘The Postwar Conservation Boom in British Colonial Africa’, *Environmental History* 7, no. 1 (January 2002): 22–47; William Beinart and Lotte Hughes, *Environment and Empire* (Oxford University Press, Incorporated, 2009); Helge Kjekshus, *Ecology Control & Economic Development in East African History: The Case of Tanganyika 1850-1950* (James Currey, 1996).

¹⁸ Neumann, ‘Nature-State-Territory’, 203.

¹⁹ Joseph Morgan Hodge, *Triumph of the Expert: Agrarian Doctrines of Development and the Legacies of British Colonialism* (Athens, Ohio: Ohio University, 2007), 16.

²⁰ David Anderson, *Eroding the Commons: The Politics of Ecology in Baringo, Kenya, 1890s-1963* (London: James Currey, 2002).

colonial state through an overreliance on indirect rule; a system that elevated or created African elites and utilised them to force Africans into a capitalist colonial economy dependent on settler agriculture, while simultaneously denying them full access to that economy.²¹ As Conte and Neumann have both argued, the goals of forestry in neighbouring Tanganyika were seriously hampered by a lack of support from the colonial administration that resulted in an inadequate operating budget and a shortage of forestry personnel. Mirroring development history in the field of agriculture, Tanganyika's forestry department was to be saved by growing concerns about soil degradation in the 1930s, which found expression after the Second World War in the massively expanded funding given to the department.²² Funding, or the lack of it, and how this affected the development of forestry within Kenya has thus far been unexplored by historians of the country. This thesis will therefore explore the financial realities of creating scientific forestry in Kenya, with particular reference to how this affected aspects of forestry such as programmes of scientific research.

Moreover, the 'thin white line', representing the colonial rule of a few thousand Europeans over millions of Africans, is related to the investigation of how the colony's Forest Department maintained order within its forest reserves. Again, the existing historiography on Kenya largely ignores the upholding of law and order within the Crown forest reserves, despite Anderson identifying these spaces as probable conduits for illegal activity and the forests being the principle arena of Mau Mau activity during the 1950s.²³ There is currently no work, for example, on the role of the Forest Department in the government's suppression of Mau Mau or what part, if any, the African employees of the department who worked in the forests played in this process. The closest we come to a discussion that considers the Forest Department's maintenance of law and order in the forests is Castro's consideration of Kikuyu protest at Forest Department conservation practices on the slopes of Mount Kenya, which is indirectly linked to the rise of Mau Mau sentiment, Anderson's work on African opposition to forest reservation, and Castro's consideration of the use of on-the-spot fines to punish violators of forest laws within forests found within African reserves (that is, not the Crown forests).²⁴ This was, he argues, a practice that provided a steady and not

²¹ Berry, 'Hegemony on a Shoestring'.

²² C. A. Conte, 'The Forest Becomes Desert: Forest Use and Environmental Change in Tanzania's West Usambara Mountains', *Land Degradation & Development* 10, no. 4 (1 July 1999): 291–309, doi:10.1002/(SICI)1099-145X(199907/08)10:4<291::AID-LDR363>3.0.CO;2-W; Roderick P. Neumann, 'Forest Rights, Privileges and Prohibitions: Contextualising State Forestry Policy in Colonial Tanganyika', *Environment and History* 3, no. 1 (1997): 45–68; Thaddeus Sunseri, "'Every African a Nationalist": Scientific Forestry and Forest Nationalism in Colonial Tanzania', *Comparative Studies in Society and History* 49, no. 4 (2007): 883–913. The limited research that has been done on Uganda's colonial Forest Department indicates it was also hindered by low staffing and funding levels. See, N. Turyahabwe and A.Y. Banana, 'An Overview of History and Development of Forest Policy and Legislation in Uganda', *International Forestry Review* 10, no. 4 (1 December 2008): 641–56, doi:10.1505/ifer.10.4.641; George Webster and Henry Osmaston, *A History of the Uganda Forest Department 1951-1965* (Commonwealth Secretariat, 2003).

²³ David Anderson, 'Stock Theft and Moral Economy in Colonial Kenya', *Africa* 56, no. 4 (October 1986): 399–416. Anderson does highlight, however, protest against Forest Department conservation policies within Anderson, *Eroding the Commons*.

²⁴ Alfonso Peter Castro, 'Southern Mount Kenya and Colonial Forest Conflicts', *World Deforestation in the Twentieth Century*, 1988, 33–55; Anderson, *Eroding the Commons*.

insignificant revenue stream to the department as it was seen by Africans as effectively a form of taxation on forest produce; an argument that will certainly be investigated by this study.²⁵ Sunseri provides an analysis of forest policing in Tanganyika, in which overworked African agents of colonial rule are revealed as the gatekeepers to forest and tree use, opening them up to abuses of power and corruption, and creating popular resentment that fostered nationalism.²⁶ There is, therefore, clear and important scope for investigating how the rationalising agenda of state forestry was actually applied on the ground in colonial Kenya, particularly in respect of the hitherto underexplored Crown forests.

The desire by Europeans to transform and, in their eyes, improve the landscapes they conquered across the colonised world has been argued by Anderson and Grove as a projection of European conceptions of an imagined 'Eden'. This informed a narrative for the need to conserve landscapes against the threat of their supposed potential destruction by Africans.²⁷ According to Grove, the idea of conservation grew from eighteenth-century imperial experiences of the rapid degradation of island ecosystems to become a core concept in how land would be managed across the empire.²⁸ This was a conservation in which the constituent parts of an ecosystem were categorised and evaluated based on their usefulness to the imperial machine, a usefulness that was of course determined by the white and west European culture and economics of the men who built that machine. Thus fauna across the empire were hunted to feed the bellies and egos of pioneer settlers and make way for cattle, sheep, and crops. Concurrently, indigenous people's rights of access to such resources were restricted so that supposedly sustainable killing might continue in the interests of the colonial rulers.²⁹ Similar to Anderson's work on Baringo, Mackenzie's research into colonial projects of soil conservation in Kenya has shown how within this agenda Africans, and African agricultural practice in particular, were stereotyped as a danger to the ecological balance of the colony, thereby justifying draconian policies of agricultural improvement. Conservation thus allowed what was at heart a political problem of the unequal distribution of land within the colony to be cast as a technical problem that could be solved by scientific intervention.³⁰ Notably,

²⁵ Alfonso Peter Castro, *Facing Kirinyaga: A Social History of Forest Commons in Southern Mount Kenya* (It'dg Publishing, 1995).

²⁶ Sunseri, *Wielding the Ax*; Sunseri, 'Every African a Nationalist', 2007.

²⁷ David M. Anderson and Richard H. Grove, 'Introduction: The Scramble for Eden: Past, Present and Future in African Conservation', in *Conservation in Africa: Peoples, Policies and Practice*, ed. David Anderson and Richard H. Grove (Cambridge, 1989).

²⁸ Grove, *Green Imperialism*.

²⁹ See, for example: Beinart and Hughes, *Environment and Empire*; William Beinart, 'Empire, Hunting and Ecological Change in Southern and Central Africa', *Past & Present*, no. 128 (1990): 162–86; William Beinart, 'The Night of the Jackal: Sheep, Pastures and Predators in the Cape', *Past & Present*, no. 158 (1998): 172–206; MacKenzie, *The Empire of Nature*. For hunting in colonial Kenya, see Steinhart, *Black Poachers, White Hunters*; William K. Storey, 'Big Cats and Imperialism: Lion and Tiger Hunting in Kenya and Northern India, 1898-1930', *Journal of World History* 2, no. 2 (1 October 1991): 135–73, doi:10.2307/20078498.

³⁰ A. Fiona D. Mackenzie, *Land, Ecology and Resistance in Kenya, 1880-1952* (Edinburgh: Edinburgh University Press for the International African Institute, 1998); A. Fiona D. Mackenzie, 'Contested Ground: Colonial Narratives and the Kenyan Environment, 1920-1945', *Journal of Southern African Studies* 26, no. 4 (2000): 697–718, doi:10.1080/713683602.

Ofcansky's account of the development of forestry in Kenya repeats this colonial line, arguing that African shifting cultivation and overgrazing caused large-scale deforestation and soil erosion. Ecological balance, he argues, was only ensured by the presence of disease, war, and famine in precolonial Kenya. "When the British arrived and imposed a sense of order on tribal relations and, more importantly, adopted policies to relieve famine, forest destruction and soil erosion accelerated", Ofcansky argues.³¹ In the light of research by Fairhead and Leach that dispels similar colonial narratives in West Africa, such accounts of colonial Kenya need serious reappraisal.³²

Conservation played an integral role in forestry as it developed across the British Empire. As outlined by Barton and Bennett, within India conservation of the forest resource was at the heart of the psyche of the Indian Forest Service. As Barton has separately argued, this was a stance that was grounded upon the utilitarian Benthamite principle that policy should be for the greater good, even if this meant hardship for the minority. This enshrined the principle of forests as state property with limited rights of access and usage to indigenous peoples, all for the greater good. Forestry passed on, Barton argues, this fortress conservation approach to the larger environmental movement in the twentieth century.³³ However, as Bryant reminds us in his work on teak extraction in colonial Burma, conservation did not preclude capitalism. Conservationist scientific forestry may have opposed the laissez-faire forestry of private enterprise, but it still sought to make a profit as long as this was based on sustainable, managed exploitation of the forests.³⁴ Sunseri reiterates this argument within the context of Tanganyika, where he posits that forest exploitation during the Second World War highlighted the profit potential of the territory as a timber producer, which was a major factor in an expanded plantation programme following the war.³⁵ In large part, motivations behind forestry through the latter half of the nineteenth and early twentieth centuries were founded on the financial success of forestry in India. Thus, the Indian example of European scientific forestry reborn to meet the needs of empire was repeated across (and adapted to) British Africa, aided by the spread of personnel, knowledge, and experience from India.³⁶ Anderson's research into Lembus forest, for example, touches upon the motivations that lay behind forestry in Kenya. He argues the financial success of forestry in India provided an example that such conservationist strategies had practical merit for the imperial purse. Outlining the Kenyan Forest Department's opposition to forest alienation and African occupation, Anderson paints a picture of a department

³¹ Thomas P. Ofcansky, 'Kenya Forestry under British Colonial Administration, 1895-1963', *Journal of Forest History* 28, no. 3 (1 July 1984): 137, doi:10.2307/4004697.

³² James Fairhead and Melissa Leach, *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic* (Cambridge: Cambridge University Press, 1996); James Fairhead and Melissa Leach, *Reframing Deforestation: Global Analyses and Local Realities: Studies in West Africa* (Routledge, 2003).

³³ Gregory A. Barton and Brett M. Bennett, 'Environmental Conservation and Deforestation in British India 1855-1947: A Reinterpretation', *Itinerario* 32, no. 2 (July 2008): 83-104, doi:10.1017/S016511530000200X; Gregory Allen Barton, *Empire Forestry and the Origins of Environmentalism* (Cambridge: Cambridge University Press, 2002).

³⁴ Raymond L. Bryant, 'Shifting the Cultivator: The Politics of Teak Regeneration in Colonial Burma', *Modern Asian Studies* 28, no. 2 (1 May 1994): 225-50; Raymond L. Bryant, *The Political Ecology of Forestry in Burma: 1824 - 1994* (University of Hawaii Press, 1997).

³⁵ Sunseri, 'Every African a Nationalist', 2007.

³⁶ Rajan, *Modernizing Nature*.

driven by a conservationist agenda and the need to make money.³⁷ This agenda received massive support during colonial Kenya's twilight years after the Second World War as expert-led development was brought to the fore of colonial policy.³⁸ With this 'second colonial occupation', the importance of protecting agricultural land in Kenya meant that the narrative of soil conservation carried with it political leverage.³⁹ In the case of Lembus forest, the Forest Department's insistence on the importance of the forest as a water catchment area allowed it to gain control of the forest from Africans and logging companies. Otieno's investigation of the 1950s afforestation project of Kisian Hill in Nyanza reveals that the conservation argument could be deployed in situations where it simply had no bearing. Despite admitting a decade earlier that afforestation would have no positive effect on local water catchment at Kisian, the department used this argument to assure it would have access to funds from the Swynnerton Plan, the massive policy of invasive, forced agricultural development and villagization that was enacted in the wake of Mau Mau.⁴⁰ Furthermore, Otieno's work warns that the conservation argument can be taken too far, obscuring the agency and politics of Africans in their negotiations with the Forest Department during the formation of protected forests within African reserves. Otieno reminds us that colonialism could be a "mutually constituted process and a product of misunderstandings" between the coloniser and colonised.⁴¹ Like Otieno, Castro focuses on the subaltern across several studies that consider the effects of scientific forestry on ethnic groups living in proximity to Mount Kenya. Castro paints a picture of Africans struggling against and ultimately failing to find a voice within the Forest Department's pursuit of conservation. Moreover, Castro recounts how empire forestry was able to replace indigenous forestry systems that existed to provide both spiritual and physical resources to peoples around Mount Kenya.⁴²

Conservation, economics, and politics are clearly at the heart of forestry and work by Anderson, Otieno, and Castro has shown how this played out in a scattering of local examples across Kenya. However, there remains a significant gap in understanding what drove forestry colony-wide. In particular, the politics and economics of timber extraction have only been briefly covered by Castro although Anderson's work on Lembus illustrates that antagonism could exist between the private sphere and the Forest Department. This topic merits much closer examination if we are to understand how the nexus between conservation and alleged scientific and sustainable exploitation occurred. Moreover, the role of Kenya's settlers in forest reservation and exploitation has only been

³⁷ Anderson, *Eroding the Commons*, 232–94.

³⁸ Anderson, *Eroding the Commons*; Hodge, *Triumph of the Expert*.

³⁹ Neumann, 'The Postwar Conservation Boom in British Colonial Africa'.

⁴⁰ Alphonse Otieno, 'Conjunction and Disjunction: Afforestation and Conservationism in Central Nyanza District, Kenya, 1940-1957', *Africa Today* 54, no. 1 (1 October 2007): 61–66.

⁴¹ Alphonse Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s' (Northerwestern University, 2008), 25.

⁴² Castro, *Facing Kirinyaga*; Alfonso Peter Castro, 'Sacred Groves and Social Change in Kirinyaga, Kenya', in *Social Change and Applied Anthropology*, ed. Miriam S. Chaiken and Anne K. Fleuret (Boulder, 1990), 277–90; Alfonso Peter Castro, 'Kikuyu Agroforestry: An Historical Analysis', *Agriculture, Ecosystems & Environment* 46, no. 1–4 (September 1993): 45–54, doi:10.1016/0167-8809(93)90012-E.

touched upon by Anderson's work on Lembus forest and warrants fuller investigation to reveal the influence of this politically very powerful group on forestry in Kenya.

The forestry of the British Empire has also been shown as developing along a web of connections between the metropole, India, the dominions, and colonies. Bennett, Brown, and Beinart in particular have shown how forestry knowledge flowed around the world.⁴³ With this flow went tree species, most famously *Eucalyptus*, that were planted (often on appropriated African land) to primarily meet the needs of settler and coloniser but not indigenous peoples or even native fauna. Thus, forestry allowed not just the conservation of forest for foreign agendas but also the conversion of forest and grassland to alien ecosystems to meet those agendas.⁴⁴ However, as Vandergeest and Peluso remind us with their research into the creation of colonial forestry regimes in Southeast Asia, the roles of local politics and ecologies should not be overlooked in the localised histories of the development of forestry.⁴⁵ Ofcansky briefly outlines how forestry ideas spread from South Africa to Kenya via the agency of Cape Colony forester David Ernest Hutchins in 1906, resulting in an emphasis on exotic plantation creation since this was very well developed in South Africa.⁴⁶ Moreover, the importance of both trans-empire networks and local agency seem particularly pertinent in colonial Kenya since, as Castro tells us, it was the site of *taungya* agroforestry operations that were inspired by colonial experience in Burma.⁴⁷ This system, known as *shamba* (Swahili – farm, cultivation) in Kenya, also has a long and turbulent post-colonial history, and its apparently stable operation during the colonial period now seems to be looked upon

⁴³ Brett M. Bennett, 'A Network Approach to the Origins of Forestry Education in India, 1855-1885', in *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800-1970*, ed. Brett M. Bennett and Joseph M. Hodge (Palgrave Macmillan, 2011), 68–85; Brett M. Bennett, 'The Rise and Demise of South Africa's First School of Forestry', *Environment and History* 19, no. 1 (1 February 2013): 63–85, doi:10.3197/096734013X13528328439072; Brett M. Bennett, 'Locality and Empire: Networks of Forestry in Australia, India, and South Africa, 1843-1948' (PhD Thesis, University of Texas at Austin, 2010); Jennifer Gold, 'The Reconfiguration of Scientific Career Networks in the Late Colonial Period: The Case of the Food and Agriculture Organization and the British Colonial Forestry Service', in *Science and Empire*, ed. Brett M. Bennett and Joseph M. Hodge, Britain and the World (Palgrave Macmillan UK, 2011), 297–320; Karen Brown, 'The Conservation and Utilisation of the Natural World: Silviculture in the Cape Colony, C. 1902-1910', *Environment and History* 7, no. 4 (2001): 427–447; William Beinart, Karen Brown, and Daniel Gilfoyle, 'Experts and Expertise in Colonial Africa Reconsidered: Science and the Interpenetration of Knowledge', *African Affairs* 108, no. 432 (1 July 2009): 413–33, doi:10.1093/afraf/adp037.

⁴⁴ Brett M. Bennett, 'The El Dorado of Forestry: The Eucalyptus in India, South Africa, and Thailand, 1850–2000', *International Review of Social History* 55, no. Supplement S18 (December 2010): 27–50, doi:10.1017/S0020859010000489. Bennett argues that *Eucalyptus* was often planted on grazing land to deny that land to indigenous peoples, that its timber was only of use to indigenous peoples for traditional uses (such as fencing) after it had been processed in sawmills, thus requiring them to engage with colonial markets, and that the leaves of the tree were ill-suited as fodder for indigenous livestock. The planting of fast-growing exotics like *Eucalyptus* continues widely across the tropical world, although is controversial because of the linking of desiccation to *Eucalyptus*. Within present-day Kenya, *Eucalyptus* is grown to make powerline poles and as firewood. See, for example, 'For Former Banker, Money Grows on Trees', *Daily Nation*, 15 October 2014, <http://www.nation.co.ke/lifestyle/money/Uasin-Gishu-County-Trees-Farming-Michael-Cherwon/435440-2487908-t7eovv/index.html>.

⁴⁵ Peter Vandergeest and Nancy Lee Peluso, 'Empires of Forestry: Professional Forestry and State Power in Southeast Asia, Part 1', *Environment and History* 12, no. 1 (1 February 2006): 31–64, doi:10.3197/096734006776026809.

⁴⁶ Ofcansky, 'Kenya Forestry under British Colonial Administration, 1895-1963', 1 July 1984.

⁴⁷ Castro, *Facing Kirinyaga*, 70.

through somewhat rose-tinted glasses as policy makers in Kenya and foreign experts assess and reconfigure it for a role within a Kenyan landscape impacted by climate change.⁴⁸ The very brief references to this system in the Kenyan historiography suggest a more complex picture. Furedi casts *shamba* and the wider state forests that it operated within as centres of political dissent. This invites comparisons to the operation of *taungya* in colonial Burma, where it resulted in repeated cases of violent protest because, Bryant argues, it represented a fundamental contradiction between the needs of forestry (the extraction of high value timber) and the local people.⁴⁹ Similar patterns of resistance to colonial forestry and agroforestry are documented by Sunseri in Tanganyika.⁵⁰ Returning to Kenya, Kanogo conversely argues that working within *shamba* was seen in a positive light by Kikuyu farmers moving away from life on the farms of white settlers, as *shamba* gave access to education.⁵¹ Finally, in discussing the expansion of *shamba* in the wake of the Mau Mau revolt in the mid-1950s, Elkins argues the system represented a way for the colonial government to reward Kikuyu who had remained loyal and fought against Mau Mau.⁵² In doing so, Elkins' argument implicitly casts aside the warning by Rajan that forestry and bodies of imperial technical expertise should be seen as actors within the colonial story rather than merely tools of the state deployed to fix colonial problems as and when needed.⁵³ There is thus only a smattering of discussion of *shamba* within the historiography, yet this discussion does link it to important processes of protest, development, and nationalism. Clearly, a much fuller investigation of *shamba* is required, and one that takes into account the agency of forestry itself and the networks of personnel and knowledge that this was built upon. *Shamba* and its embodiment as a process born of international networks will therefore be explored in this thesis.

⁴⁸ Peter Allan Oduol, 'The Shamba System: An Indigenous System of Food Production from Forest Areas in Kenya', *Agroforestry Systems* 4, no. 4 (1 December 1986): 365–73, doi:10.1007/BF00048108; A.N. Okono, 'Farming the Forest: Towards a New Shamba System', *Ecoforum* 27, no. 2 (2005): 45–48; Mark Witcomb and Peter Dorward, 'An Assessment of the Benefits and Limitations of the Shamba Agroforestry System in Kenya and of Management and Policy Requirements for Its Successful and Sustainable Reintroduction', *Agroforestry Systems* 75, no. 3 (1 March 2009): 261–74, doi:10.1007/s10457-008-9200-z. My own assessment of the lessons of the operation of *shamba* in the colonial period for its contemporary use is forthcoming; Ben Fanstone, 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?', in *Environmental Change and African Societies – Past, Present, Future*, ed. Julia Tischler and Ingo Haltermann, Climate and Culture (forthcoming, Brill, 2016).

⁴⁹ Bryant, *The Political Ecology of Forestry in Burma*; R.L. Bryant, 'The Rise and Fall of Taungya Forestry: Social Forestry in Defence of the Empire', *The Ecologist* 24, no. 1 (1994): 21–26.

⁵⁰ Thaddeus Sunseri, "'Something Else to Burn': Forest Squatters, Conservationists, and the State in Modern Tanzania', *The Journal of Modern African Studies* 43, no. 4 (1 December 2005): 609–40; Sunseri, 'Every African a Nationalist', 2007; Sunseri, *Wielding the Ax*.

⁵¹ Frank Furedi, *Mau Mau War in Perspective* (London: J. Currey, 1989), 52, 61–62; Tabitha Kanogo, *Squatters and the Roots of Mau Mau, 1905-63* (London: James Currey, 1987), 102.

⁵² Caroline Elkins, *Britain's Gulag: The Brutal End of Empire in Kenya* (Random House, 2005), 262.

⁵³ Rajan, *Modernizing Nature*.

Research Framework

The historiographical overview has identified several major themes within the environmental history of colonial forestry and gaps in the current literature on Kenya in relation to these themes. Based on this assessment, the following brief research questions are used to define the historical approach taken in this study.

Research questions

1. What roles did forestry play within the colonial state?
2. How was forestry in Kenya affected by the reality of colonial rule being only a 'thin white line' in terms of the effects of financial constraints on forestry operations?
3. How were indigenous forest management systems affected by the arrival of colonial forestry? How were Africans perceived in relation to forests by members of the Forest Department and wider government, and how did this inform policy, that is, was there a 'degradation narrative' within Kenya and how did this play out?
4. What were the drivers of forestry and what role did the colonial conservation narrative play in forestry motivations?
5. What role did imperial networks of knowledge and personnel transfer play in forestry? In particular, how did the imported *taungya* (*shamba* in Kenya) agroforestry system develop?

The thesis utilises an exploration of archival and published primary source documents to reach answers to these questions. The historiographical overview has demonstrated that forests have been the nexus of typically competing viewpoints of land and resource use; awareness of this drove the selection of sources employed. Forests, for example, may be viewed by the state as a strategic asset whose importance is seen as negating the use of those forests by other groups. Private enterprise, represented by the stereotypically unscrupulous capitalist sawmiller, may consider forests to be nothing more than mines waiting to be stripped of timber. Indigenous peoples typically invest forests with numerous social, political, and economic values that are often completely ignored, misunderstood, or otherwise maligned by state and private actors, clearly shown in Kenya by Castro's, Anderson's, and Otieno's work on African forest reserves. Indeed, because of the coverage provided by these scholars into African-forest interactions, and the concurrent absence of literature dealing with forestry as a separate but integral part of the colonial state, the bulk of the sources upon which this thesis is based come from the colony's Forest Department itself. This emphasis on the agency of forestry provides a novel foundation for the discussion of forestry within Kenya that takes into account the politically and economically important role of white settlers in the colony; the factor that truly makes the colonialism that developed in Kenya unique.

The sources themselves primarily come from Kenya's National Archives (KNA), the National Archives of the United Kingdom (TNA), the University of Oxford's Bodleian Radcliffe Science Library and Weston Library, the British Library, and the National Library of Scotland. Official documents, memoranda, reports, books, journal articles, minutes of meetings, and correspondence form the bulk of the material scrutinised, with most being produced by the colonial Forest Department of Kenya, the Colonial Office, the colonial government of Kenya, and allied organisations (such as the Empire Forestry Association). In particular, the annual (and sometimes triannual) reports of the Forest Department were a key source for statistical and outline data. Contact was made with several of the few surviving members of the colonial Forest Department, who provided me with information via email and telephone interview.⁵⁴ The attitudes of settlers (including the timber industry) has been gleaned from correspondence, their publications, and the reports and minutes of applicable organisations (for example, the timber cooperative known as Timsales and white farmers' associations).

This thesis examines the politics and economics of certain forested areas of Kenya, and the actors that participated in this, that have largely escaped historical study, what were termed the Crown forests. Crown forests were state forests, reserved by the government and under direct and theoretical total control of the Forest Department. Indeed, the Crown forests made up the majority of the land defined as forest by the colonial government throughout the colonial period. For example, in 1931 Crown forests represented 97 per cent of the forest estate, although this did fall to 73 per cent by 1962.⁵⁵ This thesis therefore posits that colonial forest policy in Kenya was bound up in the control, development, and exploitation of this state forest estate. These forests are predominantly found in the central and western highlands of the country, and are clustered around prominent topographical features such as Mount Kenya, Mount Elgon, the Aberdares range, and the Mau Escarpment of the Rift Valley. All such forests are above 1,000 metres in altitude and therefore typically montane in nature. Although Crown forest could also be found on the coast and, from the late 1950s, on the green islands of the mountains of Kenya's arid northern province, the Forest Department's overwhelming focus was the more highly populated and forested central and western

⁵⁴ Contact was established with surviving foresters through the Royal Forestry Society and particularly by my publication of a very warmly received article within their journal: 'Sowing the Seeds of Modernity: The Colonial Kenyan Forestry Department', *Quarterly Journal of Forestry* 109, no. 4 (January 2015): 42–46. Unfortunately, of the surviving members several were too ill to participate in interviews. In particular, I was able to interview Sydney Draper, who held a key position supervising shamba forest squatter villages in the late 1950s and early 1960s, via telephone but he very sadly passed away before an intensive face-to-face interview could take place. In reference to the forest squatters themselves, it is my intention to continue research which will involve tracing such workers and conducting interviews with them and their descendants, although this will be complicated by the absence of Forest Department contracts with them (that is, the Forest Department did not retain the employment contracts of its forest squatters).

⁵⁵ Kenya Forest Department, *Annual Report of the Forest Department, 1931* (Nairobi Government Printer, 1931); Kenya Forest Department, *Annual Report of the Forest Department 1962* (Nairobi Government Printer, 1963). In 1931 the acreage of Crown forest stood at 2,753,920 and that of 'Native Forest Areas' at 76,160. The figures for 1962 were, respectively, 3,381,696 and 918,656.

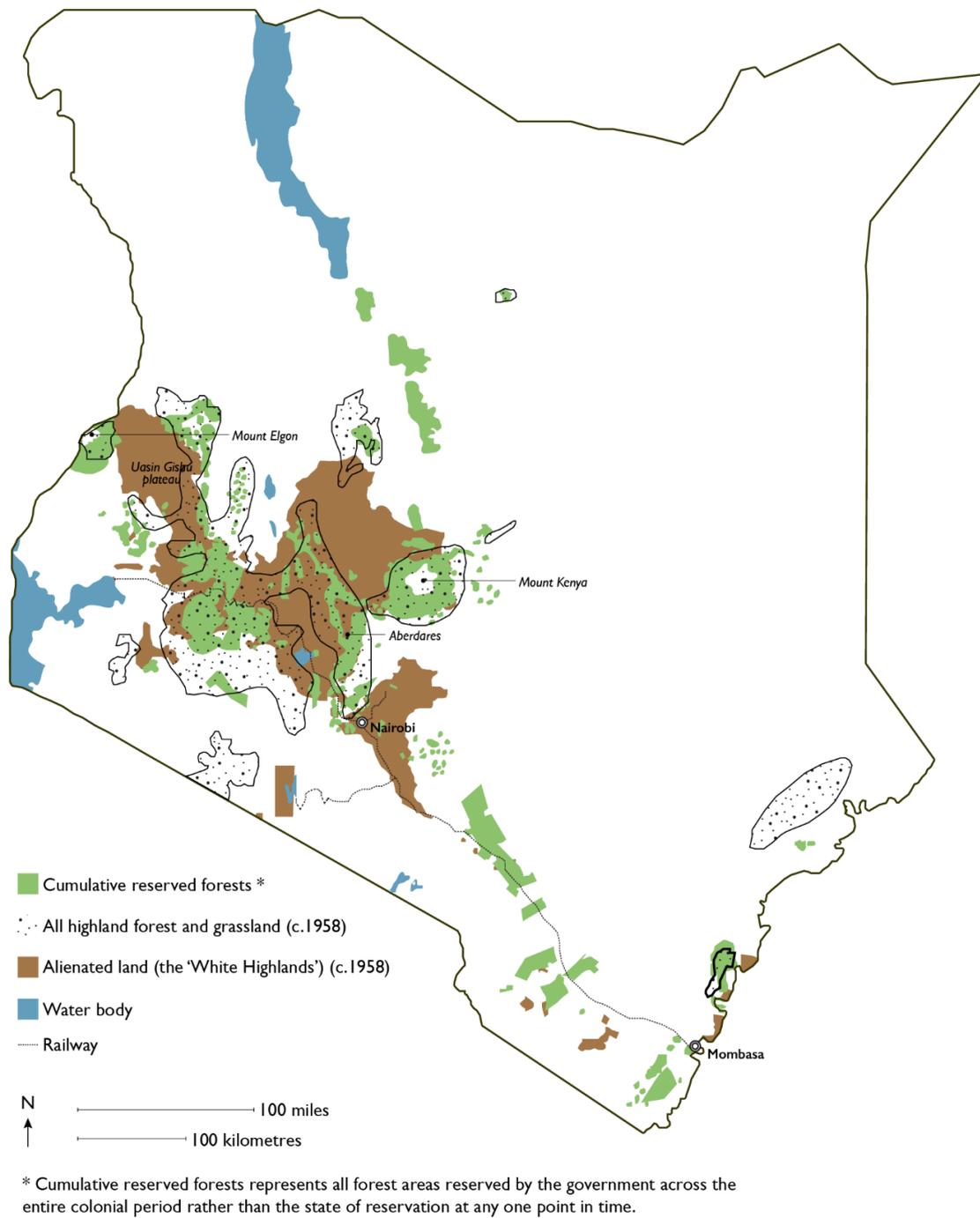


Figure I. The highland forest and grassland zones of Kenya, reserved forests, and land alienated for white settlement. Sources: *Atlas of Kenya*, 1st ed. (Nairobi: Survey of Kenya, 1959); D.E. Hutchins, 'Report on the Forests of British East Africa' (London: His Majesty's Stationary Office, October 1909), [Cd. 4723].

regions of the colony; the thesis therefore follows this same focus.⁵⁶

Forestry itself is the primary actor under consideration, an approach that inherently sees the Forest Department and its staff and workers as separate entities capable of having their own motivations and goals that were quite distinct from an overarching notion of 'colonialism'. Forestry will very much be explored as a part of the colonial state, but a part with a considerable degree of independence. Focus is directed toward what the priorities of the Forest Department were across the colonial period and the importance of the forestry ideology intrinsic to the department to these. This will cover themes of forest protection, afforestation, exploitation, and the development of forest science. The recruitment and utilisation of African workers (the 'forest squatters') to the department will be extensively explored within this theme, both in terms of the effect of Forest Department employment on the workers and their influence on forestry policy.⁵⁷ Indeed, with the state's legal takeover of the Crown forests, forest squatting was the only legal means that Africans had of residing within these forests although extensive 'illegal' settlement, cultivation, and 'criminal' activities occurred throughout the colonial period that is, where possible, also explored.

The relationship between the forests and the wider government, including the governor, Legislative Council, and other departments will also be explored. This is particularly relevant in reference to the role of forestry in the extension of state power over land, the government's obvious political and budgetary control over the Forest Department, and its economic goals. Economics also underlies the final relationship being examined, that of the forests and the private sphere. Here, the private sphere encompasses the timber industry and the white settler community. The timber industry itself was overwhelmingly dominated by white settlers although there was also a minority of sawmills operated by Indians.⁵⁸ Recognising the heterogeneous nature of this industry, the views

⁵⁶ There is undoubtedly potential for research concerning Kenya's coastal forests of mangroves and their hinterland, which had extensive and long precolonial links to trade across the Indian Ocean. However, this thesis aims to focus on the core processes of the Kenya Forest Department's 'policy' formation and the struggles that shaped this. For a study that enlightens understanding of the political ecology of Tanzania's coastal forests see Sunseri, *Wielding the Ax*.

⁵⁷ Aside from forest squatters employed by the Forest Department, there were also those Africans on temporary contracts with the sawmills who resided in forests. Because of a lack of records dealing with this second group of sawmill squatters and their rather temporary nature (they resided for shorter periods than Forest Department squatters), this thesis largely restricts itself to discussion of the Forest Department's own forest squatters. It should be noted that like the considerably more well-known African squatters of the white highlands, the term 'forest squatter' was used in the colonial period without negative connotations, just as it is in the bulk of Kenya's historiography.

⁵⁸ This research focuses on the determinants of forest policy in Kenya by primarily looking at the Forest Department's own records. While the Asian community within Kenya was extremely active and vocal in the political sphere, records indicate it had little influence on the Forest Department. Speculatively, this may have been because of the urban base of the Asian community in comparison to the rural dominance of the white settlers. White farmers residing on large estates in the white highlands operated in proximity to forests and forestry. By contrast, large Asian businesses were clustered in major townships and Asians were, of course, restricted from owning large tracts of agricultural land. Although there were several sawmills and timber trading companies owned by Asians, white settlers still controlled the industry. This was further bolstered through European dominance of the main political and cooperative body of the timber industry, Timsales. Asians did feature as employees of the Forest Department and this aspect is explored in the thesis. Asians could attain a higher position within the department than Africans (at least until the early 1960s), yet they effectively also faced a colour bar that meant they were excluded from the possibility of influencing forest policy.

of the forests that it had will be investigated, and its relationship with the Forest Department extensively explored. Similarly, the impact of the white farmers on forestry and the forests will be examined. Forest reserves were key features of the Kenyan highlands, acting as buffers between the 'white highlands' and those areas where Africans were allowed to farm.⁵⁹ In conjunction with metropolitan concerns, Kenya's colonial politics were overwhelmingly imbued with the interests of the settlers. Thus, how this politically powerful group was able to influence forest policy is a vital area of research and differentiates Kenya from Uganda and Tanzania.⁶⁰ Through scrutinising these relationships between the forests of Kenya and forestry institutions, the government, and the private sphere this thesis casts light upon both the role of forestry and forests within the creation of the both colonial state and subsequent nation state.

The first chapter begins the analysis of forestry in Kenya by looking at the late-nineteenth century to the mid-1920s, from when Kenya might be considered a frontier protectorate to a British colony. It traces and analyses the establishment of forestry in Kenya, considering the importance of conservationist, economic, and geopolitical arguments as well as the significance of imperial personnel connections and the role of early white settlers in the creation of the Forest Department and how these characterised its development and policies. The second chapter deals with the mid-1920s through to the Second World War. This was a period when the Forest Department attempted to consolidate the position of forestry in the colony; significant developments occurred in the growth of the timber industry and its relationship to the department, revealing the department's priorities and shortcomings. The system of forest squatting, referred to throughout this thesis by the term most commonly used by the Forest Department – the *shamba* system – dramatically grew and was defined in the interwar years; its importance to forestry in the colony and the socio-economic implications for Africans involved in it will all be explored. These developments are analysed in light of the political landscape of Kenya, specifically the importance of vocal white settler opposition to forestry in shaping forestry in the colony. The final chapter focuses on the post-war years until Kenya's independence from British rule in 1963.⁶¹ The twilight years of British rule in Kenya are shown as dramatically advancing the course of forestry in the colony. The growth of scientific research institutions is explored, together with how science was used to both attack and aid forest development and the expansion of state control. Similarly, the complex roles of the Forest Department and the state in a timber industry that was eager to partake of the rapid economic developments of 1950s Kenya are explored. Finally, the importance of the Mau Mau Emergency to

⁵⁹ W.T.W. Morgan, 'The "White Highlands" of Kenya', *The Geographical Journal*, vol.129, no.2 (Jun 1963), p.143, 150

⁶⁰ For example, Sunseri's *Wielding the Ax* explores many similar themes to this thesis (although his work has a closer focus on peasant resistance) within colonial and post-colonial Tanzania, which had a comparatively smaller and less influential settler population in comparison to Kenya.

⁶¹ Independence is taken as a practical and natural cut-off point for this study. However, as the final chapter will touch upon, many of the themes relating to forestry continued into the post-colonial era. For a study that straddles the colonial and post-colonial see Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s'. For specific discussion of the *shamba* system across these two time periods and an emphasis on the importance of the colonial period for imbuing the system with many of the characteristics that make it of continued (if not heightened) relevance today, see my own 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?'

forestry is analysed with a specific focus on the growth of the *shamba* system, African development, and villagization. The chapter ends with a consideration of the state of forestry as Kenya transitioned to independence, particularly in relation to the preparations the department made to deal with that changeover. The thesis concludes by considering how the findings from this investigation tie into ideas of forestry as a constituent part of the colonial state and an important element in social and economic development. Special emphasis is placed on the *shamba* system as a defining characteristic of forestry in Kenya and the importance of the success of this system for the spread of similar agroforestry systems across Africa and the wider tropical world today.

1

From the Abominable Jungle to the Scientific Forest Plantation c.1890 to 1925

1.1 Introduction

This chapter will explore both the background to and the process of the creation of the East Africa Protectorate's Forest Department in 1902. The period covered ranges from circa 1890, when British exploration of East Africa intensified, through the process of protectorate establishment and European settlement until 1925, when it is considered that the early period of the Forest Department's consolidation and policy formation was complete under its first three conservators. Within this timeframe, the forests of East Africa went from being relatively unknown in terms of their extent and biological composition to the site of numerous forestry plantations: clear symbols of the scientific and colonial appropriation of African lands.

1.2 Exploring the Jungle

In 1885 the missionary couple Rachel and Stuart Watt traversed the country today known as Kenya. Their account of this journey was typical; it dwelled on the arduous nature of journeying through "interminable forest" in which they and their porters had to stoop "underneath the giant creepers and intertwining branches, which droop over the narrow, darkened and tortuous track."⁶² No doubt eager to satisfy their readers' desires for tales of the impenetrable dark continent, other travellers also played up the dangers and difficulty of travel in East Africa. Trekking through the forests around Mount Kenya, the elephant hunter Arthur Neumann wrote in 1898 that,

We had the most trying day imaginable, through the very densest, most abominable jungle it is possible to conceive. Our guides eventually lost themselves and us, and it was not till late in the afternoon that we at last struggled out into shambas [farmland].⁶³

⁶² Rachel Watt, *In the Heart of Savagedom. Reminiscences of Life and Adventure during a Quarter of a Century of Missionary Labours in East Equatorial Africa*, ed. Stuart Watt (London: Marshall Brothers Ltd., 1913), 30, 33. Watt worked with the Church Missionary Society and was giving an account of her journeys in 1885.

⁶³ Arthur H. Neumann, *Elephant-Hunting in East Equatorial Africa. Being an Account of Three Years' Ivory-Hunting under Mount Kenia and among the Ndorobo Savages of the Lorogi Mountains, Including a Trip to the North End of Lake Rudolph* (London, 1898), 66.

30 Exploring the Jungle

Forests at lower altitudes were infested by tsetse, necessitating the use of porters to carry the expeditions' provisions.⁶⁴ Equally dangerous were the mysterious inhabitants of forests along the travellers' routes. While journeying through the high-altitude central highlands in 1893, John Gregory and his caravan feared the region's Kikuyu to the extent that no camp was made in the forest, from which attack might come. When he visited the European station of Fort Smith, 13 km northwest of the future capital, Nairobi, no one was allowed outside the perimeter unless accompanied by at least 20 other men.⁶⁵

Even the weariest of travellers, however, began to soften after the long toil of the day was over and describe the aesthetic appeal of the forest. Camping at 2,500 metres on the slopes of Mount Kenya, Neumann looked down into the central highlands of Kenya and remarked, with a clear eye to timber potential, that, "the forest is very beautiful, and contains many fine timber trees. The trunk of one that I measured girthed about 15 feet and was straight as a dart for at least 60 feet."⁶⁶ Eager to entice wealthy hunters to the territory, the 1893 *Handbook of British East Africa* described the same forests as "entrancing, being free from creepers, carpeted with green sward, and intersected by beautiful glades and running water, while antelope, buffalo, and elephant abound."⁶⁷ The overriding theme of accounts from the last decade of the nineteenth century was that the forests of the British East Africa Protectorate, as the territory became known in 1895, had massive untapped potential. The coast contained extensive mangrove forests, the source of "very fine" poles that constituted an established Indian Ocean trade and one of the principal (if low value) export commodities of the Protectorate by 1897.⁶⁸ The coastal hinterland contained a forest belt of "magnificent timber, of which the chief varieties are the mbambakofi, like mahogany, the gum copal tree, the teak and other hard woods, the acacia, the ebony, and various palms."⁶⁹ Moving west, after crossing the great expanse of plains and beginning the gradual ascent into the central highland region, Captain Lugard reported in 1893 the presence of "fine timber trees" in the country inhabited

⁶⁴ For a map of the tsetse fly zone within Kenya, see figure 3-4 in chapter 3.

⁶⁵ John Walter Gregory, *The Great Rift Valley. Being the Narrative of a Journey to Mount Kenya and Lake Baringo. With Some Account of the Geology, Natural History, Anthropology and Future Prospects of British East Africa ... With Maps and Illustrations* (London, 1896), 21, 77. Gregory also makes reference to the use of camels by European travellers, apparently following the example set by the local Orma people. If camels were used, numerous fires were apparently lit to produce smoke that would envelop and protect the caravan from the dreaded tsetse fly.

⁶⁶ Neumann, *Elephant-Hunting in East Equatorial Africa*, 129.

⁶⁷ Intelligence Division of the War Office, *Handbook of British East Africa, Including Zanzibar, Uganda, and the Territory of the Imperial British East Africa Company* (London: Her Majesty's Stationary Office, 1893), 33.

⁶⁸ C. W. Hobley, 'People, Places, and Prospects in British East Africa', *The Geographical Journal* 4, no. 2 (1 August 1894): 97, doi:10.2307/1773798; *Africa. No. 7 (1897). Report by Sir A. Hardinge on the Condition and Progress of the East Africa Protectorate from Its Establishment to the 20th July, 1897. [With Map.]*, Parliamentary Papers: Command Papers, C.8683, LX.199, 1898, 43, 46-47. Although it was considered a principal export commodity in the Protectorate's 1897 report, the value of this trade was slight compared to the major export items of ivory, grain, rubber, and livestock (in that order). In 1896-97 'building materials', which must have been dominated by mangrove poles (typically known as borities) as well as a smaller quantity of timber from coastal forests constituted 2.2 per cent of the total value of exports from the Protectorate (and 2.3 per cent of export duty collected for the same period).

⁶⁹ Intelligence Division of the War Office, *1893 Handbook of British East Africa*, 169.

by Kamba peoples.⁷⁰ Turning north-west on route to Mount Kenya, he arrived in Kikuyu country where he was met with a “forest [that] contains magnificent timber trees, its large open glades between the patches of heavy wood are of the richest soil, and the country is well watered.”⁷¹ He further speculated that temperate zone trees such as oak, ash, cedar, and pine, as well as valuable tropical hardwoods such as teak, “would certainly become naturalised here.”⁷² As Lugard trekked west into the Nandi hills of the Rift Valley he found “forest all around us on every side, huge dense African forest of colossal trees.”⁷³ Referring to Kenya’s largest forest, the Mau, John Bremner Purvis epitomised the optimistic view held by the first European travellers and administrators when he talked of the,

... mighty forests of giant timber that patiently wait for the axe and saw and ingenuity of man or enterprise of the Government, to turn the best of the timber to better account than fuel for the iron horse, and from the rest provide that fuel more easily and cheaply than at present. Already some enterprising individuals are working in a small way, with the result that almost every article of furniture may be bought in Nairobi in a style and at a price that will compare with anything in England.⁷⁴

The forests of Kenya, although still largely unexplored by Europeans at the turn of the twentieth century, were clearly seen as holding potential to be developed into a resource for the growth of the Protectorate. Further fuelling this impression that Kenya contained a wealth of timber just waiting to be exploited were the numerous accounts reporting that the forests were uninhabited.

Late-nineteenth and early twentieth century descriptions of uninhabited areas cover several of the major Kenyan forests, indicating a European perception that, broadly, the forests of the territory were unoccupied. While journeying up the Tana River in 1895, Reverend R.M. Ormerod crossed a 60-mile “almost unbroken” stretch of forest that was “practically a no-man’s land.”⁷⁵ When R.B. Buckley reported on his journey along the newly-finished Uganda railway in 1903, he emphasised the “extreme paucity of the population”⁷⁶ and that the central highlands, “say the size of England north of Liverpool and Sheffield – is almost uninhabited at present, and it offers a field for colonization by Europeans... .”⁷⁷ Buckley’s mistake, of course, was in supposing that the lands the railway crossed were representative of the highlands as a whole; rather, the Uganda railway’s

⁷⁰ F.D. Lugard, *The Rise of Our East African Empire. Early Efforts in Nyasaland and Uganda*, vol. 1 (Edinburgh: William Blackwood and Sons, 1893), 278.

⁷¹ *Ibid.*, 1:337.

⁷² *Ibid.*, 1:422.

⁷³ Margery Perham and Mary Bull, eds., *The Diaries of Lord Lugard*, vol. 1 (London: Faber and Faber Limited, 1959), 385.

⁷⁴ John Bremner Purvis, *Through Uganda to Mount Elgon* (London: T. Fisher Unwin, 1909), 83. Purvis does not state when he made his journey across the Mau. As it was by rail it was certainly after the completion of the railway in 1904, although his reflections are a result of his being resident in East Africa since 1895.

⁷⁵ ‘The Rev. R. M. Ormerod’s Journeys on the Tana River’, *The Geographical Journal* 8, no. 3 (1 September 1896): 285–86, doi:10.2307/1774190. The place names Ormerod gives remain elusive, however from his descriptions it is likely he was referring to the riverine forest between present-day Masabubu and Garissa.

⁷⁶ R. B. Buckley, ‘Colonization and Irrigation in the East Africa Protectorate’, *The Geographical Journal* 21, no. 4 (1 April 1903): 350, doi:10.2307/1775678.

⁷⁷ *Ibid.*, 362.

route was chosen based on engineering concerns and water supplies, and specifically avoided large areas of population which might present a hostile challenge to its operation.⁷⁸ The fact that this oversight went unmentioned in the discussion of Buckey's journey at the Royal Geographical Society is indicative of the general perception, and perhaps desire to believe, that British East Africa was only sparsely populated. With the total absence of comprehensive surveys, remarks made on maps produced by travellers were influential. Joseph Thomson, for example, ambiguously marked an approximate 100-mile stretch of forest between Mount Kenya and Lake Baringo as "Uninhabited forest, elephant numerous" despite only passing through the edge of the area on his 1884 expedition.⁷⁹ The issue of the true state of land occupation at the time of British conquest would of course go on to be a primary source of African political agitation within Kenya in the colonial period and beyond. In terms of forestry, it is clear that based on the scant, unscientific and generalising reports of the late nineteenth and early twentieth centuries, the forests of the territory were seen as virgin, vast, exploitable, and uninhabited; yet, they were also seen as under threat.

1.2.1 Forest Destruction

Early accounts of deforestation by Africans portrayed the practice either neutrally or in a positive manner. On an expedition through the Sotik area of the Rift Valley with the railway survey party in 1893, J.W. Pringle described the typical method of forest clearance he witnessed:

The clearing of the forest is done in a way similar to that practised by the Wa-Kikuyu and Wa-Kamasia [Tugen]. The undergrowth and jungle is cut away by hand, and a fire lighted round the stumps of all the larger trees, which, after their fall, are left to cumber the ground and decay away, only the small undergrowth being dug up.⁸⁰

His insinuation, then, was that Kikuyu of central Kenya, Tugen of north-east central Kenya, and an unnamed ethnic group in Sotik (most likely Kipsigis) all engaged in similar forest clearance practices. Significantly, he did not chastise such clearance as wanton destruction, indeed he passed no judgement on these practice at all. In 1894, Charles Hobley of the British East Africa Company, which oversaw British interests in East Africa between 1888 and 1896, wrote of deforestation carried out by Kamba living south of modern-day Nairobi with a clear sense of admiration:

A great deal of the country is covered with thick woods, mainly composed of a green-barked sponge-wood tree, but the Wakamba are gradually extending the area under cultivation, clearing away thick woods in a most patient and persevering manner.⁸¹

Similar praise was given by the official handbook for East Africa in 1893 in describing Kikuyu forest clearance: "The country was once entirely wooded, but by the industry of its population it is now

⁷⁸ Patrick Pringle, *The Story of a Railway* (London: Evans Brothers Limited, 1954), 19, 52.

⁷⁹ Joseph Thomson, 'Through the Masai Country to Victoria Nyanza', *Proceedings of the Royal Geographical Society and Monthly Record of Geography*, New Monthly Series, 6, no. 12 (1 December 1884): 712, doi:10.2307/1800706.

⁸⁰ J. W. Pringle, 'With the Railway Survey to Victoria Nyanza', *The Geographical Journal* 2, no. 2 (1 August 1893): 132, doi:10.2307/1773836.

⁸¹ Hobley, 'People, Places, and Prospects in British East Africa', 117.

covered with cultivation.”⁸² From this perspective, deforestation was a sign of civilisation and development, a clearing away of the uneconomic (at that time) forests and establishment of agriculture that could fuel the potential future colony. In demonstrating their willingness to conduct this clearing, the Kamba and Kikuyu, in these two instances, are portrayed as a potential hard-working workforce. Lugard also hailed this perceived characteristic, recounting that during a trip in 1890 “... I was especially struck with the vast extent of the cultivation, in comparison to the few villages I see. This seems to mark the Kikuyu as an industrious race.”⁸³ After also describing the Kikuyu people he had encountered as “industrious”, Richard Crawshay goes on to describe the methods used to clear forests. Notably, like Pringle, this description carries no condemnation.

If clearing a plantation in primeval forest, they commence operations by collecting quantities of dead wood, of which there is an extraordinary abundance, piling up this at the foot of the forest giants, and setting fire to it, keeping the fire burning for days, until either the base of the tree is charred throughout so that it falls straight away; or the tree dies as it stands, to fall, be burnt, and manure the ground with its potash a season or two later.⁸⁴

Concurrent to these accounts, however, was the view that forest clearances by Africans were tantamount to destruction of the forest resource. In 1893, while noting that the agrarian Meru people of central Kenya were “industrious cultivators”, Astor Chanler stated that “they are fast destroying the forest with which this range [the Nyambene Hills] was evidently formerly covered.”⁸⁵ By 1897 this narrative was taken up officially. Sir Arthur Hardinge, the Commissioner and Consul General of the British East Africa Protectorate, sought to limit forest destruction through the territory’s first piece of forestry legislation, the Provisional Wood and Forests Regulations (1st January, 1897). Under these rules, “any European, Asiatic, or African, not a native of the province, shall not be allowed to cut timber without a permit, and that any person to whom such a permit is granted shall be obliged to plant, in lieu of any tree cut down by him, ten other trees of the same description.”⁸⁶

⁸² Intelligence Division of the War Office, *1893 Handbook of British East Africa*, 33.

⁸³ Perham and Bull, *Diaries of Lord Lugard*, 1:316.

⁸⁴ Richard Crawshay, ‘Kikuyu: Notes on the Country, People, Fauna, and Flora’, *The Geographical Journal* 20, no. 1 (1 July 1902): 32, doi:10.2307/1775589.

⁸⁵ ‘Mr. Astor Chanler’s Expedition to East Africa’, *The Geographical Journal* 1, no. 6 (1 June 1893): 534, doi:10.2307/1773966.

⁸⁶ *Report - Africa. No. 7, 27–28, 30, 63; The Official Gazette of the East Africa and Uganda Protectorates*, vol. 1, 2 (Mombasa, 1899), 2. This legislation was limited to Ukamba Province, which in 1897 encompassed the majority of the central highlands, including Mount Kenya, of Kenya (and a larger area than the later Central Province). Africans considered ‘native’ to the province were excluded from this legislation, suggesting either an acceptance that Africans had a right to the forests in proximity to their settlements or, and more realistically, an acceptance of the impossibility of policing the forests when, in 1897, the Protectorate was administered by a total of 22 European officers, only six of whom were engaged in Ukamba Province, which itself was estimated to be home to some 2,500,982 Africans. It would have been comparatively easier to police the obviously much smaller and more recognisable European and Asian populations, although if Swahilis were included in this, being considered non-native to the province, the population would still amount to 88,070. Also employed in Ukamba Province were 144 soldiers of Punjabi or Sudanese origin, along with approximately 200 local native police under the command of two European officers. The role of these, however, was the defence of European stations against attacks of “hostile natives”.

This first extension of government control over the forests indicates there was sufficient concern within the nascent government over the level of forest exploitation that it was felt legislation was needed, despite much of the territory being still unexplored. Even at this early stage, it was recognised that a Forest Department would be created “when our revenue admits of it,”⁸⁷ indicating both the government’s wish to extend its control over the forests and the financial constraints it faced.

There was an intensification of the demonization of African agriculture in the early 1900s, which further became explicitly linked to agricultural decline and the negative effects on nascent industries.⁸⁸ In particular, Katherine and William Routledge’s ethnographic work on Kikuyu life condemned the indigenous method of shifting cultivation:

So the Akikúyu pushed on and on. Their progress was like that of the locusts - the ranks at the rear, finding food supply exhausted, taking wing over the backs of the main body to drop to ground in the forefront. And as locusts clear a sturdy crop, so have the Akikúyu cleared the forest. In the heart of Kikúyu, except for a sacred grove here and there, scarcely a tree remains.⁸⁹

They reinforced their argument by employing photographs that allegedly showed the effects of deforestation and the perceived wastefulness of Kikuyu forest clearing (figure 1-1). For the Routledges, this “locust” had to be stopped, “not only in order to retain a heritage of such great beauty, but in the interests of timber supply, and, above all, of the rainfall of the country.”⁹⁰ Acknowledgement of the hydraulic repercussions of deforestation represent here a convergence of unofficial and official attitudes. By drawing attention to the effects of forests on water supplies, the Routledges were echoing sentiment that had, by this time, become ingrained in forestry literature.⁹¹ Sir David Hutchins, the Chief Conservator of Forests between 1907 and 1911 agreed with regard to Kenia Province when he stated that:⁹²

⁸⁷ *Report - Africa. No. 7*, 63.

⁸⁸ Damage to the rubber industry, a major component of the nascent colonial economy was particularly highlighted. Writing to the Royal African Society, one commentator considered the terrible effects that African collectors had on rubber vines: “One of the main assets of this coast country was Rubber, in the vine form most favoured by manufacturers; but it is deplorable to see how the natives have been allowed to practically denude the forests along the coast; in all directions you see the vines hanging, having been cropped off close to the roots.” Joseph Foulkes, ‘Suggestions for Profitable Enterprise in British East Africa’, *Journal of the Royal African Society* 4, no. 16 (1 July 1905): 436, doi:10.2307/714719.

⁸⁹ W. Scoresby Routledge and Routledge, Katherine, *With a Prehistoric People, The Akikuyu of British East Africa. Being an Account of the Method and Life and Mode of Thought Found Existent Amongst a Nation on Its First Contact with European Civilisation* (London: Edward Arnold, 1910), 6.

⁹⁰ *Ibid.*, 7. The Routledge’s *With a Prehistoric People* contains few photographs. It is notable that they therefore decided to employ photographs as evidence in the argument about Kikuyu forest destruction. Clearly this was an issue they felt strongly about.

⁹¹ For an outline of the development of this view within forestry see Brett Bennett and Fred Kruger, *Forestry and Water Conservation in South Africa: History, Science and Policy* (ANU Press, 2015), 149. Interestingly, Hutchins did not cite contemporary research conducted on the links between forests and climate in South Africa. Possibly this was because this research began a process of debate within South Africa about the possible *negative* effect of forests on water supplies; clearly, Hutchins would have wanted to distance himself from even the vaguest stirrings of such a debate at a time when he was pushing for plantation establishment in the East Africa Protectorate. *Ibid.*, 149–53.

⁹² After 1918 Kenia Province was known as Kenya Province, after 1924 Kikuyu Province, and after 1933 Central Province. For an explanation of the Forest Department’s organisation see Appendices.

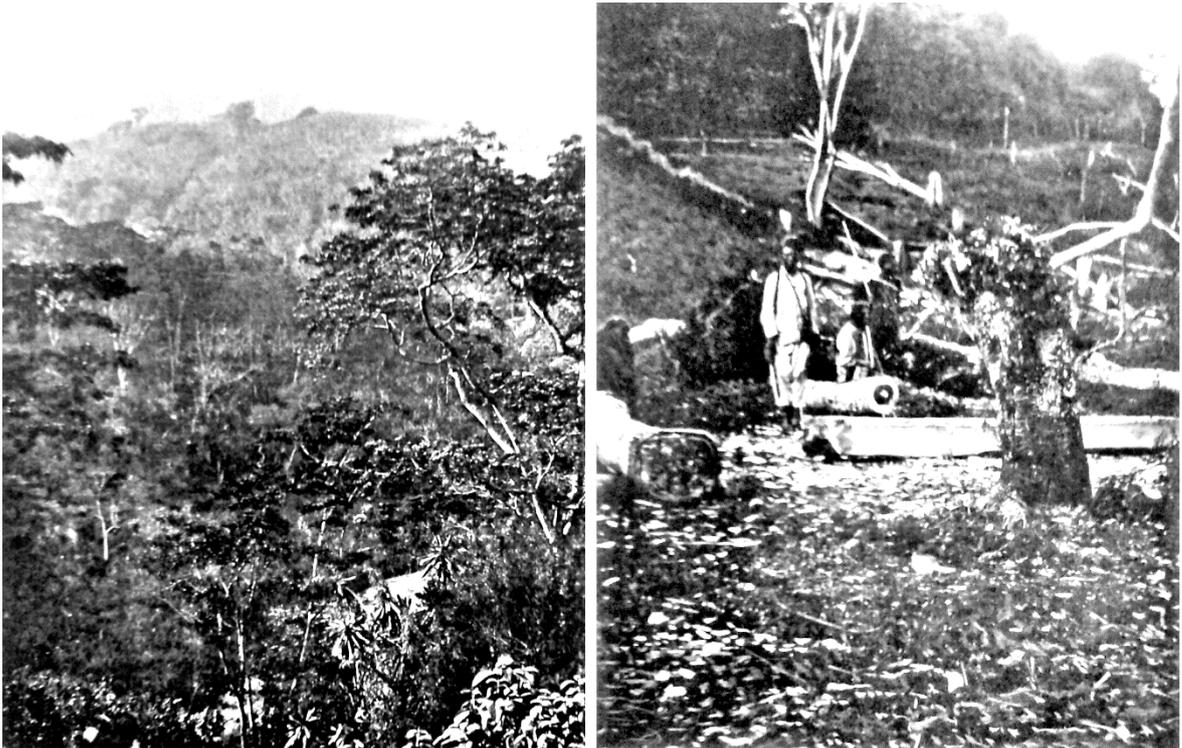


Figure 1-1. The Gorge of the Cha'-ni-a river near Nyeri. The left-hand image was taken by the Routledges in 1904 and the right hand in 1907. Accompanying the right-hand image is the caption: "The squared log shown was the only piece of timber used for any useful purpose. All other was burnt as it lay on the ground."

Source: W. Scoresby Routledge and Routledge, Katherine, *With a Prehistoric People, The Akikuyu of British East Africa. Being an Account of the Method and Life and Mode of Thought Found Existent Amongst a Nation on Its First Contact with European Civilisation* (London: Edward Arnold, 1910), 8a-8b.

...the whole country would become bare rock if forest destruction [on Mount Kenya] were permitted to continue unchecked. ... The perennial character of the streams which represents their value for irrigation purposes, would certainly be lost if the forest were destroyed.⁹³

Hutchins was referring to the 'indirect utility' of forests. Direct utility was the forest's ability to provide timber, firewood, and, to a lesser extent, bark, leaves, flowers, fruits, seeds, fibres, and the products of bee keeping. Indirect utility referred to the relationship between forests and rainfall, climate, and soil. While the direct utility of a forest was obvious and beyond question, foresters had to defend the extent or even existence of indirect utility. In his *Manual of Forestry*, the Oxford professor of forestry and extremely influential empire forester Wilhelm Schlich was adamant that,

The effects of these agencies [climate, soil, water] have been observed and recorded from ancient times down to the present, and hundreds of pages could be filled with the record of instances in which forest vegetation has affected, or has been believed to have affected, the climate, the rainfall, the regulation of moisture, the stability of soil, the healthiness of countries and allied matters; if quantity of evidence alone were wanted, the case might be considered as 'proven.'⁹⁴

⁹³ D.E. Hutchins, *Colonial Reports--Miscellaneous. No. 41. East Africa Protectorate. Report of the Forests of Kenia; by Mr D. E. Hutchins*, Parliamentary Papers: Command Papers, Cd. 3561, LIV.415 (His Majesty's Stationary Office, 1907), 30.

⁹⁴ W Schlich, *Manual of Forestry. Volume 1. Forest Policy in the British Empire*, 3rd ed. (London: Bradbury, Agnew, & Co. Ltd., 1906), 25. Schlich was one of the fathers of forestry in the British Empire, having held the position of inspector-general of forests in India in the 1880s and subsequently organizing Britain's first forestry training schemes at Coopers Hill and then at Oxford University. His influence on forestry education was immense, and undoubtedly all students who passed through Coopers Hill and Oxford were well aware of his *Manual of Forestry*. For an overview on Schlich see Robert Scott Troup and Andrew Grout, 'Schlich, Sir William Philipp Daniel (1840–

Hutchins's 1907 report on the forests of Mount Kenya used and cited the arguments of Schlich as well as prominent scientist and conservationist George Perkin's Marsh in its arguments for the government reservation of forest.⁹⁵ This added considerable credence to a report that was presented to the Colonial Office and House of Commons, an audience that may have been aware of the work of Marsh and Schlich but unlikely to have read them.⁹⁶ In this way, the Forest Department's arguments for forest reservation were bolstered.⁹⁷

The Forest Department was also in agreement with the Routledges that Africans represented a very real threat to the forests of the Protectorate. For example, Hutchins' 1907 report on Mount Kenya makes repeated references to the forests of the mountain being "destroyed" by Kikuyu farmers.⁹⁸ Similarly, the lavishly printed 1908 *East Africa (British), Its History, People, Commerce, Industries, and Resources*, essentially a publication designed to promote investment and settlement in the new protectorate, featured an article by the Acting Conservator of Forests Edward Battiscombe that discussed the highland ecological zone in which he stated: "Formerly the forests of this zone must have covered very large areas, but owing to the continual encroachment of the Wakikuyu cultivators and annual grass fires, it has now been reduced ... to small patches of forest and isolated trees."⁹⁹ Surviving forestry literature is almost entirely focused on Kikuyu cultivators, no doubt because they lived among the potentially profitable and accessible Mount Kenya and Aberdare forests. Recalling his time in Kenya in the early 1920s, Assistant Conservator of Forests Richard St

1925)', *The Oxford Dictionary of National Biography*, 23 September 2004, <http://www.oxforddnb.com/view/article/35970>.

⁹⁵ Hutchins, *1907 Report of the Forests of Kenia*, 31. Hutchins also supports his argument by saying it is in agreement with the opinions of S.L. Hinde, Sub-Commissioner for Kenia Province, and H.B. Muff, a geologist from the Geological Survey of the United Kingdom who was employed to find water sources for the Uganda Railway and report on the geology of the Protectorate. Hutchins cites the work of Schlich and Marsh but does not provide supporting page numbers or quote from the works.

⁹⁶ In particular, Hutchins refers to Marsh's 1864 *Man and Nature; Or, Physical Geography as Modified by Human Action*. Marsh, who is described by eminent environmental historian William Cronon as launching the modern conservation movement, was and is extremely widely read and cited on the topic of anthropogenic degradation of landscapes (William Cronon, 'Foreword: A Classic of Conservation' in George Perkins Marsh, *Man and Nature* (University of Washington Press, 1965), ix.). However, a close reading of *Man and Nature* reveals that Marsh was far from providing any definitive statement on the positive relationship between forests and rainfall. Indeed, Marsh presents his discussion with numerous qualifications and it is clear his aim was to collate, present, and draw tentative conclusions on the research of numerous continental scientists researching temperate, not tropical, forests. Schlich also prefaces his discussion of the topic with a warning that research to that date was mainly focused on continental Europe and may not necessarily be applicable to the tropical setting. Nevertheless, Hutchins utilised the fame and respect of these notable experts in their field to bolster his argument for the reservation of forest and even warned that without reservation the Protectorate would face an environmental and then agricultural disaster as its land turned to desert without the protection of forest. See George P. Marsh, *Man and Nature; Or, Physical Geography as Modified by Human Action* (London: Sampson Low, 1864), 182, 194; Schlich, *Manual of Forestry (Vol. 1)*, 32. For discussion of the influence of Marsh on forestry in South Africa and the United States, see Bennett and Kruger, *Forestry and Water Conservation in South Africa*, 2015, 150–52.

⁹⁷ These claims on the links between forests, precipitation, and soil conservation in Kenya appear to have been effectively unchallenged until the early 1950s, when conflict would erupt between the Forest Department and some European settlers (particularly those with cattle estates) over the scientific basis of the department's claim that forest was the best preserver of the soil. See Chapter 3, section 3.1.3.

⁹⁸ Hutchins, *1907 Report of the Forests of Kenia*.

⁹⁹ E Battiscombe, 'Forests', in *East Africa (British). Its History, People, Commerce, Industries, and Resources*, by Somerset Playne, ed. F. Holderness Gale (London: The Foreign and Colonial Compiling and Publishing Co., 1908), 252.

Barbe Baker invoked the typical paternalistic colonial attitude by stating the Kikuyu were “childlike, simple and impetuous. Their immediate concern was to make farms. Little did they dream of the value of the timber that they were destroying.”¹⁰⁰ Observations from the 1890s of industrious farmers clearing away uneconomic forests were forgotten in the first two decades of the twentieth century, replaced by a tale of environmental destruction. Confronting a crowd of several hundred Kikuyu in the early 1920s, St Barbe Baker declared: “A reproach hangs over your heads. The Masai are calling you ‘Forest Destroyers.’ I agree with the Masai - you are ‘Forest Destroyers.’”¹⁰¹

1.2.2 Forest Destroyers?

Considering the large body of evidence produced by official and unofficial colonial agents and the role this played in the justification for forestry, the issue of whether Africans and specifically the Protectorate’s largest ethnic group, the Kikuyu, were ‘forest destroyers’ is worthy of investigation. Furthermore, it is a narrative repeated without critical investigation by Ofcanky’s article on forestry

¹⁰⁰ Richard St. Barbe Baker, *Men of the Trees: In the Mahogany Forests of Kenya and Nigeria*. (London: George Allen and Unwin Ltd., 1932), 21. Baker formed close bonds with several Kikuyu clans and elders, and celebrated the life of a Kikuyu chief in his fiction *Kabongo: The Story of a Kikuyu Chief* (Oxford: George Ronald, 1955). He further claims that his departure from Kenya was a result of his defending one of his Kikuyu workers from physical attack by a superior officer, although no corroborating evidence exists of this; see Richard St. Barbe Baker, *My Life My Trees*, 2nd ed. (Forres, Scotland: Findhorn Publications, 1985). Notably, implicit in such accusations that Africans, and most specifically Kikuyu, were wreaking havoc upon the forests of the Protectorate was the mistaken belief in a balance of nature. That is, the idea that there is a natural balance in ecosystems and that pre-colonial Africans were in tune with this balance; essentially that they lived in harmony with nature. By the early twentieth century, the narratives produced by the Forest Department and settlers and visitors to the Protectorate implicitly suggest that this balance had been lost by the arrival of the modern world into the country, and that, moreover, this balance could only be restored by careful, scientific, and paternalistic management of the country’s peoples and land. Lord Cranworth, a prominent settler to Kenya who had a vested interest in stopping African forest use as he believed the forest should be exploited by white settlers, wrote on this unbalance explicitly by stating how the forest had previously provided Kikuyu with refuge from Masai attack and with Masai “departure the value of the forest ceased to the Kikuyu and the balance of nature was destroyed. Almost at once he began to attack his old defenders, and down came the trees to make room for his crops, his herds, and his rapidly-growing family.” ((Lord) Cranworth, *Profit and Sport in British East Africa. Being a Second Edition, Revised and Enlarged, of ‘A Colony in the Making’* (London: Macmillan and Co., Limited, 1919), 208–9.). For general discussion on the balance of nature concept and its rejection by current ecological thinking, see Dennis E. Jelinski, ‘There Is No Mother Nature—There Is No Balance of Nature: Culture, Ecology and Conservation’, *Human Ecology* 33, no. 2 (1 April 2005): 271–88, doi:10.1007/s10745-005-2435-7; Frank Egerton N., ‘Changing Concepts of the Balance of Nature’, *The Quarterly Review of Biology* 48, no. 2 (June 1973): 322–50; Richard J. Ladle and Lindsey Gillson, ‘The (Im)balance of Nature: A Public Perception Time-Lag?’, *Public Understanding of Science* 18, no. 2 (1 March 2009): 229–42, doi:10.1177/0963662507082893. Historical works can still be built upon the erroneous balance of nature concept, for example Thomas P. Ofcansky, *Paradise Lost: A History of Game Preservation in East Africa* (West Virginia University Press, 2002).

¹⁰¹ Baker, *Men of the Trees*, 30. Baker’s book alleges that this crowd was composed of “thousands” of Kikuyu “warriors” who had come to attend a dance he had organized in the spirit of forest conservation. After a long speech in which he lambasted Kikuyu land management and extolled on the need to protect the forest he called for volunteers to join the *Watu wa Miti* (the ‘Men of the Trees’). 500 volunteers apparently stepped forward to join this organisation which was to plant and protect trees, from which he picked 50. See *Ibid.*, 30–35. The Men of the Trees was and is a real organisation, now known as the International Tree Foundation (see <http://internationaltreefoundation.org/>), however, I can find no official colonial documents that confirm its creation by Baker in Kenya at this time (Baker does not give a precise date); no official documents discuss it. The alleged incident is however very revealing of the attitudes of Baker.

in Kenya that has thus far served as the definitive account of colonial forestry in the country.¹⁰² As the following will show, the events specific to Kenya that inspired this myth of forest degradation are far more complex than a simple case of an expanding population relentlessly destroying the forest.¹⁰³

Defining the extent of the forest clearance that was allegedly underway is problematic. The Forest Department itself attempted no such investigation, and when the Kenya Land Commission of 1932 made enquiries into the issue it received no clear answers. A.G. Baker, who was forest surveyor for the department in 1907, provided a calculation based on the statement of a single “old Kikuyu” that 500 square miles of forest had been cleared by Kikuyu cultivators in the 50 years prior to 1932.¹⁰⁴ While not specifically referring to forest clearance, H.M. Gardner, the Conservator of Forests between 1928 and 1945, estimated that some 40 square miles of “forest land” were occupied by Africans in Kiambu and Fort Hall Districts by 1933 which were not occupied at the time of the Forest Department’s inception in 1902.¹⁰⁵ The issue is further complicated by ambiguity on the part of the department on what precisely constituted a forest. In evidence to the Land Commission, Battiscombe stated that the term used by Gardner, “forest land”, referred specifically to “land dedicated for the production of trees and other products... by man” while “forest” would be defined “as land covered in tree growth and scrub.”¹⁰⁶ The fact that Battiscombe himself confused the two terms in his testimony before providing his definitions suggests that the precise type of land Gardner, or indeed other forestry officers, referred to is unclear. Further ambiguity is generated by the absence of any definition of “scrub” when that term was used in discussions of vegetative cover. The existence of such confusion within the Forest Department itself, coupled with the absence of land clearance surveys, forces the accounts of forestry officers into the anecdotal and suggests that no definitive statement on the extent of ‘forest’ clearance can be made.

If the term ‘scrub’ is linked to the equally nebulous and common term ‘bush’, there exists evidence that far from encroaching onto virgin, primeval forest, Africans in the central region were at least in part reclaiming agricultural land that they had lost during a period of extreme population decline. Waweru wa Karioki, a Local Native Council member in Kiambu, stated that “In the time of

¹⁰² Thomas P. Ofcansky, ‘Kenya Forestry under British Colonial Administration, 1895-1963’, *Journal of Forest History* 28, no. 3 (1 July 1984): 137, doi:10.2307/4004697.

¹⁰³ It is worth underlining that such narratives, especially where they concerned the threat of desertification, were common in Africa whenever Europeans encountered what they perceived to be deforestation. The commonality of these narratives indicates a widespread inherent belief in their truth that created an atmosphere whereby the narrative specific to Kenya could be more readily accepted. For comprehensive accounts of how such narratives in West Africa informed inappropriate environmental policy in the twentieth century, see Fairhead and Leach, *Misreading the African Landscape*; Fairhead and Leach, *Reframing Deforestation*. For specific cases of the degradation myth in East Africa see James C. McCann, ‘The Plow and the Forest: Narratives of Deforestation in Ethiopia, 1840-1992’, *Environmental History* 2, no. 2 (1 April 1997): 138–59, doi:10.2307/3985505; Grace Carswell, ‘Continuities in Environmental Narratives: The Case of Kabale, Uganda, 1930–2000’, *Environment and History* 9, no. 1 (2003): 3–29.

¹⁰⁴ A.G. Baker, in *Kenya Land Commission Evidence and Memoranda*, vol. 1 (London: HM Stationary Office, 1934), 454.

¹⁰⁵ H.M. Gardner in *ibid.*, 1:930.

¹⁰⁶ E. Battiscombe in *ibid.*, 1:412.

Mr Hobley and Mr Hope we had a big famine and many thousands of people perished and as a result of the death of many people, the bush encroached upon our cultivated land.”¹⁰⁷ The period referred to is the early 1890s when Hobley passed through the area, reporting that Masai raids on Kikuyu were increasing owing to the “anthrax scourge” (rinderpest) killing Masai cattle and so pushing them to raid Kikuyu cattle.¹⁰⁸ The famine that Kariuki mentions began in earnest in 1892, after a period of drought. Concurrently, rinderpest swept through the cattle populations of the central region with devastating effect. The raids that Hobley wrote about were accompanied by large scale movements of impoverished Masai, to whom smallpox was endemic. As the Masai sought refuge among Kikuyu clans, smallpox was able to reach epidemic proportions among the comparatively densely populated agrarian regions of the southern highlands. These catastrophes were followed in 1894 by a locust plague that destroyed large portions of Kikuyu crops and Masai grazing land alike, causing further population movements and deaths. In 1896 bronchitis spread through the Kikuyu peoples, causing high mortality compounded by the concurrent spread of the debilitating parasitic chigoe flea (jiggers). Further drought between 1897 and 1900 combined with outbreaks of rinderpest, bovine pleuropneumonia, locust swarms, and an additional outbreak of smallpox to create extreme famine conditions. The total number of deaths during this exceptionally severe decade is extremely difficult to calculate, with no official records and numerous seemingly exaggerated accounts. However, Dawson has estimated that between one tenth and one half of the total African population of Kenya’s central highlands died during the decade, with the Kikuyu, Kamba, and Masai most severely affected.¹⁰⁹ Dawson further argues that population recovery among these groups did not commence until the 1920s, with rapid increases only coming in the 1930s.¹¹⁰

The socio-economic ramifications of the 1890s were immense for those living in the central region. Describing the people he encountered in Ngong Road Forest shortly after joining the Forest Department in the early 1900s, Battiscombe remarked, “they were a hybrid mixture of Masai and Kikuyu, the result of the old famine days when the Masai women went up to the Kikuyu country.”¹¹¹ Battiscombe did not realise the import of his observation. The movement and integration of Masai women into Kikuyu clans was the last resort of the Masai. With their cattle gone or dying, women were effectively traded for survival. John Ainsworth described the process as he saw it in the 1890s:

Many of women and children and some of the old people belonging to the [Masai] clans near the Kikuyu country had, when semi-starvation came at the time of the Rinderpest, gone into the

¹⁰⁷ Waweru wa Kariuki of Kiambu, 14 November 1932 in *ibid.*, 1:137.

¹⁰⁸ Hobley, ‘People, Places, and Prospects in British East Africa’, 113–14. Hobley began his expedition in 1891 but does not state when he passed through central Kenya.

¹⁰⁹ Marc Dawson, ‘Disease and Population Decline of the Kikuyu of Kenya, 1890-1925’, vol. 2 (*African Historical Demography*, Centre of African Studies, University of Edinburgh: African Studies Centre, University of Edinburgh, 1981), 126–29.

¹¹⁰ *Ibid.*, 135.

¹¹¹ E.B. Battiscombe in *Evidence and Memoranda*, 1:412.

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Kikuyu villages for food, some to trade hides and skins, and others to beg or to steal. Many hundreds of these remained in Kikuyu for some time.¹¹²

The beneficiaries of this immigration were the wealthiest of the Kikuyu, those who had enough land, livestock, and labour in the form of the extended clan to enable them not only to survive the trials of the 1890s but to profit from them. While Masai did what was necessary to maintain their independence, the poorest Kikuyu and Kamba became increasingly dependent on the same increasingly powerful elites, often giving up their land and labour in return for sustenance through the lean years.¹¹³ The increase in the number of trade caravans travelling through the central region as a result of the expansion of the British East Africa Company and the subsequent creation of the East Africa Protectorate exacerbated this situation. The expansion of the caravan trade during the 1890s occurred to such an extent that Mackenzie argues it can be said to have caused the increasing commoditisation of African production. She further argues that there were two effects: an outflow of food at the precise time when that food was most needed in the famine-stricken areas of Kenya, and an increase in the wealth of those elites who dominated this trade which allowed them to consolidate and expand their holdings of livestock, land, and labour.¹¹⁴

The disasters of the 1890s and the resultant population crash began the realignment of African communities toward the newly emerging colonial economy. This was a process that favoured those who were able to exploit it; that is, those individuals and clans who would become the new elite of chiefs and headman. The changes had significant effects on the forests of the central region. As Kariuki stated, population decline meant large areas of cultivated land were abandoned, allowing secondary forest, 'scrub' or 'bush', to take their place. Importantly, such secondary forest was classified by the Forest Department in the same way as primary forest, that is, under the general term 'forest'.

Concurrently, the more dependable rainfall of the forests meant that famine conditions pushed people into those forests as a survival strategy.¹¹⁵ The movement of people into the forests in the wake of the 1890s famines is shown in a 1908 Forest Department report on the approximate 20 km stretch of forest between Limuru and Kijabe, 25 km northwest of Nairobi, which stated, "natives came into this region after the famine of 1898."¹¹⁶ After the alienation of land to settlers in the early

¹¹² John Ainsworth, 'East Africa "Kenya" Reminiscences, Files of Colonel John Ainsworth, CMG, CBE, DSO, FRGS' n.d., 18, MSS.Afr.s.380, Oxford Bodleian Library.

¹¹³ Charles H. Ambler, *Kenyan Communities in the Age of Imperialism: The Central Region in the Late Nineteenth Century* (New Haven, 1988), 150–52; Mackenzie, *Land, Ecology and Resistance*, 58.

¹¹⁴ Mackenzie, *Land, Ecology and Resistance*, 22, 58.

¹¹⁵ The effectiveness of this strategy and the fertility of forest soils was later shown when the Forest Department began to engage squatters who lived in the forests to tend its tree plantations. During a famine of the 1930s the department made the assessment that, "Normally, on the fresh forest soil they obtain better crops than they would elsewhere and though during the year locust damage was serious in many districts, the squatters were certainly as well or better off than they would have been anywhere else." Kenya Forest Department, *Annual Report of the Forest Department, 1932* (Nairobi Government Printer, 1932), 20.

¹¹⁶ C.W. Hobley & D.E. Hutchins, quoted by H.M. Gardner in *Evidence and Memoranda*, 1:931.

1900s, this trend intensified as “the occupation of these [settler] farms has automatically pushed the natives westward into the forest.”¹¹⁷

Expansion into ‘forests’, at least part of which were in reality cultivated land that had turned to secondary forest, and the clearing of trees by Africans in the central region of Kenya in the early decades of the twentieth century was therefore not a consequence of population expansion but rather population decline. The disasters of the 1890s and early 1900s dramatically reduced the population of the highlands of Kenya and eroded survival capacities. Families and entire clans fled from their drought-stricken farms and congregated in areas where food was still being cultivated, selling their labour and land to survive, or establishing new farms inside the protective confines of the forests.¹¹⁸ The reorientation and growth of the elites of this region toward increased caravan trade and the nascent colonial economy allowed their further dominance over land, a factor exacerbated after European settlers began claiming land for themselves in the highlands. This land grabbing by elites, both African and European, pushed those without land to seek it inside forests or try to reclaim the farms they had fled from at the height of the crises in the 1890s. When the Forest Department began evicting Africans from their *shambas* in 1904, this attempt to reclaim land was recounted by John Ainsworth, Acting Deputy Commissioner:

The natives themselves state to Mr. Hope that they are simply reoccupying land formerly used by them as *shambas*, if their contention is correct I must submit that the natives in question have a right to occupy the land...¹¹⁹

Forest clearance by Africans in the first decades of the twentieth century was not caused by population expansion and the disastrous use of shifting cultivation. Rather, what was occurring was a convergence of local environmental factors – droughts and locust – with socio-economic and environmental changes that came with colonialism – the arrival and proliferation of diseases, the alienation of land to settlers, and the realignment of elite African agriculture to meet colonial needs and the subsequent increase in elite power because of this. Kikuyu were not forest destroyers but were certainly forest users. If scientific forestry was needed in the nascent East Africa Protectorate it was not because of the escalation of ‘destructive’ African farming methods, as colonial accounts maintain, but because of the arrival of colonialism itself.

1.3 Establishing Forestry

Ofcansky has argued that the creation of the Forest Department in the East Africa Protectorate in 1902 was a natural evolution from the 1897 Ukamba woods legislation.¹²⁰ Such a statement

¹¹⁷ Ibid.

¹¹⁸ This is an argument supported by Peter Castro in reference to southern Mount Kenya. Specifically, he argues that punitive expeditions and the collapse of the caravan trade caused depopulation and the advancement of forest which then gave the impression of forest destruction when that land was repopulated. Castro, *Facing Kirinyaga*, 48.

¹¹⁹ John Ainsworth, Acting Deputy Commissioner, to C.F. Elliot, Conservator of Forests, 18 November 1904, DC/MKS.10a/3/1, Kenya National Archives (hereafter, KNA).

¹²⁰ Ofcansky, ‘Kenya Forestry under British Colonial Administration, 1895-1963’, 1 July 1984, 138.

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disguises the considerably more troubled and complex rationale for the department's creation. The view of relentlessly destructive Africans was coupled with the economic importance of the forests in the reasoning behind establishing forestry in Kenya, while the department's policies were influenced by the political and economic climate of the Protectorate.

Sir Charles Eliot, Commissioner for the East Africa Protectorate, stated in 1902 that the Forest Department was created because of "the value of the East African forests and the obvious danger to which they are subjected from fires started by natives and reckless destruction for obtaining fuel...."¹²¹ However, while Eliot argued for the necessity in creating a forest department to prevent large-scale deforestation, he further believed that the goal "to insure an adequate fuel supply for the railway" was equally important, and that where forest reserves were established "they should interfere with colonisation as little as possible."¹²² Eliot conceived the value of the forests in terms of their usefulness to the colony, supplying the railway with fuel and supporting colonisation. The 1905 *Handbook for East Africa, Uganda and Zanzibar* displayed a similar view, considering forestry only in terms of the export of coast mangrove timber, an already established trade, and that rather than developing a large timber export sector, as in India, the future of the East African economy rested with agriculture and industry.¹²³

The Protectorate's first governor, Sir James Hayes Sadler, saw the role of the forests as supporting agricultural development stating that, "the Forests play a very important part in the economic conditions of the country by maintaining the regular supply of water to the rivers."¹²⁴ Under Sadler's successor, Sir Percy Girouard, this view intensified to one in which the *only* role of the forests was to support agriculture. A firm believer in establishing the Protectorate as a white colony, Girouard was intent on abolishing what he saw as "a very much overloaded and expensive [Forest] Department", although was stopped from doing so by the Earl of Crewe, Secretary of State for the Colonies.¹²⁵ For Girouard, the utility of forestry lay in its ability to aid European settler agriculture, both in terms of protecting water supplies but also providing a cheap timber resource to settlers. This opinion was not novel or confined to official circles. In a 1903 Royal Geographical Society debate on the subject of colonisation, Richard Crawshay, who had resided in Kikuyu country for three years, gave his opinion that the abundance of timber there was one of the three great advantages that the territory had over South Africa for European settlement.¹²⁶ The paramountcy

¹²¹ 'Report by His Majesty's Commissioner on the East Africa Protectorate. No. 6 (Africa: East Africa)', 1903, 25.

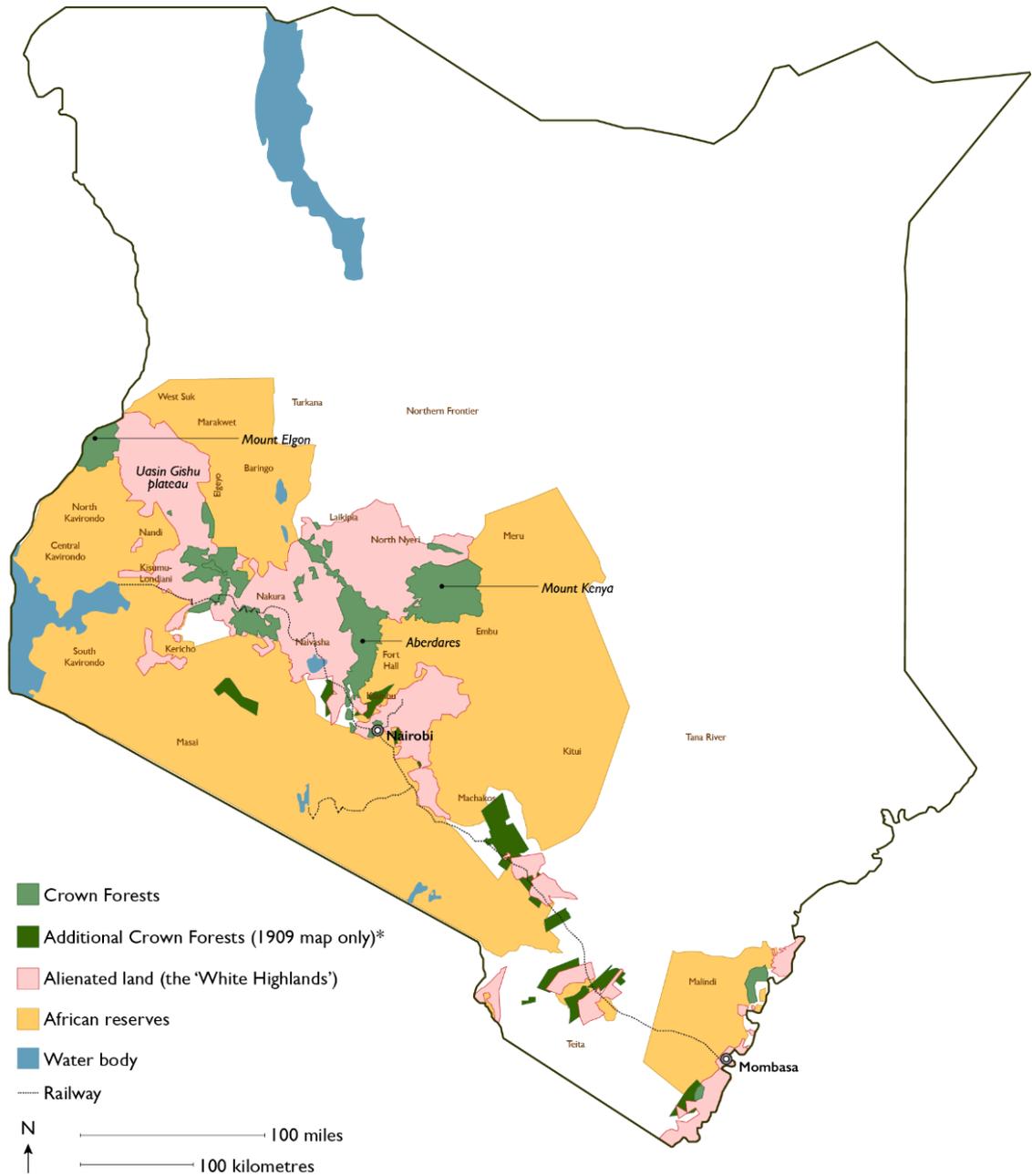
¹²² Charles Eliot, *The East Africa Protectorate* (London: Edward Arnold, 1905), 176.

¹²³ *Handbook for East Africa, Uganda & Zanzibar* (Mombasa: Gov't. Printing Press, 1905), 43–44.

¹²⁴ *Handbook for East Africa, Uganda and Zanzibar, 1907* (Mombasa: Gov't. Printing Press, 1907), 96–97.

¹²⁵ E.P.C. Girouard, 'Interim Report on British East Africa, Enclosure 1' 4 December 1909, 11, No. 3 in Administration of the East African Protectorate; correspondence CO 879/105/2, The National Archives of the UK (hereafter, TNA). For an overview of the governors of Kenya and their disparate views on how the colony and Protectorate was to be governed, see George Bennett, *Kenya, a Political History: The Colonial Period*, vol. 1 (London: Oxford University Press, 1963).

¹²⁶ Francis O'Callaghan et al., 'Colonization and Irrigation in the East Africa Protectorate: Discussion', *The Geographical Journal* 21, no. 4 (1 April 1903). In fact, Crawshay listed timber as the first great advantage, followed by an ample water supply and availability of a large labour force in the form of the Kikuyu peoples.



* 1909 Crown Forests appear on Hutchin's 1909 map of forest reserves and no other map before or after 1909. These are likely inaccurate representations of railway forests that were sold off before the 1920s.

Figure 1-2. Crown Forest, c.1924-1925. Sources: Hutchins, *1909 Report on the Forests of British East Africa*; L. Carpenter (Statistical Officer, Department of Agriculture), 'The Colony and Protectorate of Kenya' (London: Stanford's Geographical Establishment, 1925), Map.1.8.46, NLS.

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of European interests meant that the Forest Department, according to Girouard, should confine its activities to preservation. Furious at the department's growth, he confidentially stated in 1909:

Instead of a policy of holding on to what we have, there is substituted one of most elaborate survey, *afforestation*, nurseries of fifty or sixty acres, and an equipment and staff which no pioneer country could possibly maintain if it was governing itself. ... and in this view I have the support not only of the Executive, but of everyone of importance, official or unofficial, I have consulted up to now.¹²⁷

Such a statement speaks of a deep rift in knowledge between foresters, administrators, and if Girouard was correct, the unofficial community of the Protectorate. Kenya's Forest Department followed the approach as set by Schlich: it had the objectives of sustainable utilisation of forest products and, in some cases, protection of forests for climatic reasons.¹²⁸ But for Girouard, who could not "pretend to be a forest expert", forestry should have started and ended with the protection of the existing forests of Kenya and certainly should not have sought to expand those forests or create new ones and so take away potential agricultural land.¹²⁹ Forestry was seen as a means of supporting the specific colonial project of white settlement and maintaining the vital communication artery of the railway.

1.3.1 The Railway

The Uganda railway was at the heart of Britain's colonial project in East Africa. Winding its way from coastal Mombasa to the shores of Lake Victoria, and eventually on into Uganda, the initial purpose of this costly endeavour was to access the supposed riches of Uganda but it rapidly became the means by which the colonial economy and security of the East Africa Protectorate was maintained. The central highlands of Kenya were identified by explorers and administrators as ideal for white settlement and agriculture.¹³⁰ The location of these highlands, 400 km from the

¹²⁷ Girouard, 'Interim Report on British East Africa, Enclosure 1', 11. (Emphasis original).

¹²⁸ Schlich, *Manual of Forestry (Vol. 1)*, 1–25. Kenya's Forest Department lacked a published and official forest policy that would clearly extol these two objectives until the 1950s. However, its reports implicitly show these two aims. Contemporary to Girouard's statement, for example, the 1909-10 Forest Department Annual Report clearly shows that the department sought to manage and improve forests through selection felling (for timber), natural regeneration, and the possible introduction of exotic timber species. In this way, the aim was sustainable exploitation of the forests in such a way that it did not compromise their role protecting water catchment areas. Kenya Forest Department, *Annual Report of the Forest Department, 1909-10* (Nairobi Government Printer, 1910).

¹²⁹ Girouard, 'Interim Report on British East Africa, Enclosure 1', 11.

¹³⁰ In contrast to West Africa, where the prevalence of disease amid a tropical climate made large-scale white settlement an impossibility, a classification shared by the tropical coastal belt of Kenya, the central highlands were seen as an ideal white man's country where agriculture could be established to meet the costs of colonialism in Kenya. A typically optimistic account of Kenya's highlands, for example, stated: "It is indeed a beautiful country, with a climate as healthy and pleasant as any man's heart can desire. It is primaevial forest highlands lying at altitudes varying between 4500 feet and ... 18,600 feet. As far as my experience goes, no malaria is present above 7000 feet. There are everywhere plenty of clear, cold perennial streams, also two rainy seasons, therefore, no need of that irrigation which would be necessary to develop the Ikamba plains. Anything will grow - except such fruits and vegetables as thrive only in the extreme heat of the low enervating coast." (O'Callaghan et al., 'Colonization and Irrigation in the East Africa Protectorate')

coast, coupled with the importance of developing the colonial economy in Uganda, made the railway essential to colonial development; it was the only means of accessing this region.

Keeping the railway running was therefore of considerable importance to the success of the Protectorate. In 1901 the railway spent more on fuel than it did running its entire Locomotion and Carriage Department in 1905-06. This excessive cost, Rs. 849,962, resulted from the use of coal rather than wood and prompted new emphasis to be placed on woodfuel.¹³¹ Consequently, the cost of fuel for the railway in 1902-03 fell to Rs. 488,975, due to wood comprising the majority of the fuel consumed.¹³² If the railway was to be economically viable it was clear that it must rely on local woodfuel not imported coal. It is within this context that the Forest Department was begun in 1902. Indeed the official history of the department claims that it was the needs of the railway that led to the creation of the “first up-country forest reservation and to the first plantations of eucalypts for fuel.”¹³³ After touring East Africa in 1907, Under-Secretary of State for the Colonies Winston Churchill emphasised the importance of the railway and the place of forestry within this:

It is of vital importance that these forests should not be laid waste by reckless and improvident hands. It is not less important that the Uganda Railway should have cheap fuel. ... now that an elaborate Forestry Department has been established on the most scientific lines, there is a danger that forestry will be the only object, and the cost of fuel so raised by regulations, admirable in themselves, that the economy of the Uganda Railway may be impaired. And let us never forget that the Uganda Railway is the driving-wheel of the whole concern. What is needed here, as elsewhere, is a harmonious compromise between opposite and conflicting interests. That is all.¹³⁴

His message was clear: forestry should exist to serve the railway. Churchill's concerns were linked to fuel shortages that the railway had experienced since 1903. An attempt to forestall fuel shortage for this most vital transportation link was begun as early as 1897, when one mile either side of the growing railway was proclaimed a railway zone with the dual purpose of ensuring a steady fuel supply and providing a land asset for the railway which could be sold at a later date.¹³⁵ Despite these measures, the railway suffered woodfuel shortages that meant it routinely imported coal in the first decade of its operation.

In 1902-03 the railway consumed 34,469 tons of woodfuel, all extracted from the railway forest zone, but by 1904-05 this had fallen to 14,658 tons; indeed, woodfuel consumption would

¹³¹ C Sandiford, *East Africa Protectorate Administration Reports, 1905-06, Railway* (Uganda Railway Press, Nairobi, 1906), 38.

¹³² 'Africa. No. 12 (1903). Report by the Mombasa-Victoria (Uganda) Railway Committee on the Progress of the Works and Revenue Working, 1902-1903', [Cd. 1770], 1904, 11.

¹³³ J.P. Logie and W.G. Dyson, *Forestry in Kenya: A Historical Account of the Development of Forest Management in the Colony* (Nairobi: Colony and Protectorate of Kenya, 1962), 2. The precise meaning of the term “up-country” is unclear but most probably refers to forest reservation beyond the coast and its hinterlands.

¹³⁴ Winston Spencer Churchill, *My African Journey* (London: Hodder and Stoughton, 1908), 78-79.

¹³⁵ This proclamation instantly granted to the railway approximately 1,093 square miles of largely tree-less and “ownerless” land in a corridor stretching from the coast to Lake Victoria. This zone was further extended to cover two miles on either side of the track by The Ukamba Woods and Forests Regulations of 1901. While the initial proclamation of the railway zone had the purpose of fuel supply and asset, these regulations specifically refer to ensuring a stable fuel supply for the railway, effectively creating a railway forest reserve zone. 'Africa. No. 11 (1904). Final Report of the Uganda Railway Committee', 1904, 13-14, [Cd. 2164]; *The Ukamba Woods and Forests Regulations, No. 14 of 1901*, 1901.

only start to reach 1902 levels again after 1908.¹³⁶ The fall was an issue of supply rather than reduction in railway activity, with the fuel shortfall compensated by importing coal. This shortfall in woodfuel appears to have been caused by labour shortage. Woodfuel extraction was remarkably inefficient; without automation labour gangs of up to 900 people were required to work long, arduous hours of cutting before carrying their fuel potentially several miles to a collection point.¹³⁷ Concurrent to the fuel shortages were complaints from settlers regarding the difficulty in getting large numbers of African workers; it seems likely, therefore, that the nature of woodfuel extraction provided few incentives for Africans.¹³⁸

It was because of this situation that Churchill made his statement in 1908 on the importance of forestry not interfering with the running of the railway. Subsequently, in 1909, Hutchins published his report outlining the closer cooperation of the Forest Department and Uganda Railway. Prior to this cooperation, the Railway's fuel contractors had apparently felled indiscriminately. The Forest Department predicted this would result in the railway fuel zone being fully depleted by 1917. Several plantation sites with the express purpose of supplying the railway with fuel were subsequently created. The tree of choice for these sites was the eucalyptus, a darling of forestry whose fast growth and ecological adaptability made it the ideal choice for fuel supply.¹³⁹ Eucalyptus would go on to be a major plantation tree throughout the colonial period and beyond, marking this early need for a reliable railway fuel supply as a defining point in the development of forestry in Kenya.

1.3.2 German East Africa

Regional competition with Germany also influenced the formation of the Forest Department in Kenya, as it of course did with the overall development of British East Africa. This factor was also intrinsically linked with the importance of the railway, as securing the British East Africa Protectorate was part of the wider issue of power and security across eastern, central, and northern Africa. Sir Edward Grigg, the governor of Kenya Colony from 1925 to 1930, argued:

¹³⁶ 'Africa. No. 12 (1903). Report by the Mombasa-Victoria (Uganda) Railway Committee on the Progress of the Works and Revenue Working, 1902-1903'; 'Africa. No. 16 (1904). Report on the Construction and Working of the Mombasa-Victoria (Uganda) Railway and Steam Boat Service on Lake Victoria, 1903-1904.', [Cd. 2332], 1905; C Sandiford, *East Africa Protectorate Administration Reports, 1908-09, Railway* (Uganda Railway Press, Nairobi, 1909).

¹³⁷ Churchill, *My African Journey*, 75-77; D.E. Hutchins, *East Africa Protectorate. Report on the Forests of British East Africa by D. E. Hutchins. With a Map and 25 Photographs.*, Parliamentary Papers: Command Papers, Cd. 4723, LX.1, 1909, 47.

¹³⁸ Governor Sadler to the Secretary of State, 26 March 1908, No. 10 in *East Africa Protectorate. Correspondence Relating to Affairs in the East Africa Protectorate.*, Parliamentary Papers: Command Papers, Cd. 4122, LXXI.991, 1908, 6-23.

¹³⁹ Hutchins, *1909 Report on the Forests of British East Africa*, 48-50. Eucalyptus appears to have been chosen over the also fast-growing black wattle because it produced a higher yield of fuel per acre and because it could be coppiced and harvested for an estimated 75 years compared to 15 for wattle. For discussion of the spread of eucalypts across the world from their native Australia because they were embraced so fully by foresters for their ability to prosper in a wide range of environments, see Bennett, 'The El Dorado of Forestry'.

The Uganda Railway was built through that country [Kenya] without any thought of the Highlands, and simply as the easiest road to Uganda, where we went to secure our safe position in the Congo Basin, and to make safe for ever for the Sudan and Egypt the sources of the Nile.¹⁴⁰

With regards to forestry and scientific development, from its inception British East Africa lagged behind German East Africa. The situation existed across most areas of administrative and economic development. By 1904 there were 280 administrative personnel across all departments in German East Africa, compared to 135 in the British Protectorate.¹⁴¹ The result of greater German investment, both material and human, in its colony was that “Elaborate accounts have been published of the resources of German East Africa, of its fauna, flora, and mineralogy; no effort has been spared to cultivate the natural products of the country and to introduce whatever plants or animals seem likely to thrive.”¹⁴² In conducting such research, “they have created for themselves a commercial position in this part of the world which threatens to undermine our trade.”¹⁴³ Scientific research, specifically into the potential resources of a country, was linked directly with the ability to develop that country’s economy.

German East Africa also led in research and experimentation in rubber tree cultivation in eastern Africa, a situation which particularly caught the attention of administrators in British East Africa.¹⁴⁴ With the young British Protectorate struggling to identify a core export product, attention was turned to numerous candidates not the least of which was rubber. Forestry was identified as a way to establish British East African exports and compete with the apparently rapidly advancing German colony. A 1901 report, a year before the Forest Department was formed, thus urged:

The first necessity is to appoint a rudimentary Woods and Forests Department, which would examine the resources of the country and offer advice on such questions as the best means of preserving rubber and mangrove trees, and the probabilities of success in cultivating coffee, tea, tobacco, and vanilla.¹⁴⁵

Coffee, tea, tobacco, and vanilla would clearly fall outside of the remit of a forest department, yet the preservation of wild rubber and mangrove became a goal of the Forest Department. Although by the 1910s the department did little more than issue wild rubber tapping licences and the boom was very much over for the Protectorate by 1914, it initially was involved in the development of

¹⁴⁰ Sir Edward Grigg, quoted in M.F. Hill, *Permanent Way: The Story of the Kenya and Uganda Railway: Being the Official History of the Development of the Transport System in Kenya and Uganda*, vol. 1 (Nairobi: East African Railways and Harbours, 1949), 243–44.

¹⁴¹ A. H. M. Kirk-Greene, ‘The Thin White Line: The Size of the British Colonial Service in Africa’, *African Affairs* 79, no. 314 (1 January 1980): 37.

¹⁴² *Report by His Majesty’s Commissioner on the East Africa Protectorate. No. 9 (Africa: East Africa)*, Parliamentary Papers: Command Papers, Cd. 769, XLVIII.369, 1901, 7.

¹⁴³ *Ibid.* For discussion of forestry in German East Africa and the subsequent British territory of Tanganyika, see Hans G. Schabel, ‘Tanganyika Forestry under German Colonial Administration, 1891-1919’, *Forest & Conservation History* 34, no. 3 (1 July 1990): 130–41, doi:10.2307/3983902; Sunseri, *Wielding the Ax*; Thaddeus Sunseri, ‘“Every African a Nationalist”: Scientific Forestry and Forest Nationalism in Colonial Tanzania’, *Comparative Studies in Society and History* 49, no. 4 (1 October 2007): 883–913; Conte, *Highland Sanctuary*; Neumann, ‘Forest Rights, Privileges and Prohibitions’.

¹⁴⁴ J. Forbes Munro, ‘British Rubber Companies in East Africa before the First World War’, *The Journal of African History* 24, no. 3 (1 January 1983): 370.

¹⁴⁵ *East Africa Protectorate. No. 9*, 7–8.

this crop.¹⁴⁶ It is notable that of the Forest Department's skeleton staff of a single conservator and three European assistants in 1902 one of these was L.H. Seaford. An American with no education or experience in forestry, indeed most of his career had been spent in a dental company, what Seaford did possess was two years' experience in the rubber trade.¹⁴⁷ Experience in farming seems to have prompted the department to employ T.O. Morgan in 1907, who also had no forestry education. Morgan came to Kenya to farm before taking up a position planting rubber trees for the department.¹⁴⁸ Although no details of the recruitment processes for these officers exist, it seems probable that it was their experience outside forestry which made them suitable for employment, reinforcing the idea that the Forest Department was indeed conceived as a vital component of developing an economy that was being outpaced by its southern neighbour.

1.3.3 Forestry to what end?

It can be argued that a forest department was established in the East Africa Protectorate simply because forestry had become one of the many essential strings that now comprised the bow of British imperialism.¹⁴⁹ However, this argument obscures the nuances that shaped the precise establishment and operation of forestry in Kenya. Economic considerations clearly paid a significant role in supporting the case for Kenyan forestry, beginning in the 1890s with the potential that was perceived to exist within the forests of the territory, which drove the early legislative moves to protect the forests. The economic argument was given added urgency by the environmental argument: Africans were perceived (incorrectly) to be destroying the forest. Government control to 'save' the forests was thus cast as necessary and legitimate. The view that Kenya possessed forests ripe for exploitation and profit was particularly taken up by investors. In 1907, for example, a proposal was made for the exploitation of the forests of Mount Kenya by Lord Winchester, Lord Warwick, Lord Brooke, and Lord Dudley. In this, specific and repeated reference is made to similarities with certain very profitable forests in India, where forestry was established

¹⁴⁶ Munro, 'British Rubber Companies in East Africa before the First World War', 376. Munro argues that only very low yields of rubber could be obtained in Kenya, contributing to the failure of the crop there. After 1914 the Forest Department still listed rubber on its revenue sheets, but reported no revenue from it. Kenya Forest Department, *Annual Report of the Forest Department, 1920-21* (Nairobi Government Printer, 1921), 14.

¹⁴⁷ L.H. Seaford to C.F. Elliot, Conservator of Forests 18 October 1904, FOR/1/400, KNA. Seaford would later be accused of stealing from Africans. Although acquitted, he was no longer with the Forest Department by 1909; whether this was because of his possible criminal activities or his lack of true forestry skills is impossible to say.

¹⁴⁸ 'Morgan, T.O.' 1907, FOR/1/366, KNA. It is unclear what happened to the rubber trees the department planted. As noted above, the department received no revenue from rubber after 1914, thus it is likely the venture failed.

¹⁴⁹ Kenya was of course by no means unique among Britain's African territories in possessing a Forest Department. For example, if discussion is limited to pre-First World War British tropical Africa, by 1914 the East Africa Protectorate (Kenya) had five forestry officers from the Colonial Service, Uganda had two, Nyasaland two, Nigeria 34, Gold Coast 5, and Sierra Leone 4. Only Gambia was unique in having no colonial forestry personnel. Clearly, then, forestry was seen as an endeavour to be pursued by Britain's colonial administrations across its tropical African possessions. The argument here is that although there was nothing unique about Kenya having a forest department, particular local factors influenced its formation, development, and focus. Data from Anthony Hamilton Millard Kirk-Greene, *On Crown Service: A History of HM Colonial and Overseas Civil Services, 1837-1997* (London: I. B. Tauris, 1999), 18.

to an advanced degree.¹⁵⁰ Their view was clear: if money was being made out of lumber in India then why not Kenya?

The opinion taken in the nascent colonial government of British East Africa was more complex. The Protectorate was indeed searching for valuable export commodities, yet official documents produced outside of the Forest Department reveal that Kenya's forests were not seen as having great productive potential. Instead, forestry was envisaged as a device in supporting the twin pillars of colonialism in Kenya: white settlement and the railway. The forests were essential not for the export potential of their timber, but as fuel, building materials, and for their protection of watersheds: all to allow settlement. Wider economic and security concerns, locally expressed as competition with the rapidly advancing German East Africa, reinforced and explain this attitude.¹⁵¹ To the early commissioners and governors of the East Africa Protectorate, forestry was there to support development but not evolve along lines that interfered with this development. As hinted at by comments from Girouard reproduced above, and explored in more detail below, clashes in vision were all too common within the context of this framework.

1.4 Replacing African Forestry

Having established itself within the colonial apparatus of development, it was essential for the Forestry Department to assert its position of dominance over the Africans it saw as threatening forestry and in turn the entire process of development. The demonization of African farming methods and tree uses, such as rubber tree exploitation, typified the view adopted by the Forest Department in this period. The view softened toward those, predominantly Kikuyu, who were employed by the Forest Department in its *shamba* agroforestry scheme after 1910, yet it persisted for the majority of Africans living in the main forest zones in the highlands and coastal hinterland.¹⁵²

¹⁵⁰ Enclosure in No. 200, F.W. Baker to Colonial Office 9 May 1907, 169–71, Africa No. 869, Concessions in Uganda, the East Africa Protectorate, and Somaliland; further correspondence 1907. CO 879/92/27 TNA.

¹⁵¹ This argument is in concurrence with that posited by Berman and Lonsdale in reference to the uncertain attitude of the British government toward the Protectorate. As they argue, the Foreign Office (which administered the Protectorate until its 1905 transfer to the Colonial Office) was focused on imperial concerns and thus saw maintaining the British position in Uganda as its main concern alongside imperial competition with Germany. The Treasury's main concern was recouping its investment in the Uganda Railway. These concerns created confusion over how much land in the Protectorate could or should be sold off to settlers, as fears existed that selling too much would reduce the state's income. Lonsdale and Berman, 'Coping with the Contradictions', 495. The Forest Department, as a potential source of income to the state and very much an actor that increased state power over the land, should be seen as affected by this imperial confusion. Conversely, while Berman and Lonsdale argue that white colonization was of secondary importance to imperial conquest for the British state, the above analysis of the creation of the Forest Department and the following analysis of the struggle to actually carry out forestry in the Protectorate indicates that (for forestry at least) on the ground white colonization was able to trump imperial state concerns.

¹⁵² Agroforestry is the modern term that describes age-old and modern practices of growing trees and agricultural crops on the same land, or, as Nair more poetically puts it, the "[c]ultivating of trees and agricultural crops in intimate combination with one another..." P. K. R. Nair, *An Introduction to Agroforestry* (Springer Science & Business Media, 1993), 3.

If the hydraulic effects of forests on African agriculture, hugely significant as they are, are set aside it can be seen that the Forest Department had little concern for the role of forests or forestry in the lives of Africans. The simplistic view of Kikuyu peoples as forest destroyers completely ignored the multiple roles that the flora of the forests had in their lives. In research done by Leakey in the interwar years, an extensive list of hundreds of forest products used by Kikuyu is revealed, covering numerous tree species whose timber had specialised uses based on its properties, for example only *Polyscias kikuyuensis* (*muthai*) or *Trichilia roka* (*mururi*) were used to make beehives, while dozens of other plants had medicinal uses.¹⁵³ Sacred groves played important roles in Kikuyu religion, being conduits through which the spirits of ancestors could be contacted or offerings made to *Ngai*, the supreme being.¹⁵⁴ Furthermore, Kikuyu practised both forestry and agroforestry techniques. The value placed on timber trees for hut building meant that the Kikuyu left patches of forest during land clearances “ranging in size from a few acres to many square miles, which were set aside deliberately for timber cutting only. The trees in these areas could not be felled to make room for cultivation.”¹⁵⁵ These were, effectively, forest reserves. Moreover, Castro argues that such practices were common across central Kenya.¹⁵⁶ Indigenous agroforestry practices, the planting or retention of trees in close proximity to crops, also existed before the arrival of colonialism and remain, in modified forms, today. *Cordia abyssinica*, for example, is and was interplanted with maize and other crops for its shade-giving and mulch value.¹⁵⁷ However, Castro’s extensive research indicates that Kikuyu did not plant large numbers of trees in groups, for example to reforest farmland, akin to the plantations that would be established under colonial rule.¹⁵⁸ Ultimately, Kikuyu forestry was designed to meet local economic and cultural needs.

The Forest Department was aware of the indigenous uses of at least some trees in the Protectorate, as shown by botanical listings that include local names and occasionally uses for plants.¹⁵⁹ It was also aware of Kikuyu forestry practices, to the extent that it modified indigenous forest reserves into government forest reserves. In evidence given by an elder from Kiambu during the Kenya Land Commission in 1932 it is clear that there was an established Kikuyu system of forest guards and forest reserves that was effectively take over by the Forest Department:

¹⁵³ L.S.B. Leakey, *The Southern Kikuyu before 1903*, vol. 3 (London: Academic Press, 1977), 1300–1337. Although only published in 1977, Leakey conducted the research for the three-volume *Southern Kikuyu* in the interwar years and particularly in 1939.

¹⁵⁴ *Ibid.*, 3:1077–1117.

¹⁵⁵ L.S.B. Leakey, *The Southern Kikuyu before 1903*, vol. 1 (London: Academic Press, 1977), 43. In this statement, Leakey is referring to the end of the nineteenth century.

¹⁵⁶ Castro, ‘Agriculture and the Environment’, 48. It is unclear whether Castro is referring to only Kikuyu in his statement on how widespread forest management practices were. See also, Castro, ‘Deforestation and Human-Forest Relationships’.

¹⁵⁷ Castro, ‘Agriculture and the Environment’, 49–50; Patrick M. Maundu et al., *Useful Trees and Shrubs for Kenya* (World Agroforestry Centre, Eastern and Central Africa Regional Programme, 2005).

¹⁵⁸ Castro, ‘Deforestation and Human-Forest Relationships’, 126–27.

¹⁵⁹ Battiscombe, ‘Forests’. Notably, the flora list was supplied not by a Forest Department employee but a settler, Dr Atkinson.

In the past there were places where there was forest where I myself took my young warriors and told them to protect this piece of forest from being cut down, so that we might retain building material. The Forest Department came and took that land and put in their own guards, sending away my own people who were in charge preventing the forest from being cut down. And now I dare not cut a leaf or graze my cattle because I am not allowed, and it was mine. Why should there not be equality? Why should you come in and take a piece of forest which I set aside as reserve forest?¹⁶⁰

Indigenous forestry institutions were swept away, curtailing African rights of access, and replaced with their colonial counterparts:

In the years 1903 and 1904 the Kikuyu chiefs and elders had their own forest guards to protect the forest. After that year, Mr. John Ainsworth and his officers told the chiefs and elders to remove their forest guards, because they were not protecting the forest well, and instead they said that they were going to replace their own askaris, with a special uniform, who would protect the forest better than those.¹⁶¹

The African-controlled system of forest guards was replaced by a system of uniformed Forest Department-controlled guards. By the Chief Conservator of Forests own admission, however, the forest guards employed by the department were far from effective in this period, and indeed seem to have been only barely under the control of the department. Carrying firearms provided by the Forest Department but not authorised by the government, some forest guards engaged in criminal activities resulting in the official statement in 1910 that “cases of extortion and rape are not infrequent” while they “fired shots and otherwise exceeded their duties.”¹⁶²

There are few extant records regarding these forest guards before the 1920s, when the department began to regularly publish its annual reports and maintain more thorough archives of its activities; however in 1910 the department employed 100 guards across the Protectorate, although predominantly in the central highland region.¹⁶³ The majority of these guards came from two sources: either retirees from the King’s African Rifles (KAR) or the “Wanderobo” (Ogiek peoples).¹⁶⁴ The extensive forest knowledge that Ogiek peoples possessed made them ideal

¹⁶⁰ Evidence given at Kiambu, 14 November, 1932 (with Dr Leakey as interpreter) by Elder Kiori in *Evidence and Memoranda*, 1:137. The precise dates when the events that Kiori describes took place are unclear. However, if we assume that Kiori was a resident of Kiambu when the Forest Department took over the forests he referred to, it seems like this occurred before 1910, as by that year several forest reserves and forest stations (Lari, Dagoreti, and Escarpment) were already in operation in Kiambu. Kenya Forest Department, *Annual Report 1910*, 2.

¹⁶¹ Evidence given in a memorandum presented by the Loyal Kikuyu Patriots of Southern District of Kikuyu, 1st June 1932 in *Evidence and Memoranda*, 1:175.

¹⁶² D.E. Hutchins quoted in E.P.C. Girouard, ‘Enclosure - Report Upon the British East Africa Protectorate’ (CO 879/105/2, 16 June 1910), 80. Provincial Commissioner, Kenya, quoted in *ibid*.

¹⁶³ Girouard, ‘Enclosure - Report Upon the British East Africa Protectorate’, 79. The number of forest guards during the 1920s varied between 123 and 132; Kenya Forest Department, *Annual Report 1920-21*.

¹⁶⁴ Kenya Forest Department, *Annual Report 1910*, 17. ‘Wanderobo’ here refers to the group of peoples more commonly known as ‘Dorobo’ but today called Ogiek. This refers to a highly ethnically diverse group of peoples categorised according to their mode of subsistence: they resided within forests, where they also hunted game and gathered forest products such as fruit and honey. Typically looked down on by the other ethnic groups of Kenya because they did not, largely, engage in cultivation or keep livestock, Ogiek are essentially the only ‘forest people’ of Kenya. Michael G. Kenny, ‘Mirror in the Forest: The Dorobo Hunter-Gatherers as an Image of the Other’, *Africa* 51, no. 1 (1981): 477–95, doi:10.2307/1158950; John A. Distefano, ‘Hunters or Hunted? Towards a History of the Ogiek of Kenya’, *History in Africa* 17 (1990): 41–57, doi:10.2307/3171805. The vast forest knowledge and bushcraft skills that Ogiek peoples maintained occasionally drew much admiration from Forest Department employees who spent

employees of the Forest Department, however they were considered “little reliable” and therefore it seems safe to assume employed on a lesser scale in contrast to the “thoroughly disciplined” recruits from the KAR.¹⁶⁵

Quite in what way the ex-soldier forest guards were disciplined is unclear; while they may have consistently obeyed the orders of their European forestry overseers, it is quite possible they had no respect for the rights of the Africans they policed. At this point, in approximately 1910, the vast majority of the forest guards coming from the army would not have been local to the area in which they were posted by the Forest Department. Prior to 1912 the only large contingent of local East African soldiers in the KAR came from the Masai, although their regiment was disbanded in 1907, being deemed “idle rich” and unsuitable to military life. Instead, the KAR recruited either from the coastal Swahili caravan trading community or from Egypt, the Sudan, Belgian Congo, Ethiopia, and Somaliland. Often press-ganged from famine-stricken villages or the slums of cities like Cairo, the majority were Muslim and semi-pastoralists deemed to have martial qualities.¹⁶⁶ The colonial view was that “it is clearly of advantage to have in the Protectorate a force recruited in other parts of Africa which is not likely to be affected by local sympathies in case of trouble making.”¹⁶⁷ The same attitude clearly existed within the Forest Department. The recruitment of forest guards from two sources, Ogiek hunter-gatherers and KAR, isolated them culturally, politically, and economically from the (at this point predominantly Kikuyu) people they policed in the forests. Just as Parsons argues that Kikuyu peoples were deliberately not recruited into the KAR because their land losses to the Europeans made them “politically unreliable”, so too was it unofficial Forest Department policy to prohibit Kikuyu from policing Kikuyu.¹⁶⁸ Instead, forest guards were employed who were essentially outsiders and were not invested, culturally or economically, in the forests they governed, thus reinforcing their sole allegiance to the department. No doubt intended to make the forest guards impartial in matters of forest policing, the effect of the policy was to create a force so corrupted by the powers bestowed on it that it was deemed, in the restrained language of Edwardian colonial reports, a “very unreliable, undisciplined force” that violated colonial laws to the extent that a police investigation was launched into it in 1910.¹⁶⁹

Reform and formalisation of the forest guards were clearly needed, and the Forest Department began to do this with The Forest Amendment Ordinance, 1915, the sole purpose of which was to regulate the forest guard force. This laid out 12 points on which a forest guard would face

time and even lived with them, for examples see Baker, *My Life My Trees*; Dennis Holman, *Inside Safari Hunting, with Eric Rundgren* (London: W.H. Allen, 1969).

¹⁶⁵ Kenya Forest Department, *Annual Report 1910*, 17.

¹⁶⁶ Timothy Parsons, *The African Rank-and-File: Social Implications of Colonial Military Service in the King's African Rifles, 1902-1964* (Portsmouth, NH: Heinemann, 1999), 54–62; ‘Report by His Majesty’s Commissioner on the East Africa Protectorate. No. 6 (Africa: East Africa)’, 21–22.

¹⁶⁷ ‘Africa. No. 15 (1904). Report on the East Africa Protectorate for the Year 1903-04’, 1905, 22.

¹⁶⁸ Parsons, *The African Rank-and-File*, 56.

¹⁶⁹ Girouard, ‘Enclosure - Report Upon the British East Africa Protectorate’, 80. Further investigation is needed to determine the findings of this police investigation.

disciplinary measures.¹⁷⁰ It highlighted those areas the department had trouble with in the past but also its desire to create an effective and efficient force. Forest guards were given wide-ranging powers, a necessity if they were to police the forests with minimal supervision from the overstretched white senior members of the department. Guards thus had the power of arrest without warrant in any case where they suspected a forest offence had taken place (typically the taking of forest produce without permission) and the power to decide what a “satisfactory” reason was for possessing forest produce.¹⁷¹ It was within these powers that scope for corruption existed. In particular, if any person was found with forest produce and could provide the forest guard with sufficient reason for this then no offence would be recorded, thus the opportunity for the bribing of forest guards in lieu of a reason existed.

Offences by forest guards continued after the 1915 act. After the department began to get rid of several “old hands” among the guards in the interests of efficiency in 1921, it still was forced to dismiss three guards after they were convicted of unnamed offences.¹⁷² While in 1924 four guards were dismissed for “criminal breach of trust” and ten dismissed for incompetence; combined, those dismissed in 1924 represented 13 per cent of the entire forest guard force.¹⁷³ The situation deteriorated further in 1925. As well as four guards being convicted of criminal breach of trust, one was convicted of murder, and a “Probationary Guard deserted, stole a police rifle and ran amok, committing two murders.”¹⁷⁴ The sense of relief is almost palpable when the department reported only two forest guard convictions in the following year and that the force had “perhaps somewhat increased in reliability owing to more rigid selection and closer supervision.”¹⁷⁵

Ultimately the problems of the forest guard force appear to have stemmed from the poor selection process. Unwilling to trust local Africans, even those with experience in their own indigenous forestry systems, the department chose ex-soldiers and ex-police. A significant minority of these were ill-suited to the responsibilities and absence of close supervision that employment by the department required, not to mention their lack of interest in forestry work. The department itself was extremely frustrated by its guards. It had hoped that within the guards might be found a pool of willing and able future forest rangers/assistant foresters (the highest positions Africans could hold within the department) but this was not so. The guards, the department reported, lacked

¹⁷⁰ These points were: Absence without leave, failure to report a forest offence, aiding or abetting a forest offence, failure to report or extinguish a fire, failure to carry out orders, insubordination, intoxication on duty, ignorance of paths of beat, loss of government property, acceptance of any gratuity, and malingering or feigning illness.

¹⁷¹ *An Ordinance to Amend the Forest Ordinance, 1911, for the Purposes of Making Provision for the Enlistment and Conditions of Service of Forest Guards, No. 16 of 1915*, 1915, 5.

¹⁷² Kenya Forest Department, *Annual Report of the Forest Department, 1921* (Nairobi Government Printer, 1921), 1. Statistics do not exist for the strength of the forest guard force in 1921, preventing clarification on exactly how many guards were let go in that year.

¹⁷³ Kenya Forest Department, *Abridged Annual Report of the Forest Department, 1924* (Nairobi Government Printer, 1924), 1.

¹⁷⁴ Kenya Forest Department, *Annual Report of the Forest Department, 1925* (East African Standard Ltd., 1925), 2–3.

¹⁷⁵ Kenya Forest Department, *Annual Report of the Forest Department, 1926* (Nairobi Government Printer, 1926), 3.

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ambition, initiative, ability to learn, and were mostly illiterate, making them poor choices for the job of assistant forester.¹⁷⁶

1.4.1 Alien Forestry

The creation of the forest guard force was symptomatic of the attitude the Forest Department took toward the indigenous inhabitants of the Protectorate in this period. Kikuyu forestry and agroforestry practices, complete with their own system of forest reserves and forest guards, were swept away rather than built on. Local Africans were to have no say in the governance of the forests and their forest knowledge was ignored except in those cases, such as Ogiek recruitment into the forest guards, where it could be appropriated into the new forest governance regime. The department made no attempt to use forestry to the advantage of the inhabitants of the Protectorate, for example by cultivating trees with established African uses, aside from maintaining forest reserves that protected the water catchment on which agriculture, African and settler, relied. In erasing pre-existing forestry practices, specifically those of indigenous forest reserves and forest guards, and demonising African agriculture as destructive to forests, the Forest Department established itself as the sole authority and arbiter of how the forests of the Protectorate were to be run, taking away any claim indigenous peoples had to the ability to manage the forests themselves. Kenya provides a perfect example of how colonial forestry was an endeavour founded on European knowledge to the ignorance of indigenous knowledge; it was insular in nature, excluding or simply refusing to see other viable or potentially viable forest management practices.

1.5 The Struggle for Colonial Forestry

Forestry in Kenya would face significant hurdles in the form of opposition from settlers, particularly from a core of especially powerful settlers, and from within the colonial government itself. While African protest against forest reservation existed, particularly after African elites obtained more political power through Local Native Councils, it had little impact on the course of government appropriation of forest before the 1930s.¹⁷⁷ The development of most of the Forest Department's

¹⁷⁶ Kenya Forest Department, *Annual Report 1925*, 3; Kenya Forest Department, *Annual Report 1926*, 3.

¹⁷⁷ Castro has identified that Embu and South Nyeri Local Native Councils protested about forest reservation and the expulsion of their rights to forest products from the mid-1920s onwards. Castro, *Facing Kirinyaga*, 54. Individual cases of resistance also occurred, although few records exist that allow the tracing of these. In 1904, for example, C.F. Elliot, the Conservator of Forests, ordered that Kaboora, a Kikuyu farmer who had built huts and begun cultivating within the already reserved Karura forest near Nairobi, be evicted. 'C.F. Elliot, Conservator of Forests to Sub-Commissioner, Nairobi' 12 September 1904, DC/MKS.10a/3/1, KNA; 'C.F. Elliot, Conservator of Forests to Sub-Commissioner, Nairobi' 15 November 1904, DC/MKS.10a/3/1, KNA. Further correspondence from 1904 and 1923 indicates that African farmers who refused Forest Department orders were in some cases summarily evicted and had their farms grubbed up; measures which sometimes exceeded the authority of the forester who committed them. 'Sub-Commissioner to Collector, Dagoretti' 6 April 1904, DC/MKS.10a/3/1, KNA; 'Sub-Commissioner to C.F. Elliot, Conservator of Forests' 4 November 1904, DC/MKS.10a/3/1, KNA; 'L.R. Weeks, Acting Senior Commissioner to Chief Native Commissioner' 9 October 1923, FOR/1/227, KNA. Isolated incidents did occur that could warrant the classification of protest. In 1909, an Ogiek was punished with one year's hard labour for firing a poisoned arrow at a forest guard. It is possible this act was in retaliation to forest demarcation or the forced movement of Ogiek

operations in Kenya was therefore not dependent on acceptance or opposition by the Africans affected. Rather, achievement of the department's goals rested with the attitude taken toward forestry, the Forest Department itself and those it employed, by others in government, and influential members of the settler community. Neither was it purely an issue of forestry being an expensive venture "for such a poor Colony", although this was undoubtedly extremely important, since very rapidly after its creation the Forest Department would find itself in conflict with settlers.¹⁷⁸

1.5.1 *Constraining the Budget*

Under the first Conservator of Forests, C.F. Elliot, between 1902 and 1905 the Forest Department had a modest expenditure of less than £4,000 per annum; representing less than 1 per cent of the entire expenditure of the Protectorate. The other major technical department with a focus on land, the Agricultural Department, also had a low expenditure. Significantly, however, while the expenditure of the Forest Department would frequently fall below 1 per cent of total Protectorate spending for the period from its inception to 1921, Agricultural Department spending only fell below 2 per cent between 1905 and 1908.¹⁷⁹

The arrival of Hutchins as the newly restyled Chief Conservator of Forests in 1907 signalled a new interest in forestry in Kenya. Under Hutchins the department was immediately able to increase its expenditure by 160 per cent, indeed it spent £1,600 more than the Agricultural Department in 1907/08; the only time within the period this would happen. The pattern of increased expenditure was allowed to continue for a further two years until it drew the considerable ire of Girouard. The intervention of the new governor would see the expenditure of the Agricultural Department allow to rise 20 per cent, since "it works to a large extent for the benefit of the white population of the highlands."¹⁸⁰ Conversely Girouard considered the Forest Department an unnecessary drain on the Protectorate, particularly because it was engaging in programmes of afforestation while Africans continued to cause "immense waste" of the forests through the use of fire to expand cultivation into the Aberdare and Mount Kenya forests. For Girouard, the Forest Department existed only to consolidate and demarcate what forests the Protectorate already had.

peoples from the forests, however it is equally possible the incident was a personal attack on the forest guard, which have already been shown as a corrupt force. The possibility also exists that the forest guard was also Ogiek, in which case the attack could be unconnected to forestry work or represent an attack on a 'traitor'. The lack of other evidence concerning the incident, which is a statement representing the vast majority of forest crime cases appearing in the official records, restricts our ability to draw conclusions from them. Overall, such incidents may have occupied the time and energy of forestry personnel, more so when cases were taken to court, but they did little to hold up the progression of actual forestry work. Kenya Forest Department, *Annual Report 1910*, 8.

¹⁷⁸ Girouard, 'Enclosure - Report Upon the British East Africa Protectorate', 83.

¹⁷⁹ 'East Africa Protectorate Annual Reports 1903-18', n.d.; 'Finance Ordinances 1908-1922' n.d., CO 630/1 - CO 630/4, TNA.

¹⁸⁰ Girouard, 'Enclosure - Report Upon the British East Africa Protectorate', 73.

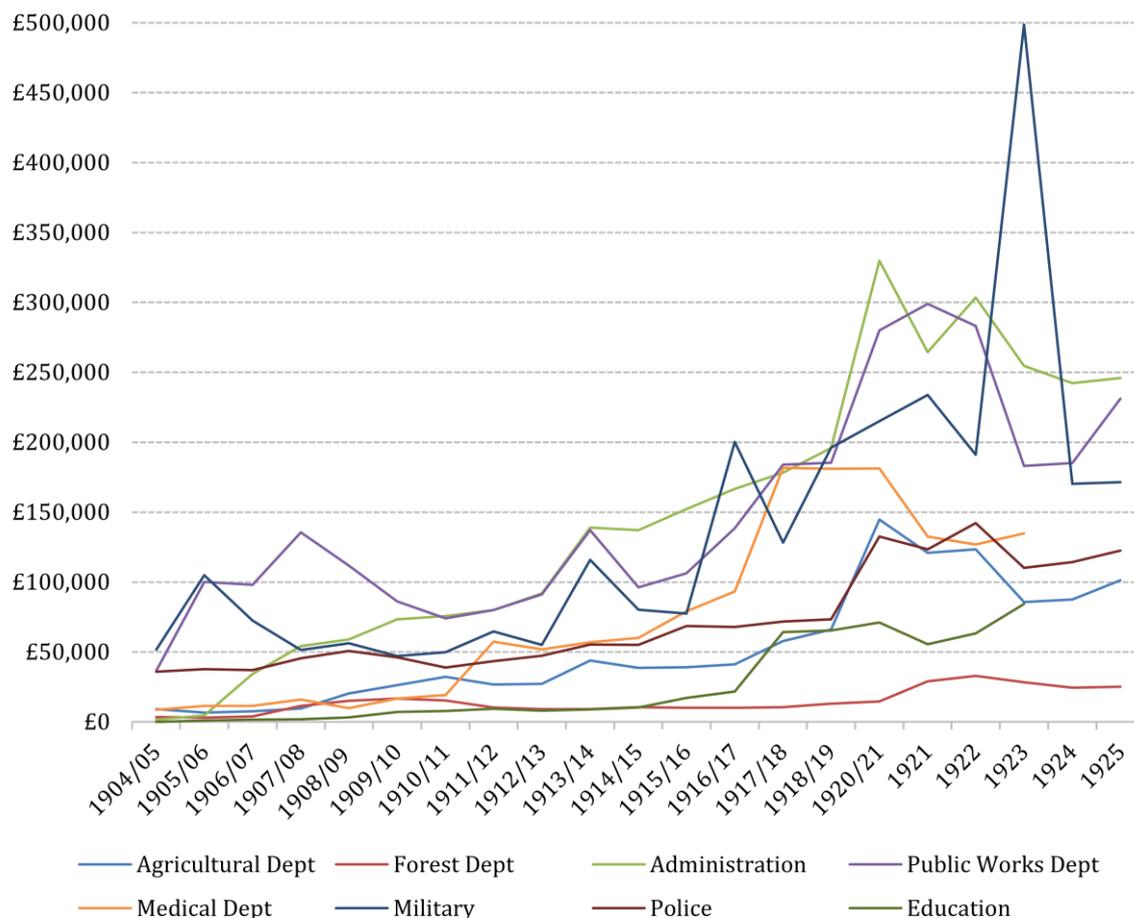


Figure 1-3. Expenditures of the Forest Department compared to other key government departments, 1904 to 1925. Note that expenditure on the Uganda Railway has been left off this chart because it dwarfed all other spending; in 1906 railway expenditure was £ 194,155 and by 1925 this had risen to £ 2,794,711. Sources: compiled from the Annual Reports of the East Africa Protectorate, 1903-25.

The hostility displayed by the executive toward forestry would see a reduction in forest expenditure of nearly 50 per cent when rises in the overall expenditure of the Protectorate are taken into account after 1910. In the first year of the First World War, the Forest Department was able to spend only £11,892, less than it had at any point since 1908, while the expenditure of the Agricultural Department had risen to £43,923 (Figure 1-3). Forest Department expenditure barely rose in comparison to other major departments throughout this whole period until 1925. Based on this, it seems that Churchill's recommendation to find a "harmonious compromise"¹⁸¹ between forestry and the developmental needs of the Protectorate was achieved by allowing the Forest Department to stagnate while most other departments grew.¹⁸²

Girouard was certainly not alone in his condemnation of forestry spending, enjoying the support of several powerful settlers. In relation to their effect on the practical ability of the Forest Department to engage in its work, none were more significant than Lord Delamere. Upon taking up

¹⁸¹ Churchill, *My African Journey*, 79.

¹⁸² In 1919/20 the Forest Department reported a larger expenditure than the following respective departments: Pensions, Official Gazette, Treasury, the Governor's Office, Port and Marine Department, Transport, Secretariat, Audit Department, Government Laboratories, Coast Land Settlement, Game Department. See Table 1.1. for average departmental expenditures between 1910 and 1920.

a seat with the Legislative Council in 1907, Delamere made it his mission to curtail the spending of a government he saw as rapidly expanding beyond its means:

I have a good deal of business of my own and my only object in taking a seat on the Legislative Council was, above all, to try and bring down the expenditure to meet the revenue. My Sincere conviction is that this can be done in the very near future only in one way, and that is by arbitrarily cutting down or rather keeping down the expenditure on the non-productive departments to their present figure.¹⁸³

His actions corroborate his rhetoric. Minutes of the Legislative Council debates of November 1907 on the 1908 Appropriation Bill show that it was Delamere who moved to reduce the proposed budget for the Forest Department by 22 per cent to £16,275, a far larger reduction than was proposed for any other department on the bill.¹⁸⁴ Delamere was supported in this by all members of the Legislative Council with the notable exception of the General Manager of the Uganda Railway. The suggestion is that only the railway saw the importance of the Forest Department; this debate notably occurred during the period of cooperation between the Forest Department and Uganda Railway that would lead to Hutchins' policies on plantation establishment for the express purpose of supplying the railway.¹⁸⁵ However, this concern was not enough to restrain Delamere and the other non-official members of the Council. Governor Sadler was known for his indecisiveness over whether to fully support white settlement, and was therefore extremely unpopular with the settlers.¹⁸⁶ In 1906, when Sadler was a Provincial Commissioner, he had supported proposals for large logging concessions on Mount Kenya and it is possible his later support for the reduction of the Forest Department budget represented a belief that the forests should be exploited rapidly and did not warrant a large Forest Department.¹⁸⁷ Equally, it may be that Sadler was attempting to ease tensions with the settlers by appeasing Delamere on an issue that would affect the government only slightly.

The period from 1902 through to the early 1920s was one of great financial constraint for the Forest Department. Although this was a period when the budgets of many other branches of government saw sporadic cuts it is clear that throughout its second decade of existence, the

¹⁸³ Delamere, 9 December 1907, quoted in Elspeth Huxley, *White Man's Country. Lord Delamere and the Making of Kenya*, vol. 1 (London: Macmillan and Co., Limited, 1935), 211.

¹⁸⁴ East Africa Protectorate Minutes of Legislative Council 1907-1909 (Nairobi, 7 November 1907), 110-14, CO 544/2, TNA. Six other cuts were made on the 1908 Appropriation Bill. The largest of these cuts was actually to Agricultural Department Special Expenditure (40 per cent reduction to £3000), however the *standard* expenditure of the Agricultural Department was not reduced. In fact, as seen in figure 1.1., overall Agricultural Department expenditure increased in 1908 (actually more than doubling in 1908/09 to £20,287). The other reductions on the bill in order of size were: Legislative Departments (5 per cent reduction), Post Office and Telegraphs (4.4 per cent reduction), Lt. Governor's Department and Secretariat (2.8 per cent reduction), Police (2.6 per cent reduction), and Provincial Administration (1.3 per cent reduction). The Forest Department's 22 per cent reduction was therefore the largest reduction that any department faced in the bill. Debates on the bill also resulted in three increases: a 3.3 per cent increase for the Public Works Department's extraordinary expenditure (to £57,955), a 3.4 per cent increase to the Land Office's expenditure (to £10,397) and an 8.7 per cent increase to the Military's special expenditure (to £9,096).

¹⁸⁵ Hutchins, *1909 Report on the Forests of British East Africa*, 48.

¹⁸⁶ Bennett, *Kenya, a Political History*, 1:26; Robert G. Gregory, *India and East Africa: A History of Race Relations within the British Empire, 1890-1939* (Oxford: Clarendon Press, 1971), 86.

¹⁸⁷ Castro, *Facing Kirinyaga*, 41.

<i>Branch of government</i>	<i>Average annual expenditure, 1910-1920 in £</i>
<i>Railway Department</i>	446,218
<i>Provincial Administration</i>	135,204
<i>Public Works Department</i>	121,416
<i>Military</i>	107,525
<i>Police</i>	57,984
<i>Post Office and Telegraphs</i>	57,837
<i>Medical Departments</i>	49,375
<i>Agricultural Department</i>	41,415
<i>Survey Department</i>	28,122
<i>Prisons</i>	18,984
<i>Legal Departments</i>	18,620
<i>Customs Department</i>	17,055
<i>Forest Department</i>	13,067
<i>Hospitals and Dispensaries</i>	12,845
<i>Land Department</i>	11,930
<i>Education</i>	10,409
<i>Treasury</i>	10,056
<i>His Excellency the Governor</i>	7,823
<i>Port and Marine Department</i>	7,731
<i>Official Gazette and Printing</i>	6,720
<i>Secretariat</i>	6,501
<i>Audit Department</i>	4,330
<i>Transport</i>	4,319
<i>Government Laboratories</i>	4,316
<i>Game Department</i>	3,973
<i>Mineral Survey Department</i>	1,000

Table 1-1. Average annual expenditure of branches of government between 1910 and 1920. Source: compiled from the Annual Reports of the East Africa Protectorate, 1910-18, and Finance Ordinances, 1908-1922.

department's expenditure can at best be described as modest in comparison to the other main items of government expenditure (Table 1-1). The expenditure of the department confirms that forestry was a low priority for the government. Hutchins and his optimistic 1907 and 1909 reports on the forests of Mount Kenya and the Protectorate as a whole, respectively, were successful in loosening government purse strings to a limited extent, but growth in expenditure was largely forestalled in this period.

1.5.2 *Settlers in the Forest*

Lord Delamere had stated that he desired to reduce government spending on "unproductive" departments and that such actions were therefore arbitrary. However, the particular interest that Delamere and other settlers had in the forests indicate that this was far from arbitrary. Settler reaction against state forestry in the East Africa Protectorate was a significant dimension of the general grievance the settler community had against alleged overzealous government interference in the operation and economic development of the Protectorate.

The most extreme settler view of the colonial government of Kenya was summarised by Elspeth Huxley:

Before the Russian revolution the British colonial system as exemplified in East Africa probably represented the most advanced form of state ownership and control in the world. The state was supreme and its servants, like the Communist party, were absolute dictators of the country's economic life. All actual or potential sources of wealth—land, minerals, forests, rivers, lakes—belonged to the state.¹⁸⁸

The role of the state was at the heart of settler grievances in Kenya. As Kennedy has argued, with little mineral wealth, land was the Protectorate's primary attraction. If money was to be made, it would come from farming.¹⁸⁹ Settler control and exploitation of land and labour were therefore essential for their economic survival, and, as Good has argued, this was largely achieved by the 1920s.¹⁹⁰ Observing this situation in 1930, Evelyn Waugh characterised it as a virtual recreation of a traditional England lost to industrialisation and the wealth of the middle classes: white, gentrified, and almost feudal in its relationship with labour.¹⁹¹ Within this context it is clear why as a bastion of state not private land control, the Forest Department would be a particular cause of settler discontent. By the time of the Forest Department's creation, state custodianship of forests had formed the heart of the scientific forestry creed; while private enterprise was seen as a necessity in forest exploitation, it had to be kept on a short leash or else the forests of the colonies ran the risk of becoming dominated by the private landlord, just as they were in Britain.¹⁹²

This principle of the state control of forests was expounded on by Robert Scott Troup, head of Oxford's School of Forestry, in his *Forestry and State Control*, in which he stated, "where the welfare of the general community is affected, restrictions should be placed on the rights of the few."¹⁹³ These restrictions were necessary because "*continuity of action* extending over a long period of time is an essential condition for successful forestry."¹⁹⁴ This was a consequence of the long maturation

¹⁸⁸ Huxley, *White Man's Country. Lord Delamere and the Making of Kenya*, 1:181.

¹⁸⁹ Kennedy, *Islands of White*, 22, 72.

¹⁹⁰ Good, 'Settler Colonialism', 603–4. This is not to argue that this control led to economic success for the settlers, as of course many settlers struggled financially.

¹⁹¹ Evelyn Waugh, *Remote People* (London, 1931), 224.

¹⁹² By 1922, 95 per cent of the forests of Britain were in private hands. Robinson, 'Forestry in the Empire'.

¹⁹³ R.S. Troup, *Forestry and State Control* (Oxford: Oxford University Press, 1938), 12. Troup justified the scientific forestry attitude to private forest management with historical examples from Europe. In particular, he cited the decline of state-owned forests and increase of private ownership without government oversight in Prussia in the eighteenth century and France prior to 1874. This trend, he argued, resulted in "the devastation of many forest areas" in France and Germany before the state intervened and began to expand control through scientific forestry principles. Within Britain, private forests were predominant (accounting for over 80 per cent of Britain's forest area by the early 1930s, even after the creation of the Forestry Commission in 1919) and the almost total absence of government control of these, Troup argued, had caused "the majority of British private woodlands [to] present a sad picture of neglect, while sustained yield management is seldom understood, much less practised." As many of the most powerful settlers in Kenya interested in forest exploitation came from Britain, they no doubt carried with them an expectation they would enjoy the same autonomy of forest exploitation they had in their homeland. The Forest Department of Kenya can therefore be seen as aligned against the recreation of the very system that the settlers of Kenya sought. In its attitudes to African forest destruction and settler forest ownership there is a clear theme: forestry existed on the defensive. *Ibid.*, 5–7, 29.

¹⁹⁴ Schlich, *Manual of Forestry (Vol. 1)*, 55.

periods that forest products, and for scientific forestry this meant timber, required in comparison to the crops sowed by farmers. Hutchins summarised the situation as he saw it in Kenya: "To cultivate the soil however requires patience, skill, and hard work. To obtain a forest concession and float a company is an easy road to fortune!"¹⁹⁵ Even the wealthiest settlers, epitomised by Delamere, went through a long initial period of agricultural trials before they managed to turn their farms into success and profit, and the majority of settlers continually struggled to farm successfully.¹⁹⁶ The cost of Delamere's experiments in livestock breeding and crops, particularly repeated failed wheat harvests, meant he had to re-mortgage his estate in England before he finally found success with cattle.¹⁹⁷ As Hutchins' identified, the forests must have constituted an irresistible lure for the settlers. Forests could be rapidly converted into timber and the product sold on a local market that was demanding large quantities of timber; by contrast, agriculture and livestock had to be adapted for local conditions.¹⁹⁸

¹⁹⁵ Hutchins, *1909 Report on the Forests of British East Africa*, 63. Hutchins is most likely making reference to the granting of forest land to Lingham and Grogan in 1904/05, detailed below. In addition, Hutchins reported that by 1909 an estimated (that is, no survey had actually been conducted of the forest area) 40,000 acres of forest (at Njoro) had been granted to Lord Delamere, 10,000 acres (Molo) granted to Dr Atkinson, 1,000 acres (Nairobi) granted to Handcock and Thompson, 1,026 acres (Lari) granted to Uplands of East Africa Syndicate, 7,680 acres (Limoru) granted to Caine Bross, 39,200 acres (North of Elmenteita) granted to the East Africa Syndicate, 2,560 acres (Kijabi) granted to the American Mission, and a further 4,000 acres granted to an assortment of other investors and missions. *Ibid.*, 64. However, the accuracy of these figures is highly suspect. As Hutchins admitted, most were estimates only, and they also do not concur with those figures produced 11 years later for the more detailed publication: Forest Department, *The Forests and Timber Resources of British East Africa* (London: Waterlow and Sons, 1920). Munro's analysis of British investment in East Africa's nascent rubber industry also provides a clear example of the flotation of companies as a symptom of the over optimism of capital in the young Protectorate. 22 companies were engaged in the rubber industry in East Africa prior to the First World War, some of which invested before any actual surveys had been conducted on the ground. Over-optimism of recreating the success of rubber plantations in Asia led to investment before adequate research had been done on the actual viability of rubber production in East Africa, leading to the inability of the industry to compete against the Asian companies they tried to emulate. Munro, 'British Rubber Companies in East Africa before the First World War'.

¹⁹⁶ Lonsdale, 'Home County and African Frontier'.

¹⁹⁷ Huxley, *White Man's Country. Lord Delamere and the Making of Kenya*, 1:141-58. Huxley does not give precise details on these cost, apart from that Delamere was forced to borrow at least £80,000 to finance livestock experiments.

¹⁹⁸ The local market for timber seems to have been almost entirely centred on building and infrastructure projects carried out by European settlers and the colonial government, although the department did report on a small quantity of poles (from eucalyptus and black wattle plantations) being sold or issued free to Africans annually (for example, 26,501 poles were issued free in 1914-15, although this was to government departments, settlers, and Africans – there is no breakdown for just issues to Africans). Local demand for timber was strong, shown by the significant value of imports of timber between 1908 and 1925; 1908: £9,110, 1909: £10,793, 1910: £6,527, 1914: £53,323, 1915: £21,237, 1920: £22,457, 1921: £17,527, 1923: £17,844, 1924: £34,959, 1925: £46,003. According to the Forest Department Annual Reports (1914-15 and 1920-21), the local sawmills (eight of which operated in 1914-15 and 24 in 1920-21) had considerable difficulty in competing against the quality (in particular, imported timber was seasoned and there was little capacity for the seasoning of local woods in this period) and cost of this imported timber. It is unsurprising, therefore, that exports of timber were marginal in this period: timber of sufficient quality, quantity, and at low enough cost could not be produced. In 1914, for example, exports of timber (including mangrove) were valued at just £811; this fell to £84 in 1915 and remained low in 1920 (£3,393) and 1921 (£2627) because of the general economic slump. At the end of this period exports began to improve, totalling £45,571 in 1924 because of demand for cedar and particularly sawn slats of pencil cedar. This 1924 figure, in fact, would not be exceeded until 1946. See section 2.2.2. of chapter 2 for a thorough investigation of the politics and economics of the timber industry in Kenya in the interwar years. The available data for the timber market between 1908 and 1924 clearly indicate that this was a period when the timber industry was in the very nascent stages of development; it was clearly focused on the local market and made only a small contribution to the overall timber needs of colonial development. Kenya Forest Department, *Annual Report 1910*; Kenya Forest Department, *Annual Report of the Forest*

	State Ownership			Other Ownership		
	Dedicated to timber production	Other forest	Total	Corporate bodies	Private individuals	Total
Square miles	2,200	2,800	5,000	0	100	5,100
Percentage of total forest area	43.14	54.90	98.04	-	1.96	100

Table 1-2. Estimated forest area by ownership type, 1920. The Forest Department had no accurate data on the size of the Protectorate's forest area nor on the amount of forest in private hands. Estimates were done in 1920 by the department. The Lingham and Grogan concession is included in State forest dedicated to timber ownership. Source: *The Forests and Timber Resources of British East Africa* (London, Waterlow and Sons Ltd., 1920), 10.

Very soon after the creation of the Forest Department in Kenya it found itself facing the conversion of forest to private property, reinforcing its defensive posture. After wooing the support of Sir Charles Eliot, the Protectorate's High Commissioner, in 1904 and 1905 E.S. Grogan and F.R. Lingham secured a large concession of 128,000 acres of Mau and Lembus forest near Eldama Ravine, some 180km west of Mount Kenya (the concession additionally included 80 acres of extremely lucrative harbour space in Mombasa).¹⁹⁹ Grogan would become president of the Colonists' Association and chair of the Convention of Associations that sought to unite the settler community into an effective force against government. He was also certainly not afraid of testing the authority of the government, as he did when he asserted what he believed to be his rights by illegally flogging two Africans in front of the Court House in Nairobi in 1907.²⁰⁰ His business partner, F.R. Lingham, was a Canadian with considerable expertise in the Canadian and South African timber industry.²⁰¹

Lingham and Grogan had secured the single largest alienation of government forest in the colonial period, although their neglect of it allowed the Colonial Office (after it took over administration of the Protectorate in 1905) to renegotiate its extent in 1908 to 94,944 acres, desperate as it was to claw back at least part of this huge concession. So alarming was the situation

Department, 1914-15 (Nairobi Government Printer, 1915); Kenya Forest Department, *Annual Report 1920-21*; Kenya Forest Department, *Annual Report 1921*; Kenya Forest Department, *Annual Report 1924*; Kenya Forest Department, *Annual Report 1925*.

¹⁹⁹ W.H. Mercer and A.E. Collins, *The Colonial Office List for 1908* (London: Waterlow and Sons, 1908); Logie and Dyson, *Forestry in Kenya*, 12. Note this concession was approved by Foreign Office as the East Africa Protectorate was at this being point being administered by the Foreign Office. In 1905 the Protectorate was handed over to Colonial Office control. Anderson provides a thorough account of the alienation process and the associated conflicts it caused between settler, government, and African, see chapter 8 of Anderson, *Eroding the Commons*. The concession should be seen within the context of Eliot's eagerness to use white settlement to support the colonial state financially, and its support by the Foreign Office within the light of the British government's desire to recoup the costs of imperial expansion in East Africa.

²⁰⁰ Bennett, *Kenya, a Political History*, 1:21, 29; 'East Africa Protectorate. Correspondence Relating to the Flogging of Natives by Certain Europeans at Nairobi.', 1907.

²⁰¹ Moreton Frewen to Colonial Office 3 November 1909, 264, African no. 929, Concessions in the East Africa Protectorate, Uganda and Nyasaland; further correspondence. 1909. CO 879/101/2 TNA.

to the colonial authorities that the case would eventually lead to several lawsuits.²⁰² At no stage of this negotiation were the concerns of the Forest Department adequately considered and Grogan secured terms that allowed extremely low royalties to be paid to the department on timber harvested. The terms were so favourable to Grogan that the department was obliged to spend more money administering the concession than it received in return as royalties.²⁰³ As the Commissioner of Lands for the East Africa Protectorate lamented concerning the original lease: "In those days land grants were not very carefully scrutinised."²⁰⁴ Lord Cranworth, who himself attempted to secure a lease on part of the Mount Kenya forests, summarised the concern in the Colonial Office at this concession when he stated, "no stone has been left unturned and no process of law or bluff omitted to re-obtain possession" in the Colonial Office's quest to cancel the concession.²⁰⁵

Lord Cranworth stated of the Lingham and Grogan Mau forest concession, "It was here that private enterprise won its greatest victory, when 300 square miles of forest were alienated to Messrs. Lingham and Grogan."²⁰⁶ Lord Hindlip, who was engaged in sawmilling operations in Kenya, shared the attitude toward the government, stating that in the first years of the Protectorate the government was one which believed "that every one should be kept in abject subjection, and not be allowed to call anything his or her own."²⁰⁷ In securing their lease, Lingham and Grogan were seen by other settlers as keeping land from "the talons of the government".²⁰⁸ Fully aware of the Forest Department attitude to private ownership, the government was seen by Cranworth to "hoard" and "waste" valuable forest land out of "fear lest private individuals or companies, or, worse still, a speculator should make a profit, and also, no doubt, by the feeling that every year the forests get an enhanced value."²⁰⁹ This attitude seems to have been common among the settlers, or at least those with means and a desire to speculate. The belief that the Forest Department was anti-enterprise led to T.A. Wood, unofficial member of the Legislative Council, raising the issue of the

²⁰² Colonial Office to Captain E.S. Grogan 4 February 1909, 18–19, African no. 929, Concessions in the East Africa Protectorate, Uganda and Nyasaland; further correspondence, CO 879/101/2, TNA; Captain E.S. Grogan to Colonial Office 2 October 1909, 248–49, African no. 929, Concessions in the East Africa Protectorate, Uganda and Nyasaland; further correspondence, CO 879/101/2, TNA. See also CO 879/99/4, CO 879/92/27, CO 879/104/5, CO 879/107/1, CO 879/110/1, and CO 879/111/6, TNA, for correspondence between Grogan and the Colonial Office on the forest concession.

²⁰³ Anderson, *Eroding the Commons*, 239–42.

²⁰⁴ J.A.L. Montgomery to Colonial Office 24 August 1909, 227, African no. 929, Concessions in the East Africa Protectorate, Uganda and Nyasaland; further correspondence, CO 879/101/2 TNA.

²⁰⁵ Lord Cranworth to Colonial Office 7 January 1913, 19–20, Concessions in Nyasaland, Uganda, and the East Africa Protectorate; correspondence. Also including recruitment of Arab, Indian and Somali labour for the East Africa Protectorate, the improvement of transport facilities, and the position of the British South Africa Company in Nyasaland, CO 879/111/6, TNA. (Lord) Cranworth, *A Colony in the Making, or Sport and Profit in British East Africa* (London: Macmillan and Co., Limited, 1912), 156.

²⁰⁶ Cranworth, *Profit and Sport in British East Africa*, 212. The Grogan concession had a lasting impact on the Forest Department's determination to keep forest out of the hands of private enterprise. Peter Castro, for example, has shown that a conservationist agenda was employed in arguments for the reservation of southern Mount Kenya forests in 1913 but that the real rationale behind the move was to pre-empt its takeover by logging companies. Castro, *Facing Kirinyaga*, 44–51.

²⁰⁷ Charles (Lord Hindlip) Allsopp, *British East Africa: Past, Present and Future* (London: T. Fisher Unwin, 1905), 79.

²⁰⁸ Cranworth, *A Colony in the Making*, 155.

²⁰⁹ *Ibid.*, 156.

lack of assistance the department had given to economic development, as reported in a 1911 session:

He said he thought he was right in saying there was a *considerable section of the population of the country* dissatisfied with the Forest Department... [,] he had personally looked for results of the expenditure which had been incurred and it was rather difficult to discover anything more than the protection of forests which he thought could have been made a branch of the Police Service more economically.²¹⁰

Settler grievances were exacerbated by land and forestry regulations that restricted their ability to exploit and develop their land. The Crown Land Ordinance of 1902 laid out that a settler should never completely exhaust any supply of timber on the land, if timber exploitation had been the purpose of the lease.²¹¹ Rules made under this ordinance in 1903 also reflected colonial attitudes to re-ordering and enclosing land and animal control that were well established in Cape Colony, for example. Specifically, settlers were compelled to fence land that contained livestock and to mark boundaries.²¹² In contrast to Cape Colony, where enclosure represented a victory for private property and the literal representation of the boundaries within capitalist labour relations, within Kenya the attitude from the settlers to fencing was openly hostile.²¹³ The issue for the settlers was one of practicality. The Forest Department apparently refused to supply fence posts to settlers, requiring settlers to buy imported poles.²¹⁴ By 1909 the department was certainly providing poles free of charge, although who received these is unclear. Huxley quotes Lord Delamere as complaining about this issue, as it caused great expense “in a country abounding in forest”.²¹⁵ In 1905 Lord Hindlip thought the issue worthy of complaint in his book on the Protectorate, particularly as he saw it as exemplifying a government that was disinterested in supporting white settlement.²¹⁶

For the Forest Department this may have been an issue of practicality: its meagre staff had priorities of forest reservation and railway supply, not administering the cutting and free allocation of fence posts to settlers at its own expense. Yet there seems also to have been the desire to try to

²¹⁰ T.A. Wood, *East Africa Protectorate Minutes of Legislative Council 1907-1909* (Nairobi, 18 September 1911), 10, CO 544/2, TNA. Emphasis added.

²¹¹ *The Crown Lands Ordinance, 1902, No. 21 of 1902, 1902.*

²¹² ‘Rules for the Purchase of Land under the Crown Lands Ordinance 1902’, *Kenya Gazette* 5, no. 76 (1 January 1903): 24–25. If the land had no forest when the lease began the settler was expected to plant 2 per cent rather than 10 with forest.

²¹³ Lance van Sittert, ‘Holding the Line: The Rural Enclosure Movement in the Cape Colony, C. 1865-1910’, *The Journal of African History* 43, no. 1 (2002): 95–118; Lance van Sittert, ‘“Keeping the Enemy at Bay”: The Extermination of Wild Carnivora in the Cape Colony, 1889-1910’, *Environmental History* 3, no. 3 (July 1998): 333, doi:10.2307/3985183; Beinart, ‘The Night of the Jackal’.

²¹⁴ Anderson also found that settlers were reluctant to fence in their land due to the costs of doing so. Anderson, *Eroding the Commons*, 63.

²¹⁵ Huxley, *White Man’s Country. Lord Delamere and the Making of Kenya*, 1:89. Lord Hindlip also complained that the Forest Department was unwilling to supply fence posts and that he and others were forced to import fence posts. Allsopp, *British East Africa*, 85.

²¹⁶ Allsopp, *British East Africa*, 84–89. Hindlip explicitly stated, as did Delamere, that “Tenants must be prepared to import their fencing, as the Government will not ordinarily supply timber from the forests for the purpose.” *Ibid.*, 85.

instil within the settlers the need to conserve forest and not treat the Forest Department as their servant. The same 1903 rules also mandated that settlers maintain at least ten per cent of their land as forest, at his own expense.²¹⁷ This was a point that again raised the ire of Delamere and Hindlip, yet Hutchins maintained that reality the department practical inability to police the regulations meant they were effectively “a dead letter up to now [1909].”²¹⁸ On the issue of fencing, however, antagonism lingered until at least 1925, when the settler H.S. Nightingale complained of a lack assistance in fencing after the government refused to share the cost of fencing his livestock land in order to keep his and African cattle separate.²¹⁹

Lord Cranworth made light of the general attitude the department held toward settler forest exploitation by recounting a perhaps apocryphal interview with a prospective concessionaire:

A somewhat unsophisticated settler applied for a little concession in the camphor belt. A fairly high rent was proposed, but otherwise, to his surprise and gratification, the interview went smoothly enough. Not until he was leaving the door did any remark occur to damp his ardour. As he made his exit, however, a few disconcerting words reached him: 'Of course we shouldn't let you cut the trees!'²²⁰

Despite the legal and bureaucratic hindrances, forest exploitation remained an attractive proposition to the settlers or their representatives in the Protectorate. In addition to the exceptional case of Lingram and Grogan, Lord Cranworth, Lord Warwick, Lord Brooke, Lord Winchester, Lord Dudley, Lord Delamere, and his close friend Dr Atkinson all attempted to secure or were successful in securing leases on forest land for the express purpose of timber exploitation; a trend which accelerated after Hutchins' optimistic 1907 report on the potential of the Mount Kenya forests.²²¹ Dr Atkinson in particular was influential in being one of the first to establish a sawmill in the Protectorate. Letters written by Lord Delamere indicate that Atkinson's venture was such a success that it directly motivated him to also begin a sawmill enterprise for clearing forest from his land in 1903. The reason, he explained, was that as opposed to agriculture, “the return [on investment] begins at once.”²²² At this time Delamere was already experimenting in numerous agricultural areas: sheep, cattle, pigs, oranges, tobacco, oats, barley, potatoes and most particularly wheat. Although he eventually achieved considerable success in wheat and dairy, numerous failures and the cost of experimentation eventually cost him his estate in Cheshire and forced him to borrow

²¹⁷ 'Rules for the Purchase of Land under the Crown Lands Ordinance 1902', 24–25. If a farm had less than 10 per cent forest cover when the lease began the settler was expected to plant trees until the 10 per cent goal was reached. If the land had no forest when the lease began the settler was expected to plant 2 per cent rather than 10 with forest.

²¹⁸ Hutchins, *1909 Report on the Forests of British East Africa*, 66. Allsopp, *British East Africa*, 81–87.

²¹⁹ H.S. Nightingale to Forest Officer, Kinangop 5 December 1925, FOR/1/151, KNA. Nightingale's complaint was of course in relation to the perceived need to separate settler and African livestock in the face of the spread of animal disease, most particularly East Coast Fever. See chapter 2, section 2.3.3. for a detailed exploration of the politics and effects of this in relation to forestry.

²²⁰ Cranworth, *A Colony in the Making*, 162–63.

²²¹ Hutchins, *1907 Report of the Forests of Kenya*.

²²² Lord Delamere to Mr J. P. Jackson, December 1903, quoted in Huxley, *White Man's Country. Lord Delamere and the Making of Kenya*, 1:139.

at least £80,000.²²³ The appeal in sawmilling thus seems to have been that it created a financial support to settlers with rapid revenue-generating abilities.

The sawmilling enterprise was so popular that by 1910 nine such facilities were in operation, all privately owned apart from one,²²⁴ and by 1920 the number had risen to 24,²²⁵ when there were so many that their output of timber exceeded the demand for it.²²⁶ The Forest Department would later admit that it was these sawmills, almost all operating in forests leased to settlers rather than government forest, that were responsible for the majority of the timber produced in the country.²²⁷

The Forest Department therefore positioned itself against a considerable group of settlers and speculators and the interests they held. Its greatest fear was that private enterprise would increase its holdings of Kenya forests; in essence, it fought to stop any more Lingrams and Grogans. The Forest Department became determined to maintain a tight grip over the remaining forest areas of the Protectorate and ensure they could only be utilised under the strict guidance of the department according to the tenets of scientific forestry. The attitude was evident in subsequent applications for concessions. When Moreton Frewen, a Canadian with experience in the timber industry there and the representative of Lord Warwick, sought a timber concession on the slopes of Mount Kenya the Conservator of Forests, Ernest Battscombe, fought against it. Battscombe criticised Frewen's assertion that the mixed-species Mount Kenya forests were comparable to the largely single-species forests of British Columbia that could be clear felled and vehemently opposed any idea of a concession that would not be worked on proper forestry principles, that is sustainable exploitation:

Mr. Moreton Frewen objects to the forest being worked on sylvicultural principles under rigid supervision; no concession should be made to him or any other lessee for these principles to be modified.²²⁸

The Forest Department was indeed largely successful in its goal of preventing settler dominance of the forests in the second decade of its existence. It reported in 1920:

Latterly, the policy of the Government of retaining ownership of the natural forests has been more strictly adhered to, but not without considerable criticism, and the areas alienated in recent years are negligible.²²⁹

²²³ Ibid., 1:141–72.

²²⁴ Kenya Forest Department, *Annual Report 1910*, 9.

²²⁵ Kenya Forest Department, *Annual Report 1920-21*, 3.

²²⁶ E. Battscombe, Conservator of Forests to Assistant Conservator, Laikipia 5 June 1922, FOR/1/157, KNA.

²²⁷ Logie and Dyson, *Forestry in Kenya*, 12. Despite the important role of the timber industry in sustaining forestry, the department was rather disinterested in the success of these sawmills, with its files revealing little discussion of them until after 1925. Certainly by 1927 this was demonstrably true, as concern for the high rate of cutting in Londiani that was exceeding the department's capacity to reforest the area led the Acting Conservator of Forests H.M. Gardner to state "if one of the mills close down permanently so much the better." H.M. Gardner, Acting Conservator to Assistant Conservator, Londiani 23 May 1927, VF/12/2, KNA.

²²⁸ E. Battscombe to Secretary of State for the Colonies, Enclosure No. 2 in No. 128, Acting Governor F.J. Jackson to Secretary of State for the Colonies 9 February 1909, 140, African No. 929 Concessions in the East Africa Protectorate, Uganda and Nyasaland; further correspondence, CO 879/101/2, TNA.

²²⁹ Forest Department, *The Forests and Timber Resources of British East Africa*, 9.

Large forest concessions were therefore generally rejected after the Lingram and Grogan case. Instead, the Forest Department micromanaged the extractive process by seeking or considering applications for licences to fell only those trees in coupes it had marked out according to its principles of sustainable exploitation.²³⁰ This policy could lead to delays and licensee and department frustrations. J.W. Sterling's application for a licence to fell near Londiani on behalf of Londiani Farms Ltd., the principle shareholder of which was Lord Cranworth, was initially rejected in 1913. After delays caused by the First World War, this licence was, in principle, accepted by 1917. By 1920, however, the licensee had not commenced work. The Forest Department suspected Londiani Farms Ltd. of stalling to prevent other potential licensees from accessing the forest while it still had forest to exploit on its own land, although the wider economic slump experienced in East Africa must have made exploitation far less attractive than it had been seven years earlier. This prompted the Forest Department to threaten to put the licence out to tender again, a threat reiterated when it transpired that the agent to Londiani Farms Ltd., a Nairobi-based timber merchant, had been felling trees that had not been marked by the department within its licensed area. A subsequent change of agents allowed exploitation to begin proper, but the whole affair failed in November 1927 when Londiani Farms Ltd. liquidated.²³¹ The case speaks of the strained relationship between settler and Forest Department and the lack of a clear, formal process for acquiring a forest exploitation lease. However, the trend of waiting for applications for forest leases, which typically came from consortia of well-connected or aristocratic settlers or speculators, and then a protracted negotiation process that often involved the highest levels of authority, notably the Secretary of State, was practically over by the mid-1920s. Instead, the Forest Department increasingly took the initiative: selecting the areas it wanted felled, putting the lease out to tender, and strictly enforcing its control. Although aristocratic settler-led timber operations continued, by 1926 they were being joined by Indian-owned sawmills and their agents.²³²

1.5.3 Surveying

One of the most vital branches of scientific forestry, the surveying of forest, was clearly affected by the constraints placed on the Forest Department in this period. In 1908, six years after the department had been formed, no forest area had been fully surveyed and large parts of the Mau

²³⁰ E. Battiscombe, Conservator of Forests to Lord Cranworth 31 October 1918, QB/1/303, KNA.

²³¹ Londiani Farms Ltd. (correspondence) 1913 to 1927, QB/1/303, KNA.

²³² Under Conservator Battiscombe's successor, H.M. Gardner, the department took an increasingly hard line in the lease application process. This is evident when a tender was put out for a lease of 200 acres in Maguga forest, Kikuyu Province in 1926. The experience of potential licensees was carefully scrutinized and a sh.200 deposit demanded. It is notable that the three applications for this lease all came from Indian companies based in Kenya rather than settlers. It seems likely that the considerable history of trouble between the settlers and the Forest Department, combined with an increasingly competitive local timber market and greater development of settler agriculture made forest exploitation less attractive to the colony's settlers. By the early 1930s this certainly seems to have been the case, as there was an oversupply of timber in the local market even when the sawmills were working at normal capacity. Forest Department Timber Contracts - Maguga Forests 1917 to 1927, QB/1/304, KNA. Londiani Farms Ltd. to E.B. Battiscombe, Conservator of Forests 15 March 1922, QB/1/303, KNA. S.E. Wimbush, *Report on Possibilities of Export of Kenya Timbers to England* (Forest Department, 1934), 3.

forest had not even been seen by a forester; Hutchins stated that surveys should be conducted before any more demarcation could take place.²³³ By 1910 the priority in surveying and demarcating continued to be in those areas “exposed to destruction by natives.”²³⁴ It is indicative that eight years after the creation of the Forest Department it was still dealing with the issue of demarcating forests, often incorrectly, in its quest to stop their use by Africans.

Even after Hutchins’ statement, forest reservation continued before surveys were conducted. By 1925 a further 370,000 acres had been declared Crown forest (government forest), bringing the total to 2,370,000 acres. Yet because of the department’s inability to survey its land, it habitually took a ‘fortress forestry’ approach: it reserved all forested or indeed unforested land it was able to and refused what it considered “specious” pleas for agricultural access to forest land.²³⁵ Indeed, approximately 19 per cent of the land reserved as Crown forest by 1925 was not forest at all, instead being grass, moorland, and rock.²³⁶

²³³ Hutchins, *1909 Report on the Forests of British East Africa*, 23; Hutchins, Chief Conservator of Forests to Secretary 30 January 1908, QB/1/204, KNA. Demarcation was a process dependent on accurate surveys. It involves the clear signing of the boundaries of forest reserves, typically done through the planting of exotic trees or the use of posts/stakes as markers, the clearing of lines within forests, or fencing.

²³⁴ Kenya Forest Department, *Annual Report 1910*, 6.

²³⁵ Kenya Forest Department, *Annual Report 1925*, 4–5. The department considered requests to utilise forest land for agriculture as false because it considered such claims were only based on a short-term return motive and failed to take into account the need for forestry “to look ahead for a least 100 years”. That is, even though 734,000 acres of Crown forest were classified as unmerchantable forest and scrub by this point, this land was retained in department control because it had the potential to be converted into merchantable forest in the future (most likely through its *shamba* squatter forestry system, discussed below. Note that with having 31 per cent of Crown forest merchantable, Kenya was only slightly below the empire-wide average of 37 per cent merchantable forest according to data in Robinson, ‘Forestry in the Empire’, 12.). Interestingly, the department does not make the conservation argument related to rainfall in its 1925 annual report, perhaps suggesting that the land claims it was receiving were in areas it knew or suspected were unimportant for water catchment. Kenya Forest Department, *Annual Report 1925*, 4–5. The term ‘fortress forestry’ is here used in the same manner as the term ‘fortress conservation’, that is a protectionist model of conservation that aims to achieve its goals through the exclusion of people from, for example, a nature reserve. A fortress approach thus typically characterised forestry across the empire, in that colonial forest departments alienated forests and sought to exploit them for colonial goals (i.e. timber exploitation and preservation of water catchment). However, the meaning of the term in its use here is broader, in that the Forest Department was putting up walls to keep both Africans and white settlers out, as well as putting up what might be considered speculative walls: reserving any land with forestry potential in the hope of forestalling attempts to subvert its authority. For an example of how the colonial fortress forestry mentality has played into modern forestry policy see Arvind Khare et al., ‘Joint Forest Management: Policy, Practice and Prospects: India Country Study’, *Policy That Works for Forests and People (United Kingdom)*, No 3 (2000), <http://pubs.iied.org/pubs/7535IIED.html>; Paul M. Guthiga, ‘Understanding Local Communities’ Perceptions of Existing Forest Management Regimes of a Kenyan Rainforest’, *International Journal of Social Forestry* 1, no. 2 (2008): 145–166.

²³⁶ In some cases the Forest Department was willing to excise grassland from its reserves after proper surveying had taken place, as occurred with the removal of 7,700 acres of grassland from the East Elgon forest reserve in 1925. Kenya Forest Department, *Annual Report 1925*, 23. This supports the argument that the inability of the department to survey land pushed it into taking a more radical fortress forestry approach than it otherwise would have done. The approach predictably led to resentment and conflict with Africans. This became evident during the Kenya Land Commission hearings of 1932, when, for example, Chief M’Ngaine of the Meru highlighted that after the Meru Native Forest Reserve was created in Meru District in 1927, “We complain that when the Meru Native Reserve Forest Reserve was demarcated, much grazing land was included in the forest. We ask for adjustment to be made in such a way that our grazing land would be returned to us.” Evidence given by Chief M’Ngaine in *Evidence and Memoranda*, 1:89. Aside from limiting and criminalising African grazing in grassland within the Meru forests, this reservation had the unexpected consequence of pushing elephants and other large herbivores to invade farmland, creating farmer-wildlife conflict, as they fled their forest habitats that were being felled for timber, see: James Mwiti Mutegi and Paul M. Kyalo, ‘Origins of Human-Wildlife Conflicts in Meru District’, *International Journal of Academic Research*

The lack of surveys had a serious effect on the department's ability to form forest working plans, which lay at the heart of scientific forestry operations. A working plan was, and remains today, a thorough plan for the management and sustainable exploitation of a precisely defined forest area for a set period (for example, 10 to 20 years). It required complete surveys of the forest resources of the area to be managed if accurate annual yields and yearly increments in timber were to be calculated. In 1921 Troup conducted a thorough survey of the Forest Department and the state of forestry in Kenya. His report concluded that, "In no branch of work is the Forest Department of the Colony so backward as in the preparation of forest working plans, of which none exist at present."²³⁷ This situation was not unique to the Protectorate of course. In neighbouring Tanganyika, German and subsequent British rule after the First World War apparently resulted in no working plans being made before the 1940s, precisely because (at least in the case of British rule) of the lack of survey officers.²³⁸

An exhaustive search of the colonial archive indicates that the first, and apparently only, working plan created by the department before 1925 was in 1905 for Karura forest, adjacent to Nairobi. By the time of Troup's visit this plan had either been concluded or had simply been neglected; there is no extant record of it.²³⁹ The first working plan for forests within Londiani, the site of two working sawmills in the 1920s, was not begun until 1949.²⁴⁰ In 1914 it was reported that all forests were being worked on the basis of a 40-year rotation, but no further information is available.²⁴¹ Such a statement also indicates that proper working plans were not in force as a simple 40-year rotation would hardly suit all of the diverse forest types, from coastal mangrove to montane evergreen, that existed within the Protectorate. The statement on 40-year rotations even contradicted an earlier statement on the matter. The 1909-10 department annual report, written by Hutchins, does maintain that 'working plans' existed for forests outside the railway forest zone. However, there is no evidence of the coverage of these plans other than 20-year rotations being

in *Public Policy and Governance* 1, no. 1 (January 2014): 59–74. For a discussion of the ramifications of forest reserves created without proper surveying in South Nyeri see: Castro, *Facing Kirinyaga*.

²³⁷ R.S. Troup, 'Report on Forestry in Kenya Colony' (London: Crown Agents for the Colonies, 1922), 16.

²³⁸ Neumann, 'Forest Rights, Privileges and Prohibitions', 50, 52. The poor health of forestry in Tanganyika, indeed, was one of the reasons why Kenya's deficiency in working plans was so serious, as the Protectorate would increasingly take on the role of a centre for East African timber production. Statistics that demonstrate this role are absent before 1926, although it seems likely that trade to Uganda and Tanganyika existed. By 1925 the department reported that a "considerable quantity" of timber (mainly podo, *Podocarpus gracilior*, now known as *Africanus gracilior*) was being exported to Uganda and Tanganyika. Kenya Forest Department, *Annual Report 1925*, 8. After 1925 statistics exist to prove this trade: in 1926 187,959 cubic feet of timber was being exported to Uganda (representing 78 per cent of Kenya's export of timber excluding the lucrative pencil cedar). In 1928 33,391 cubic feet and 35,088 cubic feet of timber were exported to Uganda and Tanganyika, respectively. Statistics show this trade continued until at least the mid-1930s. Annual Reports, 1926-1935.

²³⁹ Logie and Dyson, *Forestry in Kenya*, 15.

²⁴⁰ D. Davis, *Preliminary Working Plan Report for Londiani Forest Division and the Bahati District of Thomson's Falls Forest Division, Kenya* (Nairobi: Forest Department, Kenya, 1949).

²⁴¹ 'Colonial Reports--Annual. No. 840. East Africa Protectorate. Report for 1913-14', 1916 1914, 31.

stipulated as the norm.²⁴² Troup's apparent ignorance of these in his report suggests that he felt the plans were not sufficiently complete to warrant the title 'working plan'.

Without working plans the department was handicapped in its long-term predictions of forest production. Concurrently, the security of the forest reserves was endangered by the inability of the department to precisely say where its forest reserves were and what they contained. The survey issue was thus of tremendous importance to the department. At the heart of the problem was the lack of staff able to complete the work. This resulted partly from the constraints placed on the department's finances by a government intent on reigning in spending and a settler community eager to limit the ability of the department to further expand its holdings. Although by 1914 the East Africa Protectorate was actually well-staffed with survey officers, their main role was to assist the extensive programme of land alienation and the establishment of settler farms to take place.²⁴³ Rather than aiding forestry, the speed in which alienation took place meant that the edges of forests were lost to settler farms. By 1921, this irked the department to the extent that it made the statement that officers of the Survey Department "were anxious to secure good boundaries on paper without reference to the lie of such boundaries on the land."²⁴⁴

The Forest Department did, in theory, have its own forest survey officer. In 1910 the forest surveyor, A.G. Baker, completed a survey of 280,176 acres of forest; all in connection with demarcating the boundaries between forest reserves and native reserves.²⁴⁵ Baker's progress would not continue past that point, however, since in the same year he was transferred to the Survey Department.²⁴⁶ This transfer was the beginning of a larger reorganisation of the Forest Department that saw Hutchins replaced by Edward Battiscombe as Conservator of Forests in 1911.²⁴⁷ Prompted by the complaints of Governor Girouard concerning the unnecessary excess of forestry, the reorganisation was designed to curb the ability of the Forest Department to engage in practices he considered wasteful, such as afforestation. Girouard was further critical of any work

²⁴² Kenya Forest Department, *Annual Report 1910*, 14.

²⁴³ G. E. Smith, *Survey Department, Annual Report for Financial Year 1907-1908* (Nairobi, 1908), 13. The East Africa Protectorate had 33 survey officers in 1914, Nigeria had 31, Uganda had 14, Gold Coast had 13, Nyasaland had 3, Sierra Leone had 2, and Gambia had one. Kirk-Greene, *On Crown Service*, 18.

²⁴⁴ Kenya Forest Department, *Annual Report 1920-21*, 2.

²⁴⁵ Kenya Forest Department, *Annual Report 1910*, 6.

²⁴⁶ *Evidence and Memoranda*, 1:447.

²⁴⁷ Note that Hutchins had held the title of Chief Conservator of Forests. There appears to have been no difference in the powers held by Hutchins and Battiscombe. The Chief Conservator of Forests title appears to have followed the Cape Colony example, which had an administrative structure of: Chief Conservator of Forests, Conservators, Assistant Conservators (also known as District Forest Officers and Superintendents), and Foresters. As Hutchins had been a Conservator in Cape Colony (1884 to 1892, thereafter a consulting forest officer) it follows that the title of chief was preferred when he was appointed to the East Africa Protectorate in 1907 so that this appeared clearly as a promotion. Hutchins had been overlooked for promotion to Chief Conservator of Forests in Cape Colony in 1905, an incident that apparently deeply affected him. His promotion to East Africa should perhaps be seen as an act of appeasement by the Colonial Office in light of this. Bennett and Kruger, *Forestry and Water Conservation in South Africa*, 2015, 85. As the Protectorate's Forest Department had no Conservators, only Assistant Conservators (sometimes styled verderers in the first two decades of its existence), it was logical that following Hutchins' departure the department should revert to a structure of: Conservator, Assistant Conservators, and Foresters. Hutchins, *1909 Report on the Forests of British East Africa*, 72.

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done by the Survey Department that did not support settlement, which excluded forest surveying.²⁴⁸ The governor directed particular anger toward the inefficient and unnecessary survey work the Forest Department had so far conducted, indicating his alarm that in five years' work only 3.5 per cent of the forests had been surveyed while the effort, lacking proper demarcation, had done little to stop Africans encroaching onto forest reserve. The governor's particular interest in surveys was connected with his greater goal: to aid settler development. His reaction may be seen as responding to a settler grievance that went back to at least 1905 over the issue of surveys holding up settlement. Lord Hindlip complained in 1905:

The Administration is under-staffed throughout, and especially in the Survey Department and Land Office. Great dissatisfaction has been caused by the failure of the Administration to provide for a survey of the country.²⁴⁹

Girouard's response to this standing grievance was to take the matter directly into hand, using the Provincial Administration to encourage chiefs to clear boundaries along forests, apparently with rapid results.²⁵⁰ In particular his "personal instructions" were carried out by the Forest Department when it conducted a "special survey" of the boundary between the Mount Kenya forests and potential alienated land in 1910.²⁵¹ The governor was pushing for a simpler method of demarcation done largely without survey. He argued in 1910:

I fail entirely to grasp the necessity for trigonometrical and plane-table survey on an elaborate scale, and in defiance of ordinary survey rules, to effect a purpose which can be accomplished a hundred times as quickly and economically by the simpler course I have outlined.²⁵²

Upon enquiry into why the more practical method of liaising with the Provincial Administration to have boundaries cleared without survey, Hutchins maintained that it was Provincial Officers who had been uncooperative in the matter, something that they denied completely.²⁵³ The result for the development of forest surveys was Girouard's 'recommendation': "The first duty of Forestry Department to be that of making its boundaries known *without* elaborate surveys and of protecting existing forests."²⁵⁴ The effect of this was sudden and dramatic. By the beginning of 1910 73,000 acres of forest had been demarcated, just four months later this had risen to 280,176 acres.²⁵⁵ Hutchins' reaction to Girouard's intervention into the operation of the department seems to have been one of submission, perhaps motivated by interest in his own survival. Continuing on the same tack that he was not responsible for the current state of affairs, he described the arrangements brought in by Girouard as "excellent" and agreed with the governor's criticism of the high cost of

²⁴⁸ Girouard, 'Interim Report on British East Africa, Enclosure 1', 11.

²⁴⁹ Allsopp, *British East Africa*, 13.

²⁵⁰ Girouard, 'Enclosure - Report Upon the British East Africa Protectorate', 78.

²⁵¹ Kenya Forest Department, *Annual Report 1910*, 6-7.

²⁵² Girouard, 'Enclosure - Report Upon the British East Africa Protectorate', 79.

²⁵³ *Ibid.*

²⁵⁴ *Ibid.*, 84. Emphasis added.

²⁵⁵ 'Colonial Reports--Annual. No. 669. East Africa Protectorate. Report for 1909-10', 1911, 20.

surveying.²⁵⁶ With these changes, and via the transfer of the survey officer and constraining of its budget, the Forest Department was effectively forced to place the development of surveys and working plans on hold.

The situation remained much the same until the late 1920s. In 1920 E.H. Pickwell, a forester who had worked with the department since 1910, was made forest surveyor. Even with this, little survey work could be done. In relation to surveying in 1921, but summing up the whole period covered by this chapter, Battiscombe stated:

Surveys are out of the question these days; not only are there very few surveyors but there are so many arrears of land surveys to be made up that any special work had to go by the board.²⁵⁷

1.5.4 Staffing

The issues that the Forest Department had with surveying were a reflection of its general personnel situation. The problem of a deficiency in staff numbers plagued the department from its inception until the early 1950s, but the effect of this in terms of the detriment to the establishment of forestry was particularly marked before 1925.

After the appointment of C.F. Elliott, a retired forest officer from India, as Conservator of Forests on a three-year contract in 1902, the department expanded in 1904 to make provision for four assistant conservators of forest. By 1906 one of these was invalided to England, never to return, while another, E.B. Battiscombe became temporary conservator until Hutchins arrived from South Africa. Under Battiscombe's temporary leadership the two further assistant conservators preceded on leave, leaving the department with a conservator and five European foresters.²⁵⁸ Three years later, Hutchins used comparisons of his own Forest Department to those in India, German East Africa, and Cape Colony. As shown in Table 1-3, when an enumeration is made of staff size and area of forest reserved it is clear that although the East Africa Protectorate's Forest Department saw rapid growth under Hutchins, it was comparatively understaffed and therefore overworked.

Forestry work in Kenya was thus time consuming and arduous. This was a position that barely changed through to the early 1920s, illustrated by an account by Assistant Conservator R. St Barbe Baker. When he conducted a safari of his territory in the early 1920s, it took him three months to cover the required 1,200 miles with the help of 40 porters.²⁵⁹ The weekly diaries of the forest officer stationed at Karura forest, primarily used as a source of woodfuel for Nairobi and for plantation experimentation, also reveal that the workload placed on foresters meant that it was typical that they worked every day of the week.²⁶⁰ This 'thin white line' of European officers was not unusual

²⁵⁶ Kenya Forest Department, *Annual Report 1910*, 6–7.

²⁵⁷ E. Battiscombe, Conservator of Forests to Professor Dunston 28 July 1921, QB/1/269, KNA.

²⁵⁸ Hutchins, *1909 Report on the Forests of British East Africa*, 70–71.

²⁵⁹ Baker, *Men of the Trees*, 132.

²⁶⁰ Karura Forest Weekly Diaries n.d., FOR/1/14, KNA.

<i>Territory</i>	<i>Reserved forest (acres)</i>	<i>Conservators*</i>	<i>Foresters*</i>	<i>Area per forester (acres)</i>
<i>British East Africa</i>	1,912,269	3	17	112,486
<i>German East Africa</i>	617,500	4	15	41,167
<i>Cape Colony</i>	1,208,923	20	100	12,089
<i>India</i>	152,960,000	200	11,000	13,905

* Conservators is here used to mean the administrative core of the departments, such as Chief Conservators, Conservators, and Assistant Conservators.

+ Foresters is here used to refer to the field staff of the department, normally referred to as Foresters or Rangers.

Table 1-3. Comparison of selected staff sizes and approximate area of governance per forester, c.1909. Nb. Although these data are all drawn from Hutchins, he does not make comparison of staff sizes to the area governed. The Protectorate's Blue Books indicate that there was actually 15 foresters in the territory and 6 senior staff, rising to 19 foresters and 6 senior staff in 1910. Temporary appointments could be the explanation for this discrepancy. Because of these issues these figures should be taken as approximately indicative of the workload of foresters rather than definite. Source: D.E. Hutchins, *East Africa Protectorate. Report on the Forests of British East Africa by D. E. Hutchins. With a Map and 25 Photographs.*, Parliamentary Papers: Command Papers, Cd. 4723, LX.1, 1909, 4, 29, 61–62, 72.

or unique to forestry of course; European staff levels were low in proportion to the Africans they administered across the country.²⁶¹ As argued by Berman, British dominance of Kenya was based on fear and the prestige of European rule, built on and supported by the threat of overwhelming, mechanised violence. The idea of prestige was deeply rooted in the British imperial psyche, finding expression in the white settlers' refusal to learn vernacular tongues and the segregation of races in Nairobi. It was intrinsically linked to the racist and paternal attitude of British imperialism, and the sense of superiority it gave colonial personnel allowed them to impose colonial law, administer justice, and forge links with politically ambitious Africans.²⁶² Forestry and European forest personnel should very much be seen as part of this phenomenon, relying on their prestige to extend the power of the colonial state across vast acreages of forest.

Despite its shortage of European staff, this was a period when the department was reluctant to employ Africans in positions above that of forest guard. The reason the department gave for this was the difficulty in finding Africans from within its forest guard force who were educated sufficiently to take up positions as assistant foresters, although the importance of maintaining the racial prestige of European officers was surely also a key factor.²⁶³ The department's own insistence

²⁶¹ Kirk-Greene, 'The Thin White Line', 35; Michael Thomason, 'Little Tin Gods: The District Officer in British East Africa', *Albion: A Quarterly Journal Concerned with British Studies* 7, no. 2 (1 July 1975): 145–60, doi:10.2307/4048227.

²⁶² Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, 203–7.

²⁶³ Interestingly, according to Schabel, in German East Africa the Department of Forestry and Wildlife was able to recruit local forest wardens (*Forstwärter*), apparently Indians, who could speak Arabic and Swahili as well as being literate in Latin script. These wardens were directly comparable to the East Africa Protectorate's forest guards, yet their education meant they could engage in duties that in the East Africa Protectorate were restricted to the higher positions of assistant foresters and the European staff. This must have been of great advantage to the Germans, as

that Africans work their way up from the bottom by first becoming forest guards or headmen from its squatter labour force acted as a deterrent. Those of ability, it complained in 1925, were unwilling to start employment in such low positions.²⁶⁴ This departmental policy was in part motivated by a general reluctance to allow Africans to pass through the type of training that European forest officers received. In his 1922 report on forestry in Kenya and in reference to creating a forestry school for Africans, Troup conveyed his view that “it is doubtful if the time has yet come for the establishment of such an institution.”²⁶⁵ The policy, then, appears to have been racially motivated and in line with the general neglect of African education by the colonial state in this period. Educational provision came entirely from mission schools before 1919; after this, Africans began to establish their own schools in tandem with those of the missions.²⁶⁶ In the case of forestry, rather than going through formal education, Africans had to prove their worth, their ambition, and their character by working their way up.

The department only began reporting on its African assistant foresters in 1921. In that year seven Africans were employed as assistant foresters, with at least five of these in sole charge of their respective forest stations; that is, because of the severe shortage of European staff these African assistant foresters operated without any direct European oversight and apparently did so without issue, as the department does not record any cause for complaint.²⁶⁷ Indeed, in 1924, the department reported a slight reduction to six African assistant foresters but all of these were operating in forest stations without European supervision.²⁶⁸ Perhaps motivated by the ability of these assistant foresters, by mid-1925 the department began a “native apprentice forestry scheme”, which engaged three Africans as assistant foresters, second grade in 1926.²⁶⁹ Notably, however, the annual report of 1926 does not cite the success or failure of the scheme. Indeed, it barely recognised it all. Instead, the report considered that the main staffing deficiency of the department was in the area of highly trained scientific experts; positions, of course, that Africans would not be able to fill because they were provided with only rudimentary education and prevented from progressing to higher levels of the department even when, as the six assistant foresters in the 1920s show, they were apparently quite able and responsible enough to operate without supervision.

by 1909 its *Forstwärter* force numbered 127. Schabel, ‘Tanganyika Forestry under German Colonial Administration, 1891-1919’, 131. Research by Neumann and Sunseri on Tanganyika does not reveal whether these *Forstwärter* continued British administration. Neumann, ‘Forest Rights, Privileges and Prohibitions’; Sunseri, *Wielding the Ax*.

²⁶⁴ Kenya Forest Department, *Annual Report 1925*, 3.

²⁶⁵ Troup, ‘Forestry in Kenya’, 40.

²⁶⁶ Ann Beck, ‘Colonial Policy and Education in British East Africa, 1900-1950’, *Journal of British Studies* 5, no. 2 (1966): 115–38; John E. Anderson, *The Struggle for the School: The Interaction of Missionary, Colonial Government and Nationalist Enterprise in the Development of Formal Education in Kenya* (London: Longman, 1970); R.M. Wambaa and Kenneth King, ‘The Political Economy of the Rift Valley: A Squatter Perspective’, in *Economic and Social History of East Africa*, ed. Bethwell A. Ogot (Nairobi: Kenya Literature Bureau, 1976), 198–220.

²⁶⁷ Troup, ‘Forestry in Kenya’, 40; Kenya Forest Department, *Annual Report 1921*.

²⁶⁸ Kenya Forest Department, *Annual Report 1924*.

²⁶⁹ ‘Minutes of Senior Commissioners’ Meeting’ 16 December 1925, QB/1/278, KNA; Kenya Forest Department, *Annual Report 1926*.

Several of the Forest Department's staff were indeed fully trained European foresters. This was certainly the case with the conservator Elliott's successors, Hutchins and Battiscombe. Hutchins had served as a conservator in South Africa and was educated in forestry in France and India, while Battiscombe received his forestry training at the University of Edinburgh, where he was awarded the Medal for Forestry, and in Germany.²⁷⁰ However, the majority of the staff under them appear to have lacked forestry qualifications, instead having "general" qualifications and who had come to East Africa to earn any living they could find.²⁷¹ These were men such as L.H. Seaford, an American appointed as a forest ranger (forester) in 1904 whose closest experience of forestry was the rubber industry, and W.P. Fitzgerald who was appointed in 1906 not for his forestry skills, for he had none, but for his experience as a road surveyor.²⁷² The general policy was to replace such officers with qualified foresters at the earliest time, which was the case with Seaford. However, qualifications and experience did not guarantee good service. Max Sehof, for example, had served in the Natal Forest Department for two years before joining the Kenya Forest Department in December 1907, but within a year his performance was assessed as poor and in July 1909 he left to become a gardener in Nairobi.²⁷³

With a lack of available men with education in forestry, in 1909 Hutchins wrote of about those with the right background and character for the job. Foresters should be young, married, working class, and from the country as "men who have led a town life are quite unsuitable."²⁷⁴ The same mindset that identified African ethnic groups with 'martial' characteristics as suitable for the role of forest guard also sought related qualities in its foresters. A working class outdoorsman, a man used to hard physical work but with the stability of family life, was preferable to a sedentary middle class clerk. These criteria certainly gave no guarantee that the best man for the job would be employed. When seeking a temporary forester in 1907, Hutchins' complained:

Of the four temporary foresters selected [as candidates] not one is suitable for permanent employment and only Greetham comes from the class of man indicated to the Secretary of State in my report on the organisation of the department.²⁷⁵

Greetham also had "not the command of his temper"²⁷⁶ but was employed despite Hutchins considerable reservations, such was the scale of the personnel problem within the department. By 1911, after two prospective foresters trained in Britain declined offers of employment in Kenya, for unknown reasons, Battiscombe began pleading to the government the very urgent need for "thoroughly trained" and "competent" foresters, particularly from the Forest of Dean School of

²⁷⁰ W.H. Mercer and A.E Collins, *The Colonial Office List for 1912* (London: Waterlow and Sons, 1912).

²⁷¹ Hutchins, *1909 Report on the Forests of British East Africa*, 71.

²⁷² L.H. Seaford to C.F. Elliot, Conservator of Forests; W.P. Fitzgerald Personnel File n.d., FOR/1/363, KNA.

²⁷³ Sehof, Max Personnel File 1907 to 1909, FOR/1/371, KNA.

²⁷⁴ Hutchins, *1909 Report on the Forests of British East Africa*, 73.

²⁷⁵ Hutchins, Chief Conservator of Forests to Commissioner for Lands 3 September 1907, FOR/1/382, KNA.

²⁷⁶ *Ibid.*

Forestry in England.²⁷⁷ Settlers could also be appointed, sometimes on a seasonal basis. No doubt driven by the economic slump of the early 1920s that resulted from a global depression in prices and subsequent decline in demand for goods from East Africa, the farmer H.C. Money sought and was given a post with the department in February 1921. Put on a two-week notice period, Money was dispensed with at the end of July of the same year after his work assisting with the nurseries in Karura forest during planting season was complete.²⁷⁸ John Adam similarly faced rapid dismissal after his services were no longer required, serving with the department for just six months in 1919. Adam's case is indicative that the department's immediate needs could outweigh any criteria it set for recruitment; Adam had served in the military, hardly unusual at the time, but he was by career a clerk in desperate need of employment.²⁷⁹

Forest officers without forestry training could sometimes have the option of receiving this at the Forest of Dean School of Forestry; this was notably the case with Guy Sandbach Baker. Joining the department in August 1902, Baker was one of the most prominent members of the Forest Department in its early period. For 13 years he acted as verderer, assistant conservator, of Nyeri Forest Division consisting of the forests of the Aberdares and Mount Kenya, some of the most economically and environmentally important forests in the Protectorate. He was senior to the two other prominent assistant conservators who joined the department in its first wave of recruitment: E.B. Battscombe, who joined in 1904, and W.B. Jackson, who joined in 1903.²⁸⁰ Despite this seniority, he would never take on the role of acting conservator of forests when the conservator was out of the country, as both Battscombe and Jackson did, or ascend to the highest position of conservator, which Battscombe would go on to hold between 1911 and 1925. This was a situation that Baker was all too aware of, and it was Battscombe's promotion to conservator that brought Baker's grievances to a head. In 1910 Baker wrote to Chief Conservator Hutchins, threatening to resign if he was passed over for promotion once again. He had, he argued, served longer than anyone else in the department and his work had never been a cause for complaint.²⁸¹ Despite not being promoted, Baker seems to have remained with the department, at least until 1913.²⁸² He proceeded on leave in January 1911. While on leave, Baker toured forests in the United States and Canada, a trip that the department refused to fund.²⁸³ While this might appear to have been a move by Baker to increase his forestry knowledge, it is equally likely that he was investigating sawmilling,

²⁷⁷ E.B. Battscombe, Conservator of Forests, to Secretary of the Administration, 27 April 1911, FOR/1/400, KNA.

²⁷⁸ H.C. Money Personnel File n.d., FOR/1/369, KNA. Although there are few extant personnel files for this period, a further case that can be classified as a settler was that of Capt. F. Chaloner-Beamish. Born in India in 1872, Beamish had worked in the police in South Africa and then went to work on several timber plantations there. In February 1919 he was put on a temporary contract with the Kenya's Forest Department as an Assistant Conservator in Nyeri. Just six months later Beamish quit, with correspondence concerning this implying that what Beamish really sought in East Africa was land to farm. Beamish Personnel File 1919, FOR/1/387, KNA.

²⁷⁹ J.W.D.A. Adam Personnel File n.d., FOR/1/386, KNA.

²⁸⁰ G.S. Baker Personnel File 1902 to 1921, FOR/1/383, KNA.

²⁸¹ G.S. Baker to Hutchins 18 May 1910, FOR/1/383, KNA.

²⁸² W.H. Mercer and A.E. Collins, *The Colonial Office List for 1913* (London: Waterlow and Sons, 1913), 170.

²⁸³ G.S. Baker Personnel File.

a way to put his forestry knowledge to use but escape the department, as he became a partner in Londiani Saw Mills in 1914.²⁸⁴ For unknown reasons, he left the mill in 1918, and was actually able to rejoin the department. Finally, this “temporary appointment” ended in 1920.²⁸⁵

Baker’s case highlights a significant aspect of the culture of the department: to be truly part of it, one had to be a fully trained forester. Baker was not. Indeed his only academic training in forestry came with the six months he spent at the forestry school at Parkend in the Forest of Dean, otherwise being educated at Owen’s College, Manchester, and the Cheshire County Agricultural College.²⁸⁶ He was, moreover, a settler. Baker had moved to the East Africa Protectorate with his parents in 1901. His father, F. Sandbach Baker, had served on the Manchester Chamber of Commerce and was firmly behind its recommendation to construct a railway through the Protectorate based on his belief that cotton could be grown there. It was for cotton growing that the Bakers initially took up residence on their 500 acres in Kenya, before becoming the first to try and succeed in raising and breeding dairy cattle in the Protectorate. Their success was the direct inspiration for Delamere’s move into the dairy business, and their farm was held up by the Colonial Office as the perfect example of Kenya’s future as a white man’s country. F. Sandbach Baker would claim: “We are the pioneers of British East Africa in the truest sense. We hold the first settler’s lease ever given out there.”²⁸⁷ Baker was thus a settler as well as being directly involved in the economic exploitation of the forests, a position that may have been seen by the department as putting him at odds with the interests of forestry that sought to remain detached from concerns of profit. It would seem that G. Sandbach Baker was passed over time and again because he did not, and could not, completely fit into the Forest Department.

Despite Hutchins’ insistence that only people with “special forest qualifications”²⁸⁸ should remain in the department, Baker did remain; such was his apparent ability to succeed in the position. The typical treatment of resignations in the annual reports of the department was to devote one or two lines extolling the career of the outgoing officer. It is notable that no such statement was made of Baker despite his long career with the Forest Department, perhaps because of his troubled history with Battiscombe, his status as an outsider, and his brief flirtation with an industry that the department was trying to contain. Moreover, Baker’s case illustrates the diversity of settler experience and positions within the Protectorate. Settlers were a vital source of manpower to the department while, of course, an opposing force to the operation of forestry in the Protectorate. To the settlers, the department was a means of employment for sons and those whose

²⁸⁴ ‘General Notice No. 267’, *The Official Gazette of the East Africa Protectorate* 16, no. 353 (1 April 1914): 291; ‘General Notice No. 638, Dissolution of Partnership’, *The Official Gazette of the East Africa Protectorate* 20, no. 597 (12 June 1918): 523.

²⁸⁵ Kenya Forest Department, *Annual Report 1920-21*, 1.

²⁸⁶ *1907 Handbook*.

²⁸⁷ No. 246, F. Sandbach Baker to Colonial Office in African No.985. Confidential. Further Correspondence (1912) relating to Concessions in Nyasaland, Uganda, and the East Africa Protectorate 18 December 1912, CO 879/110/1, TNA.

²⁸⁸ Hutchins, *1909 Report on the Forests of British East Africa*, 71.

enterprises had failed, even if they were hardly qualified for forestry work. The settlers did indeed meet some aspects of Hutchins' criteria in that to succeed as a settler one had to be willing to put up with the discomforts of living in the African bush and relish the outdoors life.

The department's personnel issues also extended to its management. These issues impacted, at differing points, the relationship the department had with other parts of the colonial government and within the department itself. In relation to the first impact, Chief Conservator of Forests Hutchins amplified tensions between his department and the rest of the colonial government. Indeed, as argued by Bennett and Kruger, Hutchins was well known as an eccentric and rather outspoken, being passed over for promotion in Cape Colony because of his lack of diplomacy in dealing with other government departments.²⁸⁹ Girouard reported that the executive staff of the Protectorate considered Hutchins "frankly impossible" to deal with.²⁹⁰ It is likely that Hutchins' stubbornness was a factor in the lack of cooperation between the Forest Department and Provincial Administration over the issue of demarcation before Girouard personally pushed the matter forward. This characteristic also incited Girouard to push for Hutchins' retirement and replacement by Battiscombe in 1911 and his suggestion that foresters be put under the authority of the Provincial Administration. Clashes of personality seem to have been common, with Girouard describing members of the Provincial Administration as being "supine", "self-satisfied, pigheaded, and highly unpopular."²⁹¹ The effect on the government's relationship with the settlers was particularly marked:

I will say that none of these officers [of the Provincial Administration] ... have the social qualifications necessary for the handling or entertaining of a white community. This is most unfortunate, and has been a very potent factor in accentuating the situation [of government-settler conflict].²⁹²

Within this context, Hutchins' leadership shaped a department that was, Girouard believed, "too ambitious and self-centred", which conducted its work "quite independently of all Provincial authority, guidance, or assistance."²⁹³ The Forest Department thus existed within an environment antagonistic to cooperation, a situation that Hutchins exacerbated by steadfastly defending the principles and operation of forestry in the Protectorate. The replacement of Hutchins with Battiscombe had a rapid and dramatic positive effect on this situation. In 1912 Girouard's next report on the administration of the Protectorate concluded there would be no need for the supervision of forestry by the Provincial Administration, as Battiscombe had ensured the two departments "are now working in complete harmony."²⁹⁴ Battiscombe's influence was effective; while the department, under his leadership, successfully fought against the granting of large

²⁸⁹ Bennett and Kruger, *Forestry and Water Conservation in South Africa*, 2015, 85.

²⁹⁰ Governor Girouard to Secretary of State for the Colonies 26 May 1910, 151, No. 10 in Administration of the East African Protectorate; correspondence CO 879/105/2, TNA.

²⁹¹ *Ibid.*, 149.

²⁹² *Ibid.*

²⁹³ Girouard, 'Enclosure - Report Upon the British East Africa Protectorate', 83.

²⁹⁴ E.P.C. Girouard, 'No. 19. Report on British East Africa', 18 March 1912, 193, CO 879/105/2, TNA.

concessions to settlers he did this without generating the level of antagonism that existed under Hutchins. There is also no evidence to indicate hostility between the Forest Department and the Provincial Administration or other departments during Battiscombe's tenure. If anything, Battiscombe may have been all too willing to acquiesce to the wishes of the executive and declined to push for, or have been ineffective in pushing for, more funding for forestry. It is telling that while many government departments reported a rise in spending between 1910 and 1920, there is barely any change in the expenditure of the Forest Department (Figure 1-3).

Further evidence suggests that Battiscombe's dedication to forestry may have in fact been considerably less than that of his predecessor. After R. St. Barbe Baker took up a post as assistant conservator in 1921 he set about the unique venture of creating a Kikuyu forestry organisation, the Men of the Trees, on his own initiative. This organisation allegedly took a distinctive approach to forestry in that it adapted existing Kikuyu custom to direct the energies of warriors toward tree planting.²⁹⁵ The support St. Barbe Baker claimed he received came not from his superior but from the American Consul General, an Italian missionary, a missionary doctor, and a British settler.²⁹⁶ St. Barbe Baker would later write:

My superior officer [Battiscombe] was a puppet who danced to the tune of the régime which had done virtually nothing to protect the soil, forests or wild life. He had studied a little botany, but though I was the first fully-trained silviculturist to be posted to Kenya, he had never been sufficiently interested to come and see my work in this field.²⁹⁷

St. Barbe Baker had clear animosity toward Battiscombe, but the validity of his criticisms has to be tempered when seen in the context of St. Barbe Baker's eventual dismissal from the colony for insubordination, in 1923, after apparently taking a blow from Battiscombe's riding crop intended for a Kikuyu.²⁹⁸ There are no other records of this incident and Battiscombe left no diaries or correspondence to illuminate it. Furthermore, St. Barbe Baker's account was only published after Battiscombe died in 1969.²⁹⁹ Although it seems impossible to prove the authenticity of this account, St. Barbe Baker's statement that Battiscombe had "studied a little botany" can be seen as an accusation that the conservator had a lack of interest in forestry work and is supported to an extent by a statement published in the Forest Department annual report after Battiscombe had retired in 1925. H.M. Gardner, his successor, would describe Battiscombe's forestry achievements only to the extent that the department had followed a "sound and conservative forest policy", while Battiscombe's botanic work warranted "special cause for gratitude." Gardner continued: "It is

²⁹⁵ Baker, *Men of the Trees*, 30–42. See footnote 101 for brief discussion of the Men of the Trees organisation. In short, the colonial records provide no information on this organisation and it appears to have never been officially endorsed, or possibly even mentioned, in any way.

²⁹⁶ *Ibid.*, 24–25.

²⁹⁷ Baker, *My Life My Trees*, 40.

²⁹⁸ *Ibid.*, 50.

²⁹⁹ 'Society Notes', *Radnorshire Society Transactions* 39 (1969): 5.

Year	Senior Staff*	Foresters	Total
1904-5	5	3	8
1906	7?		7?
1907	4	6	10
1908	6	14	20
1909	6	15	21
1910	7	19	26
1911	7	15	22
1912	5	14	19
1913	7	15	22
1914	6	14	20
1915	6	17	23
1916	8	14	22
1920	12?	13?	25
1925	10	13	23

* Senior staff includes the positions of Chief Conservator of Forests, Conservators of Forest, Assistant Conservators of Forest, Verderers, Surveyers, and Seedsman.

Table 1-4. Forest Department staff levels, 1904-1915, 1920, and 1925. Gaps in years indicate absence of data. Question marks indicate estimations based on staff mentioned in correspondence and other publications, as reports do not provide actual staff levels in those years. Annual Sources: East Africa Protectorate Blue Books, 1904-1915; Forest Department Annual Reports, 1909-10, 1914-15, 1920-1925; Correspondence by the Forest Department, 1904-1916, KNA.

entirely due to his personal enthusiasm and hard work that the Colony's forest flora is so comparatively well known."³⁰⁰ Extensive praise, then, is reserved not for Battiscombe's work in pushing forestry forward but for what appears to have been his great passion, botany; although, of course, botanical knowledge of the forests was a key foundation for further forestry work.³⁰¹ While there are no overt statements saying as such, these accounts do hint that Battiscombe was not fully respected as a forester and that perhaps this was, as St. Barbe Baker argued, because he was too closely aligned with a colonial administration that neglected the department. It is also telling that while Hutchins would receive a knighthood for his contribution to empire forestry and H.M. Gardner would receive an OBE for his forestry work in Kenya, Battiscombe received no such recognition.³⁰²

³⁰⁰ Kenya Forest Department, *Annual Report 1925*, 2.

³⁰¹ Battiscombe's publications were also devoted to botany, not forestry: E. Battiscombe, *Distribution of Plants in British East Africa* (The East Africa Natural History Society, 1910); E. Battiscombe, *The Collecting and Drying of Plants* (The East Africa Natural History Society, 1912); E. Battiscombe and C. W. Hopley, *List of Plants and Trees in V.C. Garden in Nairobi* (The East Africa Natural History Society, 1912).

³⁰² Accounts of a personnel case also hint that Battiscombe may have suffered issues in the management of his staff. In this case, William Adams, who signed on as a forester 13 June 1914 appears to have had a dispute with Battiscombe, who felt Adams was shirking his work evidenced on incomplete work diaries. Adams complained of a lack of supervision and being constantly moved from post to post (staying no longer than 10 months at any one station). Adams would eventually be let go in September 1922, apparently because of the need for economy in the department. In correspondence between Adams, Battiscombe, and H.M. Gardner (the acting conservator while

The recruitment of settlers and men of the empire seeking any work they could in the new Protectorate is probably what enabled the department to maintain relatively stable staff levels between 1910 and 1925, although absence of blue books and department annual reports prevents a definite conclusion in this regard (Table 1-4).³⁰³ Extant data also indicates the First World War had an effect on the department, with approximately a fifth of its staff leaving, temporarily or permanently, to serve in the forces. Again, absence of departmental records from the years of the war prevents proper evaluation of the effect of this on forestry operations.³⁰⁴ Despite the probable setbacks of the war, the department had regained a staff of 25 by 1920, most of whom had been educated (if not all in forestry) at the universities of Oxford, Cambridge, or Edinburgh, or from the Forest of Dean school. However, this figure was four short of the sanctioned provision for the department.³⁰⁵

Despite the environmental conditions of East Africa making it eminently suitable for white settlement, this was a fact that seems to have been poorly communicated to potential colonial forestry candidates in England. Sir Ralph Dolingnon Furse, the Assistant Private Secretary (Appointments) to the Secretary of State for the Colonies, argued that recruitment to the East African colonial service suffered merely by its association with what was considered to be ‘unhealthy’ West Africa.³⁰⁶

Battiscombe was on leave) Adams reveals his clear anger at this and suggests his dismissal was down to antagonism between himself and Battiscombe. Such a case was rare within the department, although this may of course be a case of records of other employment disputes being lost, but it adds to the theory that Battiscombe was not greatly liked by his own foresters. See correspondence and files within, W. Adams Personnel File 1914 to 1923, FOR/1/385, KNA.

³⁰³ There are significant gaps in the department’s annual reports from this period, with surviving copies in the Kenya National Archive (or the National Archive of the UK) for 1909-10 and 1914-15 and 1920-21, but not for years between those dates or for 1922-23. Clearly the First World War is a part explanation for some of these years; but it is unclear why records were either not made or were lost between 1910 and 1914. It can be speculated that this was indicative of the manpower pressures the department was under, and possibly also affected by Battiscombe’s leadership. Blue Books were published for the Protectorate between 1901 and 1916 (and then only resumed in 1926), apparently due to a backlog at the Government Printers in Nairobi. Henry F. Morris, *Government Publications Relating to Kenya (Including the East Africa High Commission and the East African Common Services Organisation) 1897-1963*, Publication no. R96995 (Microform Academic Publishers, 2006), <http://www.microform.co.uk/guides/R96995.pdf>.

³⁰⁴ The Blue Book for 1914 lists three members of the department’s staff as having joined the armed forces: Charles William Webber, Ernest Harrison Pickwell, and George Ernest Williams. Webber and Williams both left the department permanently, Webber in November 1913 and Williams in March 1914. Departmental records also indicate another who went to war (who are not mentioned in the Blue Book): James Whittet Newton joined the department as an assistant conservator of forests in 1912 after completing his BSc in forestry at Edinburgh. He joined the military in England in 1915 and is not listed as serving with the department when records recommence in 1920. *East Africa Protectorate Blue Book* (Government Printer, Nairobi, 1914), 245–48; J.W. Newton Personnel File n.d., FOR/1/374, KNA.

³⁰⁵ Troup, ‘Forestry in Kenya’, 40.

³⁰⁶ Ralph Dolingnon Furse to Mr Ellis 4 January 1920, 3, Correspondence and Diaries of Furse (Sir Ralph Dolingnon Furse), Colonial Office. MSS.Afr.s.415, Bodleian Library Special Collections. Furse was making reference to the popular conception that West Africa was “the white man’s grave” owing to its combination of heat, humidity, and notorious diseases. For an introductory examination of the emergence and growth of this concept, see: P. D. Curtin, “‘The White Man’s Grave:’ Image and Reality, 1780-1850’, *Journal of British Studies* 1, no. 1 (1 November 1961): 94–110.

	1913	1919	1920	1921	1922	1923	1924	1925	Total
<i>Administration</i>	82	108	179	90	16	67	72	85	699
<i>Educational</i>	19	13	37	43	59	30	45	46	292
<i>Financial & Customs</i>	15	27	31	21	4	12	9	10	129
<i>Legal</i>	10	11	21	10	3	8	11	12	86
<i>Police</i>	13	44	45	32	17	14	32	19	216
<i>Medical</i>	67	44	73	63	41	49	84	129	550
<i>Agricultural</i>	11	15	46	40	17	16	35	35	215
<i>Forestry</i>	1	4	33	26	3	11	20	16	114
<i>Other Scientific</i>	9	3	5	7	2	2	7	8	43
<i>Survey & Geological</i>	2	0	30	32	9	5	12	15	105
<i>Other Appointments</i>	12	22	28	13	14	12	22	25	148

Table 1-5. Total colonial appointments between 1919 and 1925. No data is given for appointments between 1913 and 1919, however the figure is likely to be extremely low owing to military recruitment. Source: Colonial Office, Colonial Office Appointments Committee, 4 July 1929, Correspondence and Diaries of Furse (Sir Ralph Dolingnon Furse), Colonial Office. MSS.Afr.s.415, Bodleian Library Special Collections.

Recruitment for forestry across the colonies was, in comparison to other fields, low (Table 1-5).³⁰⁷ A post-war boom from 1919 to 1921 is also evident, although it is quite likely that forestry would not have benefited from this were it not for greater cooperation between the Colonial Office and the forestry schools in Britain:

In 1919 we found it impossible to get enough trained men. We therefore got into personal touch with the professors at the principal Forestry schools and got them interested in our services. We brought in a scheme of probationary selection of recommended students, giving them assistance with their training.³⁰⁸

By the 1920s forestry as a discipline was becoming increasingly professional and dependent on university-level education. The increased cooperation between the Colonial Office and educational institutions mentioned by Furse, which culminated in the establishment of the Imperial Forestry Institute at Oxford in 1924, is an example of this. To Furse, such developments were the natural reaction to the problem of having under- or unqualified staff in forestry institutions. He argued:

[W]e must have suffered in earlier days [i.e. before 1910] from having often to take what we could get in view of the conditions of service and the climatic reputation of many protectorates. ... though we have certainly had to take on several men since [the First World War] (and still have to) whom one would much rather not see get a place.³⁰⁹

Within the context of this, the recruitment of settlers into the Kenyan Forest Department represented both a solution to the lack of interest potential recruits in Britain had in African forestry and a cause for concern because it delayed the department's ability to engage in scientific

³⁰⁷ Note that Furse's figures appear to be applicable to those appointments made through the Colonial Service of university-educated men for, in the case of forestry, more senior positions such as assistant conservator of forests. Foresters, as discussed above, were often recruited locally or through informal channels on an ad hoc basis.

³⁰⁸ Ralph Dolingnon Furse, 'Main Lines of Improvement' No date (likely 1921, 3-4, Correspondence and Diaries of Furse (Sir Ralph Dolingnon Furse), Colonial Office. MSS.Afr.s.415, Bodleian Library Special Collections.

³⁰⁹ Ralph Dolingnon Furse, 'Note to Colonel Avery on Work of Appts. Branch (Confidential)' 19 February 1921, 5, Correspondence and Diaries of Furse (Sir Ralph Dolingnon Furse), Colonial Office. MSS.Afr.s.415, Bodleian Library Special Collections.

forestry. People like Sandbach Baker, who was both a settler and an 'informal' forester able to perform his duties to a high degree, would seem to have been the exception. Certainly, Furse's attitude supports the idea that the settler forester would never be truly able to become part of the department. Within the East Africa Protectorate, Battiscombe's leadership, if it indeed was disinterested and more concerned with placating the government than scientific forestry, only served to exacerbate the situation.

1.5.5 Plantation Forestry

The core forestry practice of the Forest Department in this period was the establishment of plantations, necessary to provide woodfuel to the railway. The creation of plantations, orderly in arrangement, highly productive, and largely monocultural would continue to be the primary policy of the department throughout the colonial period and beyond, just as they are in modern scientific forestry systems across the world. In Kenya, they had particular relevance in relation to their method of establishment and maintenance, which involved employing African agriculturists to reside within and tend the young plantation forest.

Before large-scale plantations could be established in the Protectorate several years of research with various tree species was required to determine what would be the most suitable species for further development. This period, approximately running from 1902 to 1910 involved the planting of small plantations, typically a few acres, along with the creation of the Nairobi Arboretum, where numerous native and exotic trees were grown experimentally.³¹⁰ Major nurseries were established in Nairobi, Dagoretti, Londiani, and near Mount Kenya in the highlands and at Muhoroni in Nyanza with the express purpose of propagating trees for plantations.³¹¹ By 1909 these nurseries were very successful, producing approximately 1.25 million trees annually, which the Protectorate's annual report stated were "nearly all" being used in plantations within the Uganda railway zone to supply railway fuel, although the department's own records indicate

³¹⁰ Battiscombe and Hobley, *List of Plants and Trees in V.C. Garden in Nairobi*. For example, the following trees were planted (in blocks of 50) in the arboretum in 1909-10 (common names and botanical names as given in the report): Sydney blue-gum (*Eucalyptus saligna*), Forest mahogany (*Eucalyptus resinifera*), Iron bark (*Eucalyptus siderophloia*), Crimson Gum (*Eucalyptus ficifolia*), Mediterranean Cypress (*Cupressus sempervirens*), Mexican Cypress (*Cupressus benthami lindleyi*), Macrocarpa Cypress (*Cupressus macrocarpa*), Guatemala Cypress (*Cupressus sp. from Guatemala*), Portuguese Cypress (*Cupressus lusitanica*), Sandal or m'Hugu (*Brachylaena hutchinsii*), a Guatemala Pine (*Pinus sp. from Guatemala*), Yellowwood (*Podocarpus gracillior*), various Japanese species, Native timber (*m'Karàra*), Crimson Spathodea (*Spathodea nilotica*), Japanese Cedar (*Cryptomeria japonica*), *Albizia molluccana*), Thuya (*Thuya occidentalis*), Casuarina (*Casuarina quadrivalvis*), and Blackwood (*Acacia melanoxylon*). Kenya Forest Department, *Annual Report 1910*, 4-5.

³¹¹ 'Colonial Reports--Annual. No. 592. East Africa Protectorate. Report for 1907-08', 1909, 14. Several other nursery sites were also in use by 1907, however details of these are never given suggesting they were on a lesser scale or temporary.

	Plantations created (acres)	Comprising (acres):	
		Indigenous trees	Exotic trees
1909-10	114		Majority in railway zone
1910-11			
1911-12	575		
1912-13	457		Railway zone and Karura (Nairobi supply)
1913-14	476	139	337 (railway zone)
1914-15	558	84	474 (railway zone)
1915-16	561	119	442 (railway zone)
1916-17	1,079		
1917-18	1,126		
1918-19			
1919-20			
1920-21	1,045		
1921	1,173		
1922			
1923	1,806		
1924	2,127	1,479	648
1925	2,177	1,480	697

Table 1-6. Acreage of plantations established between 1909 and 1925. Omissions indicate those years when no data are available. Source: Forest Department Annual Reports 1909-10 to 1925, East Africa Protectorate Annual Reports, and *Forest and Timber Resources of the British East Africa* (London, 1920).

approximately 42 per cent of planting had the ultimate objective of timber supply.³¹² Nevertheless, planting in the railway zone clearly dominated up to at least 1916 (Table 1-6).

The emphasis on establishing a woodfuel supply to the Uganda Railway continued throughout the 1910s. This was founded on Hutchins' heavy emphasis on building up forestry in Kenya on the back of the railway's fuel demands and expected future fuel use. Even when, as in 1910, the railway discussed switching to coal for the Mombasa to Nairobi stretch of the railway because of the rapid depletion of the indigenous forests near the track, Hutchins continued to emphasise woodfuel because he believed it had the potential to compete with coal in the future.³¹³ Governor Girouard maintained that it was his pushing of the issue of the railway supply that effectively created the policy of favouring fuel development over timber.³¹⁴ This is undermined by the agreement reached by the Forest Department and the Uganda Railway in 1909 as well as the considerable prior interest the department had in the railway fuel situation, which indicate that plantations in the railway zone would have been established regardless of Girouard's intervention.³¹⁵ Indeed, rather than executive

³¹² 'Colonial Reports--Annual. No. 669. East Africa Protectorate. Report for 1909-10', 19; Kenya Forest Department, *Annual Report 1910*, 2-3. Timber trees are listed as being grown in Dagoreti (in proximity to present-day Ngong Road Forest) and at a location in Kiambu (possibly Karura Forest).

³¹³ Kenya Forest Department, *Annual Report 1910*, 14-15.

³¹⁴ Girouard, 'No. 19. Report on British East Africa', 193.

³¹⁵ Hutchins, *1909 Report on the Forests of British East Africa*, 48.



Figure 1-4. Tree nursery described as being at Kikuyu, c.1924. The men working in the nursery are cited as being Kikuyu from Richard St Barbe Baker's Men of the Trees organisation. Presumably, it is Baker overseeing them. Image copyright and reproduced with permission of Commonwealth Forestry Association. *Source*: R. St. Barbe Baker, 'The Men of the Trees (or African Forest Scouts)', *Empire Forestry Journal* 3, no. 1 (1924): 87-92.

orders, it would be Hutchins' *Report on the Forests of British East Africa* that would guide forestry implementation after its publication in 1909 to at least the mid-1920s, when H.M. Gardner succeeded E.B. Battiscombe as conservator.³¹⁶

By the mid-1920s there was a marked change to the planting of indigenous species, away from the railway zone (Table 1-6). Experiments had been conducted on the various properties of indigenous timbers and nine sawmills were processing such wood by 1910.³¹⁷ Notably, the settlers, eager for sources of revenue, were keen to develop the use of indigenous timbers. It was E.S. Grogan, not the Forest Department, who took the initiative to send samples of Kenya's most promising timbers, podocarpus (*Podocarpus gracilior*, hereafter podo)³¹⁸ and cedar (*Juniperus procera*), to the

³¹⁶ Notably, a 1903 report by Hutchins had inspired a similar surge of state plantation activity in the Transvaal, also with eucalypts. Bennett, 'The El Dorado of Forestry', 34.

³¹⁷ 'Colonial Reports--Annual. No. 669. East Africa Protectorate. Report for 1909-10', 20.

³¹⁸ *Podocarpus gracilior* has now been reclassified as *Afrocarpus gracilior* and was generally known within the colonial period in Kenya as 'podo' or 'East African Yellowwood' (with these names still in use today). The term 'podo' is used throughout this thesis to refer to this species as it was the most commonly used name by the Forest Department. Podo is considered conspecific with *Afrocarpus falcatus* (largely found in southern and southeastern Africa) by some botanists today, although it should be noted that this is disputed due to morphological

Imperial Institute in 1905.³¹⁹ Despite this, the department was keenly aware of the value of cedar, an awareness that was born out of a reaction to the railway's history of fuel use between 1900 and 1910, which was largely based on exploiting the indigenous forests in proximity to the railway. The effects of this exploitation were doubly alarming to the department as the principle wood being exploited was the potentially most profitable tree in the Protectorate: cedar. Following the Imperial Institute report of 1906, the indigenous variety of cedar found in Kenya, *Juniperus procera*, was confirmed as a viable alternative to the American cedar commonly used in pencil manufacture. Expectations that the American supply would be depleted by approximately 1930 gave the department hope that it might be possible to establish Kenyan cedar within the international market. With the establishment of exotic plantations the department was therefore hoping to reduce the railway's average annual usage of 100,000 cubic feet of cedar and preserve a potentially extremely valuable export timber.³²⁰

The policy established by Hutchins and carried out under Battiscombe was one which prioritized the conversion of existing forests or the creation of new forest plantations using exotic trees rather than indigenous species. However, in the early 1920s (Table 1.5) there was a dramatic shift toward the planting of indigenous trees in plantations. The shift occurred under Battiscombe,

differences. Podo is native to northeast and east Africa, specifically Burundi, Democratic Republic of the Congo, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, and Uganda. It grows at altitudes between 1,500 and 2,600 metres. Like other conifers, podo is classified as a softwood for timber purposes. Streets' 1962 account of trees within the Commonwealth describes its timber characteristics as "soft to fairly hard, light to fairly heavy, with a straight grain and fine texture, working well to a good finish and taking nails better than most *Podocarps*, but not very durable; used for interior construction, such as doors and flooring, and for furniture." It is generally used for similar purposes to pines, but is notably much slower growing than most species of pine introduced into Kenya as timber trees and required careful seasoning. Podo is sometimes considered the same as *Podocarpus latifolius* ('Real Yellowwood' or 'True Yellowwood'), the national tree of South Africa, but is less durable and therefore less valued. Khare et al., 'Joint Forest Management', 139–40; R. J. Streets and Robert Scott Troup, *Exotic Forest Trees in the British Commonwealth* (Clarendon Press, 1962), 617; Aljos Farjon, 'Afrocarpus Gracilior: The IUCN Red List of Threatened Species 2013: e.T42439A2980350', 2013, <http://dx.doi.org/10.2305/IUCN.UK.2013-1.RLTS.T42439A2980350.en>; Aljos Farjon, 'Afrocarpus Falcatus. The IUCN Red List of Threatened Species 2013: e.T42438A2980290', 2013, <http://dx.doi.org/10.2305/IUCN.UK.2013-1.RLTS.T42438A2980290.en>; Aljos Farjon, W. Foden, and L. Potter, 'Podocarpus Latifolius. The IUCN Red List of Threatened Species 2013: e.T42510A2983787', 2013, <http://dx.doi.org/10.2305/IUCN.UK.2013-1.RLTS.T42510A2983787.en>; Aerts, R., 'Afrocarpus Falcatus (Thunb.) C.N. Page. Record from PROTA4U. Louppe, D., Oteng-Amoako, A.A. & Brink, M. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources Végétales de l'Afrique Tropicale), Wageningen, Netherlands', 2008, <http://www.prota4u.org/protav8.asp?h=M4&t=Podocarpus&p=Afrocarpus+falcatus#Synonyms>; J.M. Okeyo, 'Podocarpus Latifolius (Thunb.) R.Br. Ex Mirb. [Internet] Record from PROTA4U. Louppe, D., Oteng-Amoako, A.A. & Brink, M. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources Végétales de l'Afrique Tropicale), Wageningen, Netherlands', 2008, <http://www.prota4u.org/protav8.asp?h=M4&t=Podocarpus&p=Afrocarpus+falcatus#Synonyms>.

³¹⁹ Imperial Institute, 'Timbers from the British East Africa Protectorate', *Bulletin of the Imperial Institute* (London: Imperial Institute, 1906), 15. By 1909 the department was predominantly recommending as profitable (and planting in the lower highlands between 5,500 and 7,000 feet): exotic Guatemala cypress (cited as *Cupressus benthamii*, commonly now known as Mexican cypress but possibly the same as *Cupressus lusitanica*), the exotics *Grevillea robusta*, *Syncarpia glomulifera*, and *Tristania conferta*, sandal (no botanical name is given for this but the African of m'Nderundu is; no records of such a tree can be found but it is assumed it was indigenous), and the exotic "Ironbarks and Casuarina in mixture" (*Eucalyptus* and *Casuarina*, respectively). In higher forests, between 7,000 and 8,500 feet, the department recommended the most profitable trees as Guatemala Cypress and Ironbarks, although the indigenous *Juniperus procera* is also cited. Notably, the department reported no success in growing pines (see chapter 3 for discussion of the eventual propagation of pines in Kenya). Kenya Forest Department, *Annual Report 1910*, 3–4.

³²⁰ Kenya Forest Department, *Annual Report 1910*, 15.

and his influence in this policy should not be ignored as his extensive knowledge of botany and botanic research in Kenya suggest a keen interest in developing the colony's indigenous tree species. Battiscombe was personally responsible for sending several hundred specimens for botanical research to Kew between 1909 and 1913, while samples were also sent to Königlichen Botanischen Gartens in Berlin in 1911. The process of analysing such samples was, however, long which inevitably delayed the ability of the department to pursue planting. No doubt delayed considerably by the First World War, feedback on specimens sent to Kew in 1914 for analysis was not received until 1916.³²¹

Before this new emphasis on indigenous planting in 1924 the department's focus was on exotic plantations. The general policy as laid out in 1910 was for 66 per cent of all plantings to be of exotic species, with the majority of these being from the genus *Eucalyptus*, most commonly blue gum (*Eucalyptus globulus*) or *Acacia*, most commonly black wattle (*Acacia decurrens*).³²² Hutchins' experiences in forestry in India and South Africa were influential in his exotic plantation policy, as was research conducted by others in Europe and America.³²³ In his assessment of the productive ability of the highland forests of Kenya, Hutchins' optimism came not from observations of the country's indigenous species but from a comparison to the similar conditions found on sites of eucalyptus plantations he had witnessed in India. Similarly, he drew comparisons between Kenya's forests and the undeveloped, low yield and unprofitable forests in South Africa which he had transformed into profitable high-yield forests through the use of exotic plantations, specifically of varieties of *Acacia*.³²⁴ The unreliable natural regeneration of indigenous tree species further pushed the department toward the use of reliable, propagated exotic trees.³²⁵ In contrast to the priorities in South Africa and India, Hutchins pushed not for the cultivation of black wattle, but for eucalyptus because it could be harvested for woodfuel after just ten years or, according to his original plan, the tree could be successfully coppiced after six to eight years and continue producing fuel in the form of poles for up to 75 years. This was, Hutchins argued, clearly the prudent policy and it ideally met the increasing and urgent fuel needs of the Uganda Railway.³²⁶ It was Hutchins own research in

³²¹ Correspondence and documents within Economic Products - Specimens sent to Kew n.d., QB/1/306, KNA.

³²² Kenya Forest Department, *Annual Report 1910*, 3–4. The first major plantation of *Eucalyptus globulus* was established, at Elburgon, in 1913: 'The Planting and Management of Eucalyptus for Fuel (Bulletin No. 27)' (Forest Department of Kenya, 24 March 1936), 2. However, *Eucalyptus globulus* was first planted in Kenya not by the Forest Department but Frederick Jackson, the explorer and later Lieutenant-Governor of the Protectorate, at the government station in Eldama Ravine in 1897. This planting is described as being in rows and it is possible that it was planted there to act as a marker to distinguish the government station rather than for its fuel or timber potential, see: Hutchins, *1909 Report on the Forests of British East Africa*, 118.

³²³ For the history of the popularity of Eucalyptus with foresters see Bennett, 'The El Dorado of Forestry'.

³²⁴ Hutchins, *1909 Report on the Forests of British East Africa*, 10, 11, 25–31. For discussion of Hutchins' work in South Africa, see Bennett and Kruger, *Forestry and Water Conservation in South Africa*, 2015.

³²⁵ 'Colonial Reports--Annual. No. 705. East Africa Protectorate. Report for 1910-11', 1913 1912, 23.

³²⁶ Kenya Forest Department, *Annual Report 1910*, 14–15; Hutchins, *1909 Report on the Forests of British East Africa*, 50. Hutchins describes *Eucalyptus globulus* as also being extensively planted in South Africa, indeed he states it was the most commonly planted tree on farms. However, its timber under the South African climate was reportedly of "inferior quality", leading to the Forest Department there preferring wattle. Wattle also had the advantage of producing a great number of poles that were suitable as pit props in the numerous mines of South Africa, see: *Ibid.*, 118.

India going back to 1883, backed up by more recent research done in Australia that convinced him, and therefore the department, that eucalyptus would be the fuel of choice for the railway. "No other tree in the world" he argued, "can produce 10 tons [of woodfuel] per acre, per year, as an average over a long term of years."³²⁷ The department further argued, and was supported by the railway, that wattle was an inferior woodfuel for the railway in comparison to eucalyptus, apparently burning too quickly.³²⁸ Although the railway did enter into contracts with settlers who grew wattle on their farms for the export of bark (used to produce tannin) for the use of the harvested wattle as fuel, this was small in scale, being limited to farms in close proximity to the railway.³²⁹ The Forest Department's research further indicated that wattle only grew well as a fuel at altitudes between approximately 1,980 and 2,280 metres, putting the environs of Nairobi and all the railway between the colonial capital and Mombasa out of the optimal growth zone.³³⁰ The department did continue to plant wattle after 1910, but all of these factors combined to make it follow a policy of extensive eucalyptus planting for the railway; a policy that was confirmed and supported by Troup's assessment of forestry in Kenya in 1922.³³¹

Wattle was extensively planted in Kenya, however, because its bark produced excellent tannin. The tree became a popular crop planted by settlers between 1910 and 1920, with Lord Delamere leading the way by planting 2,000 acres of wattle on his farm in 1911 and being the principle shareholder in a company that had planted a further 3,000 acres. He also owned a small factory for processing the wattle bark, which apparently ran at a profit until 1921 when the market price dropped.³³² The Forest Department assisted this industry by initially experimenting with the ideal growing conditions for the tree and by liaising with the Imperial Institute in its 1909 assessment of the tannin potential of wattle's bark.³³³ Beyond this, the department took little interest in the development of the industry, and appears to have had no involvement in the planting of wattle by settlers and, by the late 1920s, Africans as a cash crop, instead allowing the Agriculture Department to take over this role.³³⁴

³²⁷ Hutchins, *1909 Report on the Forests of British East Africa*, 50.

³²⁸ Cranworth, *A Colony in the Making*, 118; W.G. Leckie, 'The Growing of Wattle and the Production of Wattle Bark in Kenya (Bulletin No. 5)' (Nairobi: Department of Agriculture, 1933), 1.

³²⁹ Hill, *Permanent Way: The Story of the Kenya and Uganda Railway: Being the Official History of the Development of the Transport System in Kenya and Uganda*, 1:295; H. F. Ward and J. W. Milligan, *Handbook of British East Africa, 1912-13. Illustrated and with Two Maps* (Nairobi: Caxton Printing & Publishing Co., Ltd., 1912), 104.

³³⁰ Kenya Forest Department, *Annual Report 1910*, 20-22.

³³¹ Troup, 'Forestry in Kenya', 31-32.

³³² Huxley, *White Man's Country. Lord Delamere and the Making of Kenya*, 1:167.

³³³ Kenya Forest Department, *Annual Report 1910*, 20-22.

³³⁴ Leckie, 'The Growing of Wattle and the Production of Wattle Bark in Kenya (Bulletin No. 5)'; Robert M. Maxon, 'Where Did the Trees Go? The Wattle Bark Industry in Western Kenya, 1932-1950', *The International Journal of African Historical Studies* 34, no. 3 (1 January 2001): 565-84, doi:10.2307/3097554; Peter A. Dewees, 'Social and Economic Incentives for Smallholder Tree Growing: A Case Study from Murang'a District, Kenya', 1993, <http://www.fao.org/docrep/U8995E/u8995e00.htm#Contents> Chapter 5: The case of black wattle; Kitching, *Class and Economic Change in Kenya: The Making of an African Petite Bourgeoisie 1905-1970*, 62, 121, 320; Mackenzie, 'Contested Ground', 703; David Anderson and David Throup, 'Africans and Agricultural Production in Colonial Kenya: The Myth of the War as a Watershed', *The Journal of African History* 26, no. 4 (1 January 1985): 337.

By 1910 the Forest Department's plantation policy was in place. It would plant fast-growing exotic tree species within the railway forest zone to provide fuel for the Uganda railway. However, given the department's lack of resources, both monetary and personnel, carrying out this policy was difficult. Plantation establishment and management was extremely labour intensive, requiring that land be first cleared, then prepared, planted, and tended for several years. Hutchins' initial answer to this problem was to suggest that qualified white South African workers be employed, although whether this was to be in a purely supervisory role or also as the main labour force is unclear. While it seems more likely that Hutchins was envisaging a white, South African force of supervisors it is also possible he saw forestry in Kenya as an outlet for poor whites.³³⁵ This was a solution that ran afoul of an important distinction of white settlement in Kenya: it was to be the settlement of a white ruling class whose power rested on the African perception of this class as rulers. The introduction of a white labouring class risked undermining this hierarchy.³³⁶

Kenya's forest labour problem would instead find its solution via the imperial forestry network that was by the early twentieth century coming to define forestry. There appears to have been little official communication between the Protectorate's Forest Department and those in other British territories, evidenced by a lack of extant correspondence between 1902 and 1925. Certainly, communication must have existed, as the department was receiving tree samples from across the world and working with Kew and the Imperial Institute in Britain, and, after 1920, attending the British Empire forestry conferences.³³⁷ Kenya's network seems to have been rather dependent on the same types of patronage and personal relationships that underpinned the British social system of the time. Thus, the solution to the plantation problem came from an exchange of personnel who carried knowledge and experience of forestry elsewhere with them; in this case, it was Hutchins' prior experience in both India and South Africa.

Hutchins had no doubt learnt of *taungya* while serving in the Indian Forest Service, as Indian forestry had utilised, although was by no means dependent on, the employment of agriculturists who would reside within the forest and act as forest labourers. Such labourers, known within Kenya for most of the colonial period as forest squatters, practiced what was referred to as "Agriculture-

³³⁵ Hutchins, *1909 Report on the Forests of British East Africa*, 77. There are no available details of quite what Hutchins' reasoning behind or meaning in his suggestion was. It is possible to speculate that he was influenced by the use of poor, white, predominantly Afrikaner workers for plantation establishment by the South African Forest Department, which was occurring concurrently to his statement (these being the Knysna forest woodcutters, who numbered 1,269 in 1913). Possibly, Hutchins' envisioned Kenya to be an outlet for the problem of poor white South African employment. If this was so, it is notable that both the labour policies of forestry in South Africa and Kenya were influenced by the perceived dangers of having a population of poor white settlers. Although relatively insignificant, a part of South Africa's policy to address the poor whites problem was by employing them in the forests; conversely in Kenya the fear of the creation of this problem cut short the importation of white labour. For discussion of the use of white labour for plantation establishment in South Africa see Brett M. Bennett and Fred Kruger, *Forestry and Water Conservation in South Africa* (Acton: The Australian National University Press, 2015), 106–16.

³³⁶ Kennedy, *Islands of White*, 44.

³³⁷ Kenya Forest Department, *Annual Report 1915*, 27–28; J. M. Powell, "Dominion over Palm and Pine": The British Empire Forestry Conferences, 1920–1947', *Journal of Historical Geography* 33, no. 4 (October 2007): 852–77, doi:10.1016/j.jhg.2006.07.001.

<i>Year</i>	<i>Number of squatters</i>
1909-10	191
1914-15	561
1916	1500
1917	
1918	
1919	
1920-21	1500
1923	1458
1924	1539
1925	1526

Table 1-7. Number of forest squatters employed by the Forest Department. Blanks indicate a lack of data. Source: Forest Department Annual Reports, 1909-10, 1914-15, 1920-1925.

cum-Forestry” in India or, in modern forestry terminology, agroforestry.³³⁸ British forestry first became aware of this system in 1856, when it was demonstrated by forest agriculturists in Burma, where it was known by the still widely used term of *taungya* forestry.³³⁹ After Hutchins moved to the Cape Forest Service in 1882, where because of the colony’s emphasis on afforestation with plantations he experimented with *taungya*. However, within the Cape, this “did not prove a success and was later abandoned.”³⁴⁰ Possibly, this was because of larger labour problems within South Africa and resistance to allowing black Africans access to reserved areas.³⁴¹ In Kenya, Hutchins would remember his experiment and again attempt it, beginning in 1910 under the name *shamba* (Swahili for farm, field, and plantation) at either Dagoreti or Karura (what is today Ngong Road Forest, approximately five kilometres west from Nairobi, or Karura forest, today on the northern outskirts of Nairobi, respectively).³⁴² This time the system would be very much a success. In a further case of the transfer of forestry knowledge outside of formal networks of information exchange, *taungya* appears to have been transferred into Burma by migrating agriculturists who had practised the system in China for approximately 500 years.³⁴³

³³⁸ Kenya Forest Department, *Annual Report 1910*, 3; Nair, *An Introduction to Agroforestry*.

³³⁹ Raymond L. Bryant, ‘From Laissez-Faire to Scientific Forestry: Forest Management in Early Colonial Burma, 1826-85’, *Forest & Conservation History* 38, no. 4 (1 October 1994): 160–70, doi:10.2307/3983602; Bryant, ‘The Rise and Fall of Taungya Forestry’; Bryant, *The Political Ecology of Forestry in Burma*; Julian Evans, *Plantation Forestry in the Tropics*, 2nd ed. (Oxford: Clarendon Press, 1992), 290–94.

³⁴⁰ N. L. King, ‘Historical Sketch of the Development of Forestry in South Africa’, *Journal of the South African Forestry Association* 1, no. 1 (1 October 1938): 7, doi:10.1080/03759873.1938.9630679.

³⁴¹ For discussion of labour issues surrounding forestry in Cape Colony and wider South Africa, see Bennett and Kruger, *Forestry and Water Conservation in South Africa*, 2015.

³⁴² The department’s records do not explicitly state the location of the first *shamba* plantations. However, it is reported that the system’s African “forest cultivators” worked under Forester Moon. Confusingly, the department employed two foresters with the surname of Moon: J.L. Moon and F.L. Moon. Both of these men (presumably brothers) worked near Nairobi, one at “New” forest station (Karura) and one at “Dagoreti” (Ngong Road). It is unclear which of these sites saw the first use of *shamba*, but it is clear that *shamba* was initially deployed in close proximity to Nairobi. Kenya Forest Department, *Annual Report 1910*, 8.

³⁴³ Nicholas Menzies, ‘Three Hundred Years of Taungya: A Sustainable System of Forestry in South China’, *Human Ecology* 16, no. 4 (1 December 1988): 361–76.

Within this system as it was used in Kenya, the forest squatters, as they were usually known, were employed by the Forest Department to clear an uneconomic forest area, that is one of sufficiently mixed-species and poorly developed growth to not warrant exploitation or one in which the economically valuable trees had already been cleared.³⁴⁴ After clearance, the squatters planted both their own crops and the trees of the department, for which they were responsible for tending for approximately five years, by which point the trees would be of sufficient growth to not require regular tending and would shade out the crops below. Then, squatters were moved by the department to a new area to begin the process of plantation creation afresh. Although there are no existing documents that describe the operation of *shamba* in this early period, there is no indication that the core practice changed; thus the following description of its operation from the 1930s can be considered reliable:

When a block of forest was earmarked as a future timber plantation, the standing hardwood was sold to a local sawmill which was responsible for the felling and extraction of any trees the owner wanted. When that operation was completed, Kikuyu squatters were brought in to finish the job. They felled the remaining trees, cut and burnt off the undergrowth, and for three years planted crops between the felled and charred tree trunks which gradually rotted away or were destroyed by termites.³⁴⁵

The *shamba* system would become the core of forestry operations in colonial Kenya. Already in 1910, it was responsible for 42 per cent of the planting done by the department and by 1914-15, 96 per cent of the planting was done by the forest squatters. By 1925, the department considered its forest squatters “invaluable”.³⁴⁶ The point that the establishment and tending of plantations, as well other manual forestry work such as the clearing of creepers from young trees in indigenous forest, would be economically impossible without the department’s forest squatters was frequently made by the Forest Department, as illustrated by James Rammell, Senior Assistant Conservator of Forests, in 1930:

It is I think well known that this Department is only able to plant the large acreage that it does owing to the availability of Kikuyu squatters who clear, cultivate and maintain the land in which we plant, making available and keeping clean considerable acreages. Without this system our cost would go up by 400% or 500% and acreages planted could decrease by a similar figure.³⁴⁷

The programme of plantations begun in the department’s second decade would seem to have been impossible without the use of this forest workforce. Where data exists, it indicates that the system rapidly became a popular form of employment for Africans, with a 193 per cent increase in the number of squatters employed in the five years after *shamba* became operational in 1910 (Table 1-7).

³⁴⁴ In keeping with the general historiography on colonial Kenya, no pejorative sense is implied by the use of the term ‘forest squatter’. As the term is used throughout the colonial-era documents on *shamba* it is used throughout this thesis.

³⁴⁵ Holman, *Inside Safari Hunting, with Eric Rundgren*, 61.

³⁴⁶ Kenya Forest Department, *Annual Report 1910*, 2; Kenya Forest Department, *Annual Report 1925*, 22.

³⁴⁷ J.C. Rammell (Snr. Asst. Conservator of Forests, Londiani) to Secretary of the Molo Farmers’ Association, 10 March 1930, FOR/1/210, KNA.

The success and longevity of the *shamba* system in Kenya was of huge significance to forestry and those Africans engaged within in; a theme that will be explored in detail through chapters two and three. During the initial period of forestry development in Kenya, until approximately 1925, the establishment of *shamba* is notable not just for allowing the department to carry out a plantation programme that would have likely been simply impossible without it but also for the effect this had on forestry in other British colonies. The convening of the first Empire Forestry Conference, in 1920, allowed the increasing formalisation of the British Empire's forestry network. A forum was created for debate and dialogue between imperial foresters who had hitherto been largely isolated in their respective territories.³⁴⁸ It was at the second such conference, held in Canada in 1923, that debate over *taungya*-style forestry systems would emerge.

Of the many debates held at the Second Empire Forestry Conference it was that on the topic of shifting cultivation that was of highest importance to forestry in Kenya. The practice of clearing forest, typically by fire, the establishment of crops on the cleared land, and the repetition of this process after the fertility of the soil was depleted – a process referred to as shifting cultivation – was demonised by forest departments across the empire. E.B. Battiscombe, Kenya's delegate to the conference, however raised the pertinent point that in Kenya shifting cultivation had been tamed under the *shamba* system. Rather than being an agent of simple forest destruction, shifting cultivation could, he argued, be transformed into an incredibly efficient and economical way of preparing indigenous forests for plantation establishment, just as it was in the *shamba* system of Kenya. After heated debate and the establishment of a special committee on the issue, a resolution was passed that approved of the use of shifting cultivation in a controlled manner to aid forest development in West and East Africa, Ceylon, India.³⁴⁹ Here, then, was a key evolution of forestry practice within the empire. A process previously considered antithetical to the doctrine of modern, scientific forestry was embraced, controlled and transformed. Just as Lugard's doctrine of indirect rule dictated the usurpation of indigenous political systems to allow economical governance of the peoples of the empire, so too would an indigenous agricultural system be redirected to provide economical forest development. While retaining its core mission and creed, scientific forestry was thus able to be pragmatic, local, and above all adaptable. The success of *shamba* in Kenya was therefore hugely influential in advancing the ability of forestry to meet its goals within the strained economic contexts that forest departments typically existed.

Immediately after the conference in 1923, an article appeared in the *Empire Forestry Journal* written by H.M. Gardner, assistant conservator of forests Kenya, outlining how shifting cultivation

³⁴⁸ For an overview of the Empire Forestry Conferences see: Powell, "Dominion over Palm and Pine".

³⁴⁹ A full account of the debate is given in Rajan, *Modernizing Nature*, 171–79. The debate and final resolution allowed for very limited use of shifting cultivation in West Africa on already exploited areas; within Ceylon it was to be deployed in forest reserves to produce marketable timber but eventually; in East Africa, its value was fully recognised and supported; within India shifting cultivation was also approved as a method within reserves for the production of marketable timber.

could be utilised in plantation creation.³⁵⁰ The debate and resolution at the conference and the publishing of this article represent an important turning point in the adoption of agroforestry within the empire. Subsequently, *taungya/shamba* would begin to be used in the Gold Coast, and continues in Ghana today, and in the Colony and Protectorate of Nigeria in 1927.³⁵¹

Within Kenya, the Forest Department would not clarify in writing the precise operation of the *shamba* system until 1939, however it is clear that the department occupied the effective position of landlord and patron to the African cultivators it employed. The forest squatter had no ownership or right of tenure of the land upon which he worked. The system afforded the squatter land to cultivate but did not provide any guarantee that the squatter would have this land, or land in another area, once the plantation had been established. The squatter could also be evicted if his farm did not meet the strict standards of tidiness set by the department, a rule designed to maximise the potential success of the tree plantation while reinforcing the clear paternal role of the forest officer over his workers.³⁵² There are no Forest Department records from this early period indicating any resistance to the system or difficulty in recruiting squatters for it. The apparent ready acceptance of this system by Africans is indicative of both the opportunities it offered and the socio-economic position of those who sought engagement within it. The same motivation that pushed African farmers to extend cultivation into the forests, driving the African forest destruction narrative upheld so strongly by the Forest Department, also encouraged them to seek employment with the department as squatters: the worsening shortage of land within the native reserves. This situation would become abundantly clear during the recruitment process for new forest squatters from the late 1920s through to the end of colonial rule in Kenya.

1.5.6 *Settler opposition to shamba*

The first major interaction between the settlers and the department over the issue of forest squatters occurred under E.B. Battiscombe's leadership in 1918 and continued under H.M. Gardner. The initial sources of settler agitation were Tinderet forest, located approximately 30 km north of Kericho and between the main transport corridors that led to Lake Victoria to the west, and the Uasin Gishu plateau, a major site of white settlement, to the north, and Burnt forest located within

³⁵⁰ H. M. Gardner, 'Re-Afforestation in Kenya Colony by Means of Shifting Cultivation', *Empire Forestry Journal* 2, no. 1 (1923): 61–64.

³⁵¹ Fobissie B. Kalame et al., 'Modified Taungya System in Ghana: A Win-win Practice for Forestry and Adaptation to Climate Change?', *Environmental Science & Policy* 14, no. 5 (August 2011): 519–30, doi:10.1016/j.envsci.2011.03.011. Pauline von Hellermann, 'Things Fall Apart? Management, Environment and Taungya Farming in Edo State, Southern Nigeria', *Africa* 77, no. 3 (2007): 371–92, doi:10.3366/afr.2007.0052. Notably, *taungya* was reported in 1930 as being adopted in Nigeria after one of its foresters made a tour of *taungya* in operation in India; the report makes no mention of the system's use in Kenya. Conversely, von Hellermann has shown that initial experiments were conducted in Nigeria by Richard St Barbe Baker and were based on his experience of *shamba* in Kenya. James D. Kennedy, 'Taungya Method of Regeneration in Nigeria', *Empire Forestry Journal* 9, no. 2 (1930): 221–225.

³⁵² 'Squatter and Shamba Management (Bulletin No. 33)' (Nairobi: Forest Department of Kenya, 20 May 1939), 4, 9–10.

Uasin Gishu District. The matter the settlers took issue with was the grazing of cattle in forests by, they maintained, Africans who had been given permission to do so by the Forest Department. The Southern Uasin Gishu Farmers' Association was the first to lay out its position in an appeal to the Director of Agriculture in 1918; in reference to Africans in Burnt forest, the association maintained:

... these people are practically under no control, and owing to the many diseases, they are a source of great danger to the cattle industry on Uasin Gishu Plateau, and this Association requests the Government to return them into the Native Reserves, as soon as possible.³⁵³

The Association continued that the Forest Department had given permission to these Africans to reside within the forest, an accusation the Forest Department denied. Indeed, the department had no squatters in Uasin Gishu, had consistently failed to recruit any in the district, and had, one month before the Association's complaint was made, identified the cattle as most likely being the property of one of the several licensees who operated there. Londiani Saw Mills, for example, kept 120 oxen in the forest to haul logs.³⁵⁴ The fate of these Africans and their cattle, mistaken for *shamba* squatters, is not recorded but it is clear this established a pattern of settler agitation against Africans inhabiting forests. Youé has argued that the cereal boom of the early 1920s meant that settlers of Uasin Gishu were desirous of large amounts of cheap labour and were less concerned with stock diseases, and were therefore content to allow their farm-resident squatters to continue accumulating stock in the early 1920s.³⁵⁵ Yet, attacks upon the forest squatters indicates that the settlers' fears of cattle disease and competition never went away, being instead redirected toward the forests.

By the closing months of 1919 another association of settler farmers, this time the Lumbwa Farmers' Association, began directing complaints to the Forest Department about African-owned cattle in Tinderet forest. Africans who had been given permits by the Forest Department were, the association maintained, hiding stolen cattle in the forest and, moreover, these represented a veterinary risk.³⁵⁶ The linking of African cattle to diseases by the Southern Uasin Gishu Farmers' Association and to veterinary issues by the Lumbwa Farmers' Association was no coincidence. African cattle were seen by settlers and government as carriers of disease, a view which led the government to label areas where African-owned cattle predominated as 'dirty', that is, a potential source of disease. The disease made reference to was almost certainly East Coast Fever (theileriosis), a bovine infection carried by ticks with an extremely high death rate, especially among imported European cattle. First identified by science in East Africa in 1904, although almost certainly endemic to the region for generations before, theileriosis was found widely among cattle in Nairobi, Kiambu, Machakos, and as far west as Nandi district (bordering Uasin Gishu and

³⁵³ Arthur Roberts, Secretary of the Southern Uasin Gishu Farmers' Association, to Director of Agriculture, 20 July 1918, QB/1/209, KNA.

³⁵⁴ A. Macgregor, Forester Londiani to Forest Department, 2 June 1918, QB/1/209, KNA.

³⁵⁵ Christopher P. Youé, 'Settler Capital and the Assault on the Squatter Peasantry in Kenya's Uasin Gishu District, 1942-63', *African Affairs*, 1988, 400.

³⁵⁶ John H. Cameron, Secretary of Lumbwa Farmers' Association, to Provincial Commissioner, Kisumu, 28 October 1919, QB/1/209, KNA.

Lumbwa) by 1914. The settlers were painfully aware of the damage East Coast Fever could cause. Famously, it had practically wiped out Lord Delamere's early attempts at cattle rearing.³⁵⁷ Quarantine and small-scale dipping of settler cattle was begun before 1914 but the large-scale use of transportation oxen and meat cattle during the First World War appears to have tipped the balance in favour of the disease, allowing it to spread through the Protectorate. Uasin Gishu, for example, was considered 'clean' before the war, but became 'dirty' before hostilities ended.³⁵⁸

Within the context of what must have been intense settler fear of livestock disease, Africans residing within or grazing their cattle in forests, whether they were Forest Department employees or not, were seen as a threat. A 1920 statement from the cattle farmer Thomas Russell shows that the attitude was not just confined to western areas of the Rift Valley, as Russell's farm was at Kiambu, close to Nairobi and an area also infested with theileriosis. "Some beast has been across my farm and dropped some infected ticks", Russell maintained in a complaint to the Director of Agriculture, he continued, "the squatters in it [the neighbouring forest reserve] have been allowed to bring cattle into it and I am convinced that trafficking in cattle goes on between it and the Kyambu Reserve."³⁵⁹ Just as theileriosis became endemic to the majority of areas in Kenya suitable for cattle rearing, so too did the general mistrust and almost paranoid fear of Africans who owned cattle become endemic to the cattle-owning settler community.

It was a fear that the colonial government was responsive too. In July 1918, the same month as the Uasin Gishu Farmers' Association had made its complaint, John Ainsworth, the Chief Native Commissioner wrote to Battiscombe with a virtual demand that:

Native owned cattle in Forest Reserves areas should also be removed if it is desired that illicit movement of cattle should be checked. ... for veterinary reasons it is desirable that action should be taken in connection with such cattle.³⁶⁰

In 1924 the government sought legislation to support this by introducing the Trespass Amendment Ordinance into the Legislative Council. Superseding the 1913 and 1914 trespass ordinances, the new ordinance, which became law in 1924, also went further than the Crown Lands Ordinance of 1915. Under the previous ordinances, a person could have been evicted for trespass only if they had been served with a summons or arrested by a government officer. The 1924 Trespass Amendment Ordinance diluted this requirement by allowing the landowner himself to arrest and evict the trespasser, and then for the government to confiscate any cattle owned by that trespasser as a means to deter them from trespassing again. As the Chief Native Commissioner explained during the debate over the ordinance:

³⁵⁷ Huxley, *White Man's Country. Lord Delamere and the Making of Kenya*, 1:141–45.

³⁵⁸ R. A. I. Norval, Brian D. Perry, and A. S. Young, *The Epidemiology of Theileriosis in Africa* (ILRI, 1992), 42–56.

³⁵⁹ Thomas Russell, Kiambu, to Director of Agriculture, 31 December 1920, QB/1/209, KNA.

³⁶⁰ J. Ainsworth, Chief Native Commissioner to E.B. Battiscombe, Conservator of Forests, 8 July 1918, QB/1/209, KNA.

... this bill has been framed on applications by settlers to Government ... [which] wants this extra power to keep these people from forests so that when a family is found they can be told definitely they have got to get out of it [the land] or their stock will be confiscated.³⁶¹

E.B. Battiscombe explained during the debate that the Forest Ordinance 1912 allowed the Forest Department to evict trespassers from declared forest areas. The implication was that the Trespass Ordinance was needed to evict trespassers from forests classified as Crown Land (as all forests not private property were) but not declared forest areas. These were those areas that because of the Forest Department's deficiency of resources had not yet been demarcated. The Trespass Ordinance was not needed in the case of Tinderet forest, Battiscombe assured the unofficial (settler) members of the Legislative Council, because although most of the Africans in that forest had permission to be there "steps have now been taken to have them all removed."³⁶²

Battiscombe's statement to the Legislative Council concerning his attitude to Africans in Tinderet was a hardening of the stance he had held in 1919 when the Lumbwa Farmers' Association had first complained of their presence in the forest. In a letter to the Provincial Commissioner of Kisumu in 1919, Battiscombe stated he would "be very glad" to have Africans within Tinderet evicted "who are there without permission."³⁶³ Over the next five years Battiscombe would therefore go from wanting evictions of only those present without permission to all Africans within the forest.

The Forest Department position was, perhaps, initially softened by the utility of having cattle in the forest. The Acting Chief Veterinary Officer explained the Forest Department's defence of the Lumbwa Farmers' Association accusation to the Acting Chief Secretary in 1919: the Forest Department needed cattle in the forests in order to keep grass in check and therefore reduce the chance of forest fires starting and spreading.³⁶⁴ Equally likely is that the department's defence of cattle in the forest was a reaction to an accusation by the District Commissioner that the Tinderet forest officer had been illegally and "indiscriminately" issuing forest grazing permits to Africans.³⁶⁵ Whether there was any truth in this accusation has now been lost, but it is possible the forest officer was exceeding his remit in issuing permits with the aim of reducing the chances of forest fire. What is clear is that as the department began to take a closer interest in activities within Tinderet its attitude to African cattle hardened.

In 1919 Battiscombe admitted that his department had not the resources to control the movement of illicit cattle in Tinderet.³⁶⁶ The inability of the Forest Department to adequately patrol

³⁶¹ Colony and Protectorate of Kenya, 'Minutes of the Proceedings of the Legislative Council, 1924' (Hansard, Nairobi, 15 May 1924), 37.

³⁶² *Ibid.*, 35.

³⁶³ E. Battiscombe, Conservator of Forests to the Provincial Commissioner, Kisumu, 12 December 1919, QB/1/209, KNA.

³⁶⁴ Acting Chief Veterinary Officer to Acting Chief Secretary, 28 November 1919, QB/1/209, KNA.

³⁶⁵ E. Battiscombe, Conservator of Forests to the Provincial Commissioner, Kisumu, 12 December 1919.

³⁶⁶ *Ibid.*

and police its forests was well known in the colony. During the debate over the 1924 Trespass Ordinance the settler Conway Harvey argued this inability was one of the core reasons why more powers over trespass were needed.³⁶⁷ This inability to maintain adequate control over the forests was reflected in the department's reaction to the Africans in Tinderet. The department argued the majority of the Africans in Tinderet were Dorobo (that is, Ogiek) and therefore traditionally led a hunter-gather lifestyle; this was changing as these Africans began exploiting the large colonial market for animal skins in order to purchase livestock. Working with the Department of Native Affairs, the policy was one to "attach" Ogiek to pastoral ethnic groups "to which they show the nearest affinity, and to encourage them to get their own cattle and settle down as members of the community."³⁶⁸ This policy was justified by Battscombe because the Ogiek "will never become useful members of the community until they are brought into touch with civilisation."³⁶⁹ The issue of making Ogiek 'useful' was key in the hardening of the Forest Department stance toward them. The department repeatedly made attempts to employ Ogiek of Tinderet as forest guards but Battscombe argued "they are quite useless and time and again fail to report offences."³⁷⁰ The combination of settler demands that something be done about the economic threat posed by African cattle in Tinderet and the department's inability to either incorporate those Africans into its governance regime or otherwise keep watch over them led Battscombe to state to the Resident Commissioner of Eldoret in April 1924 that:

As long as there is a nucleus of native owned stock in the forest I am convinced that it will always serves as an attraction to other stock to be brought in and I am sure that the only possible way of dealing with the matter is to allow no native stock at all in the forest reserve.³⁷¹

The fate of the Ogiek of Tinderet was thus sealed by mid-1924 but continued delays in implementing this policy yet again led to complaints from the settlers. In July 1924 the Londiani Association of farmers passed a resolution calling for the government to carry out its decision to remove cattle from Tinderet, citing a heightened risk of East Coast Fever, and then demanding that all African-owned cattle be removed from the Kisumu Londiani Extra Provincial District because stolen stock could be hidden amongst them.³⁷² It would be Battscombe's successor, Harold Gardner, who would take the matter in hand. By the end of 1925 Gardner reported that the majority of the Ogiek had been evicted. He had allowed nine men and their families to stay, each allowed up to five cattle. They were expected to collect seeds, patrol, act as fire guards, and generally use their knowledge of the forest to the advantage of the department. Gardner declared, "if they fail to do so they will be turned out of the forest forthwith."³⁷³ In making this statement, Gardner made it clear that in Tinderet at least an African presence would only be tolerated where it conformed to the

³⁶⁷ Colony and Protectorate of Kenya, 'Kenya Hansard 1924', 32.

³⁶⁸ Chief Native Commissioner to E.B. Battscombe, Conservator of Forests, 3 October 1923, QB/1/209, KNA.

³⁶⁹ E.B. Battscombe, Conservator of Forests, to Chief Native Commissioner, 6 May 1924, QB/1/209, KNA.

³⁷⁰ *Ibid.*

³⁷¹ E.B. Battscombe, Conservator of Forests, to Resident Commissioner, Eldoret, 23 April 1924, QB/1/209, KNA.

³⁷² Londiani Association Resolution of 21 July 1924, 30 July 1924, QB/1/209, KNA.

³⁷³ H.M. Gardner, Acting Conservator to Acting Chief Native Commissioner, 5 December 1925, QB/1/209, KNA.

governance regime laid out by the Forest Department, that is, ultimate control over the Africans' most prized possession – cattle.³⁷⁴

³⁷⁴ A broad overview of the interactions of Ogiek peoples with the colonial and post-colonial governments of Kenya is provided in Towett J. Kimaiyo, *Ogiek Land Cases and Historical Injustices, 1902-2004* (Ogiek Welfare Council, 2004). This book provides a vivid account of various land grievances held by Ogiek although it unfortunately largely lacks evidence to support these claims. Ogiek grievances against the government and present Kenya Forest Service continue today, see, for example, media coverage by Rachel Savage, 'Kenya's Ogiek People Are Seeing Their Land Rights "brutalised"', *The Guardian*, 18 August 2016, sec. Global development, https://www.theguardian.com/global-development/2016/aug/18/kenyas-ogiek-people-are-seeing-their-land-rights-brutalised?CMP=tw_t_a-environment_b-gdneco.

2

Consolidation and Opposition

c.1925 to 1945

2.1 Introduction

The period covered by this chapter, from the early 1920s to circa 1945, was one in which the Forest Department sought to develop Kenya as an exporter of timber, a move that was spurred on by metropolitan support for the advancement of timber exports from all the African colonies. Significant progress was made in the development of the timber industry and limited moves made to advance both the domestic and export markets for Kenya's timbers. The assertion by Logie and Dyson in the official history of forestry in Kenya that "little development"³⁷⁵ took place in the industry in this period is thus very much an exaggeration. However, this attempt to establish Kenya timbers on the international market does reveal key deficiencies within the department and highlights the state of its relationship with private enterprise in the colony.

The expansion of forestry activities also caused the Forest Department to face continued opposition from settler farmers. Settler agriculture developed greatly in this period with a clear focus on livestock and export crops, such as coffee, which relegated the importance of the timber industry in the economic survival of the settlers. Opposition stemmed not from the Forest Department's animosity to settler activity in the forests but from that aspect of forestry that was of supreme importance in Kenya: the *shamba* system. The operation and success of this system will be explored in detail in this chapter, revealing its capacity to serve forestry and local agricultural needs while also exhibiting colonial exploitation.

2.2 Development and Exploitation

Forestry continually strives to meet the current needs of the markets it serves whilst also implementing plans that predict and so satisfy those needs decades into the future. This process is complicated by the sometimes multiple decades that trees require to mature to the point of harvesting. As J.W. Nicholson, the colonial forest advisor who visited East Africa from 1928 to 1930, stated: "...national forest policies must be based on a far-sighted statesman-like appreciation of the requirements of the future."³⁷⁶ Balancing the real needs of the present with the predicted needs of

³⁷⁵ Logie and Dyson, *Forestry in Kenya*, 13.

³⁷⁶ J.W. Nicholson, 'The Future of Forestry in Kenya' (Nairobi: Colony and Protectorate of Kenya, 1931), MSS 115/37/6, KNA.

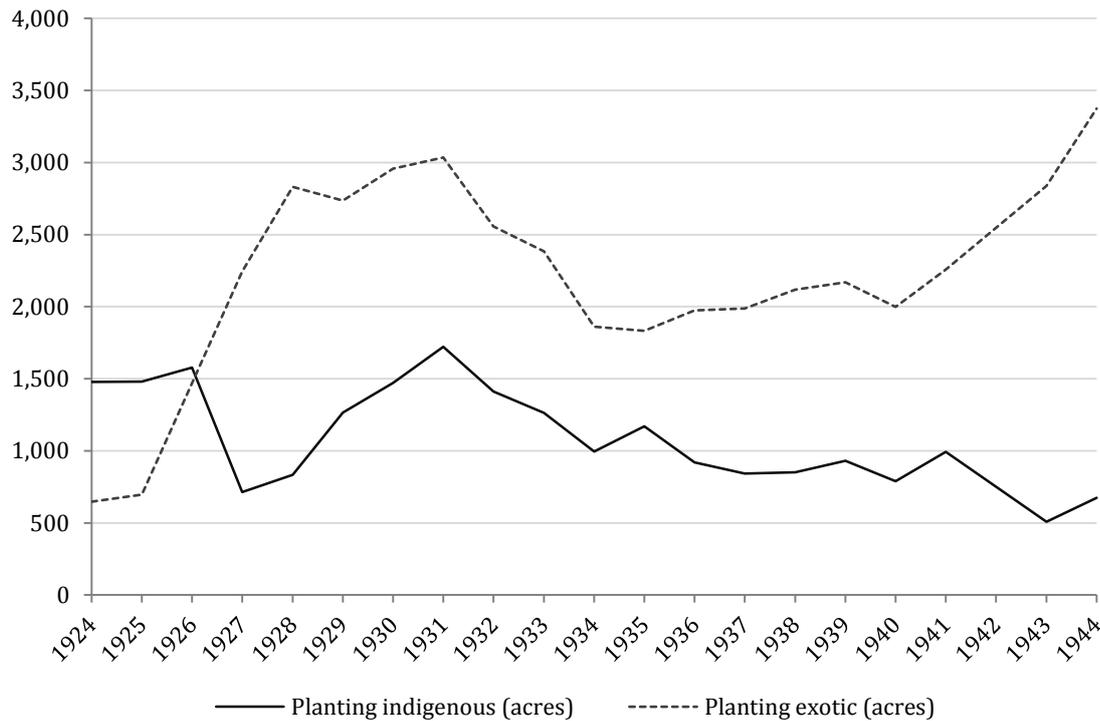


Figure 2-1. Annual acreage of indigenous and exotic tree planting carried out by the Forest Department. Source: Annual Reports of the Kenyan Forest Department, 1924-1944.

a colony that might undergo rapid economic progress was extremely difficult for the Forest Department in Kenya and contributed to the retardation of scientific forestry and the timber industry.

2.2.1 Planting policy

It was the dual concern of current and future need that led the Forest Department to pursue the planting programme that it did: a heavy reliance on the exotic species of *Eucalyptus globulus* and *Eucalyptus saligna* together with a smaller amount of black wattle, which were planted primarily for fuel, while Monterey cypress (*Cupressus macrocarpa*) was the primary exotic choice for timber.³⁷⁷ Experimental plantings of all these species had begun before 1910 and their success within the environmental conditions of Kenya secured their place in the planting policy of the department. As harvests from eucalypt plantations could begin just eight years after planting they

³⁷⁷ Cypress reportedly arrived in Kenya after seeds (notably, no cypress plants in Wardian cases were used) were sent from Guatemala, the Imperial Forest Research Institute (Dehra Dun, India), Capetown, the Transvaal, Paris, and the United States between 1909 and 1920. Forest Department, 'The Management of Cypress Plantations in Kenya', 1945, 2-3. All species of pine, important plantation trees in South Africa, were noted in 1924 as growing poorly in Kenya, explaining why this versatile and commercially very significant softwood was not planted commercially in this period. However, experiments seem to have been continuous in regard to this species, with limited success achieved in the early 1930s. Pines would, after the Second World War, come to dominate the planting policy of the department. For detailed discussion of why pine propagation was difficult in Kenya, how the department eventually overcame this, and how this is revealing of the relative state of the empire forestry network (in the 1930s and 1950s) of which the department was a member, see section 3.1.2, chapter 3. Kenya Forest Department, *Annual Report 1924*, 12; Kenya Forest Department, *Annual Report 1929*, 1931, 16; Streets and Troup, *Exotic Forest Trees in the British Commonwealth*, 35-40.

were ideally suited to the fuel needs of the colony, particularly the railway,³⁷⁸ while cypress was favoured as a timber crop because it matured in 30 years in comparison to the 100 years that the department estimated for indigenous timber species.³⁷⁹ It was a general policy that Nicholson fully supported.³⁸⁰ In 1924 the department admitted that some indigenous species produced finer timbers than cypress, yet their long maturation periods coupled with the unpredictability of when their seeds would ripen, which prevented accurate planting plans to be formulated and implemented, made the exotic species far more appealing to scientific forestry in Kenya.³⁸¹ The difficulty in raising seedlings of indigenous species seems to have been especially marked in years of poor rains, when exotic plantings were comparatively more successful, although whether this was only due to the foresters' greater experience with exotics or not is unclear. The very dry year of 1927, for example, saw a huge dip in the area of indigenous planting established.

The emphasis on planting indigenous species in the early 1920s, referred to in chapter 1, lasted a mere three years. For almost the entire period covered by this chapter, the annual acreage of exotic planting exceeded that of the indigenous (Figure 2-1). Across this period, 43,972 acres of exotic plantation were created compared to 21,899 acres of indigenous plantation.³⁸² Having said this, the later years of the 1920s did see a slight increase in the planting of indigenous species, especially the potential export timber *Juniperus procera* (pencil cedar),³⁸³ the significance of which will be explored below.

³⁷⁸ 'The Planting and Management of Eucalyptus for Fuel (Bulletin No. 27)'; Hutchins, *1909 Report on the Forests of British East Africa*, 118; Kenya Forest Department, *Annual Report 1925*, 11.

³⁷⁹ Kenya Forest Department, *Annual Report 1925*, 18.

³⁸⁰ Nicholson, 'The Future of Forestry in Kenya', 36. Nicholson also rejected any concerns, apparently raised by settler farmers, about desiccation of surrounding land caused by eucalypts as he contested that any adverse effects would be "purely local."

³⁸¹ Kenya Forest Department, *Annual Report 1924*, 12. The Forest Department planted a range of indigenous species; of these, only acreages of pencil cedar (*Juniperus procera*) were recorded separately and this one species accounted for 62 per cent of all the indigenous plantations between 1924 and 1944. The other main species planted were (local names used, spellings as commonly used by Forest Department): mueri (*Pygeum africanum*), podo (*Podocarpus gracilior*), muhugu (*Brachylaena Hutchinsii*), mukeo (*Dombeya Mastersii*), and mutata (*Panax Pinnatum*).

³⁸² These figures come from tallies of the yearly acreages planted. Between 1909 and 1944 the department established 78,918 acres of exotic and indigenous plantations combined. The department occasionally gave in its annual reports total acreages which differ from this number by a small amount, perhaps because of losses of plants, extensions to plantings, or harvesting not recorded at the annual, colony-wide level. The cumulative total of plantations established is used throughout this research for consistency although it must be remembered that no statistic from the colonial period is irrefutable.

³⁸³ The planting of pencil cedar may have also been dependent on discovery of a satisfactory method of propagating seedlings. Richard St Barbe Baker was apparently given the task of investigating this matter in the early 1920s. He stated that there was typically only a 5 per cent germination rate for pencil cedar in the nurseries and he had overcome this problem through observation of the natural method of germination. The cedar seeds were, he stated, eaten and then passed by pigeons. Replication of this process using water and sulphuric acid was successful in bringing on germination of cedar trees and allowed the species to be widely propagated in nurseries. No Forest Department documents exist that corroborate this account, however, and doubt over its accurateness exists as Baker also stated that it was he who discovered pencil cedar in Kenya, realised its potential, and had it tested in England (effectively claiming for himself the success of pencil cedar exports), yet pencil cedar was recognised for its economic potential and tested in England as early as 1906, 15 years before he arrived in Kenya (see: Imperial Institute, 'Timbers from East Africa'). If his account of the propagation of pencil cedar is true, it highlights the importance of personal initiative rather than concerted policies of development in spurring on forestry. See: Baker, *Men of the Trees*, 27–28, 44–45.

Of the exotic plantations between 1926 and 1933, 59 per cent were classified by the department as fuel plantations; thereafter cypress dominated. Nicholson stated in 1931 that "... the Forest Department was at one time inclined to go nap on gums but it is now on the high road to complete recovery from any complaint of *Eucalypto mania*."³⁸⁴ Nicholson was either unaware of the department's current plans, as the planting policy at that time was clearly focused on eucalypts, or, more realistically, in this statement he was trying to deflect criticism from what he thought a sound plan. This reversal of the planting policy to exotic fuel was in fact motivated by pressure from the Chamber of Commerce who voiced their concerns in 1925 about possible future shortages of fuel for both domestic and industrial use.³⁸⁵ The Uganda Railway significantly added to these complaints by citing that approximately 18 per cent of its expenditure in 1925 was devoted to fuel, as compared to 5.17 per cent for South African Railways. The cost was largely due to the necessity in using coal rather than woodfuel because of supply issues.³⁸⁶ Thereafter, the Forest Department sought to expand the amount of fuel it was producing and supplying to the railway; a policy spurred on by assurances made in 1925 from the Uganda Railway that it would rely on woodfuel as long as it was forthcoming.³⁸⁷

This objective, however, was never really met. Government forest reserves, particularly the fuel plantations established in proximity to the railway, were not the sole source of woodfuel to the railway. Woodfuel destined for railway use was also drawn from forests on private land, forests within native reserves and from the bush land between the coast and Nairobi. In 1925, only 17 per cent of the railway's woodfuel came from the forest reserves. With the provision of fuel to the railway being one of the main rationales behind maintaining a Forest Department within the colony, the department became determined to increase this percentage. By 1930 the proportion of woodfuel delivered to the railway from government reserves had risen to 55 per cent, yet it then fell, wavering between 44 and 49 per cent for the next several years. It did not rise again until the massive level of forest exploitation during the Second World War, coupled with the unavailability of coal, made the reserves the main source of woodfuel to the railway.³⁸⁸ The Uganda Railway was never fully committed to wood as its primary fuel and by the 1930s it was spending significantly

³⁸⁴ Nicholson, 'The Future of Forestry in Kenya', 37. The phrase "go nap" would here appear to be related to the equestrian use of the phrase to denote a disobedient horse, therefore the Forest Department was previously somewhat out of control in its planting policy. Alternatively, Nicholson may have been using the phrase to suggest the department was risking its future on a single policy (the phrase being a back formation from 'Napoleon'). His extension of the metaphor with "high road" suggests the first meaning.

³⁸⁵ Kenya Forest Department, *Annual Report 1925*, 11.

³⁸⁶ 'Legislative Council Debates, Vol. 2, 1925' (Hansard, Nairobi, 29 October 1925), 798.

³⁸⁷ Kenya Forest Department, *Annual Report 1925*, 18.

³⁸⁸ Forest Department Annual Reports, 1925-1936. After 1936 the Forest Department did not provide complete statistics on this issue. The annual reports of the Uganda Railway only present actual woodfuel use rather than amount received which does not allow extrapolation.

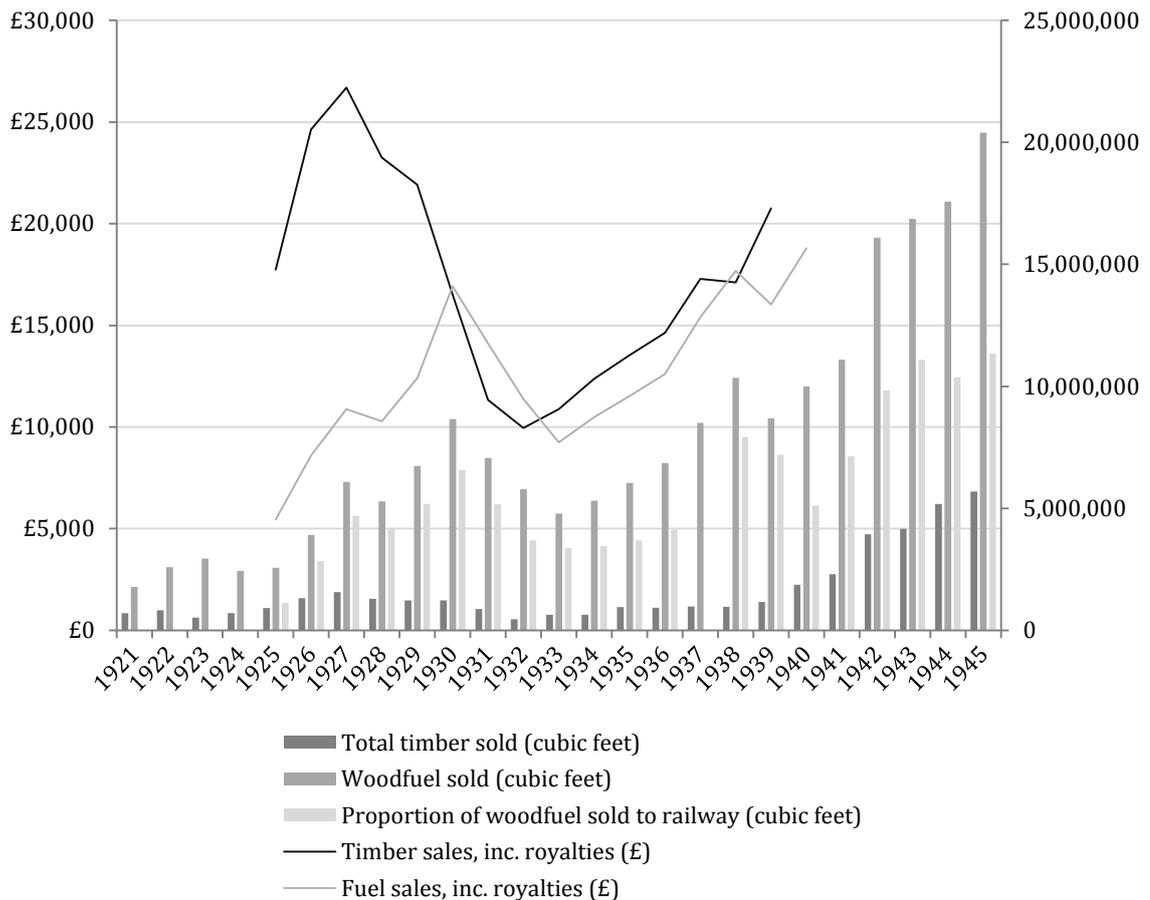


Figure 2-2. Sales of timber and fuel that accrued to the Forest Department. Source: Annual Reports of the Forest Department. Discrete data on timber and fuel sales are limited in the records to 1928-1942.

more of its expenditure on importing coal from South Africa than it was on woodfuel.³⁸⁹ Despite the railway's earlier assurance that it could absorb the fuel output of the forests, by 1930 it was increasingly procuring and deploying heavier, more powerful engines that were more suited to coal than woodfuel.³⁹⁰

The early recession years of the 1930s were a reprieve in terms of fuel sales for the Forest Department. Faltering coal supplies forced the railway to fall back onto using woodfuel. This reprieve was repeated during the Second World War, but it did not stop the overall trend away from woodfuel use by the railway and in 1945 the Uganda Railway announced the total switchover of its engines to oil.³⁹¹ In 1938 the Forest Department complained that the railway would give no

³⁸⁹ Kenya and Uganda Railways and Harbours, 'Report of the General Manager on the Administration of the Railways and Harbours' (Nairobi Government Printer, 1939), 48, CO 544/54, TNA. In 1933 the railway was spending £71,633 per annum on coal compared to £46,436 on wood. By 1938, a year when there were no problems in fulfilling all of the railway's contracts for woodfuel, the expenditure on wood was £55,523 whereas coal had reached £182,312.

³⁹⁰ Kenya Forest Department, *Annual Report of the Forest Department, 1930* (Nairobi Government Printer, 1930), 6. The engines in question were most likely of the Garratt type, a large, articulated, and very powerful engine suited to narrow gauge railways such as Kenya's.

³⁹¹ Kenya Forest Department, *Report of the Forest Department for the Years 1945-1947* (Nairobi Government Printer, 1947), 28. The railway would begin the total switchover of its engines to oil rather than coal or wood in 1948, a change it announced in 1945.

estimate of its future requirements or whether, indeed, it planned to continue using woodfuel.³⁹² With between 60 and 80 per cent of the fuel extracted from the forest reserves being utilised by the railway during the 1930s (figure 2.2), a reduction in the railway's demand for fuel would have resulted in large acreages going unexploited. The department was clearly aware of the danger of over-reliance on the railway as a customer for its woods, and the switchover in the planting policy to cypress for timber rather than eucalypts for fuel in 1934 should be seen within this context; the Forest Department had to increasingly turn its attention toward the timber markets if its operations were to remain relevant.

2.2.2 *Timber industry*

The new emphasis on exotic softwoods was officially announced by the department in 1936. The hope was that as it was a general utility softwood, cypress might find a local market by replacing indigenous podocarp, which was found to be brittle in working, liable to splitting, and slow to grow.³⁹³ As figure 2.2 illustrates, this change in planting policy, which would remain in effect until the end of this period, coincided with an upturn in the revenues the department collected from the sale of timber from its forests. This rise in sales represented a gradual recovery from the years of depression that had plagued the timber industry within Kenya.

The laissez-faire approach of the colonial government and the Forest Department toward the development of the timber industry decreased its ability to weather the depression. Prior to the 1930s the Forest Department took a minimal role in the timber industry; its main responsibility was ensuring sawmills were only taking those trees designated by forest officers in forest reserves and on private land and granting sawmilling licenses. By 1928 there were 35 sawmills operating in forest reserves and a further ten in private forests (outside department oversight), owned by 22 firms. In that same year two sawmills ended their operations because of the intensity of competition between the mills.³⁹⁴ The ultimate problem in the second half of the 1920s was of massive oversupply within the timber industry, which compelled some mills to hold timber in stock in the hope of price increases. When the stock-retaining mills reached dire straits they dumped their timber on the local market at even lower prices. With the timber market flooded, mills operated at under capacity, suspending their operations or working on short time. By 1931, the Forest Department reported that many mills "had practically closed down."³⁹⁵ Many mills could not afford to pay the required royalties on timber processed. The Forest Department had an outstanding account with British East Africa Saw Mills, for example, that rose from 7,795 Kenyan shillings in

³⁹² H.M. Gardner (Conservator of Forests) to Chief Secretary (Nairobi), 'Economic Development Programme', 19 July 1938, 8, VF/4/2, KNA.

³⁹³ Kenya Forest Department, *Annual Report of the Forest Department, 1935* (Nairobi Government Printer, 1935), 14–18; Kenya Forest Department, *Annual Report of the Forest Department, 1936* (Nairobi Government Printer, 1936).

³⁹⁴ Kenya Forest Department, *Annual Report of the Forest Department, 1928* (Nairobi Government Printer, 1928), 6.

³⁹⁵ Kenya Forest Department, *Annual Report 1929, 1931*, 5.

January 1931 to 10,400 Kenyan shillings eight months later.³⁹⁶ In 1935 the number of mills working in the forest reserves had fallen to 23, although the number of small mills operating in private forests had increased to 14. Clearly, the settler farmer owners of the small, private forest mills were using their forest resources to help bring their farms through the depression. As the Forest Department argued, the effect of these private forest mills was detrimental to the wider sawmilling industry, as the additional output of timber continued to restrain prices.³⁹⁷

Problems within this industry, however, were compounded by the government. Prior to 1932 there was little sense of coordination between sawmilling firms. The formation of the East African Timber Co-operative Society (widely known as Timsales) in 1932 under the leadership of Ferdinand Cavendish-Bentinck,³⁹⁸ the unofficial leader of the colony's white settlers, marked the beginning of proper co-operation between the mills and gave new direction to the industry. Through this organisation, sawmillers' frustrations regarding the government's lacklustre support to their industry were expressed. Moreover, evidence from a 1938 meeting between Timsales and the government, reported by the Conservator of Forests, Harold Gardner, suggests that it had been the government that had "induced" the sawmillers to expand their operations and production with the aid of bank loans in the mid-1920s. Therefore, the problems of oversupply and competition that followed were linked to this directive.³⁹⁹ Whereas in their management of the forests they strove to be scientific, the Forest Department's early involvement with the business of exploitation was simplistic. The department appears to have taken the view that, as long as production increased the output would be absorbed on the local and foreign markets: its goals were to increase exploitation and expand its revenue to drive its planting programme. Based on the estimated forest capital,⁴⁰⁰ in 1928 the department argued:

... we could well afford to double or treble our present rate of cutting, and, in fact, until this is done a large potential and legitimate revenue is being lost and capital is lying idle.⁴⁰¹

The sawmill owners were apparently blinded by a belief that simply extracting the natural wealth of a colony could lead to riches, and so they followed the government's (mis)direction until it led many of them to ruin in the 1930s.

The muted development of Kenya's domestic timber market was symptomatic of the government's general policy of non-interference with the timber industry and the industry's own reluctance to engage capital in schemes of development or co-operation. Although the government

³⁹⁶ H.M. Gardner (Conservator) to Attorney General (Nairobi), 5 October 1931, FOR/1/346, KNA.

³⁹⁷ Kenya Forest Department, *Annual Report 1935*, 9.

³⁹⁸ See section 2.3.3, below, for discussion of Cavendish-Bentinck's opposition to forestry activities.

³⁹⁹ 'Minutes of a Meeting between C.R. Lockhart (Financial Secretary), H.M. Gardner (Conservator of Forests), F.W. Cavendish-Bentinck (Chairman - E.A. Timber Co-Operative Soc. Ltd.), W.J. Beeston (Director - E.A. Timber Co-Op), B.R. Hoddinott (Director - E.A. Timber Co-Op), A.Q. Roberts (Director - E.A. Timber Co-Op), and H.W. Gill (General Manager - E.A. Timber Co-Op)' (Secretariat, Nairobi, 4 October 1938), 2, FOR/1/241, KNA.

⁴⁰⁰ 'Forest capital' refers to the calculated quantity of timber in a forest that could be exploited.

⁴⁰¹ Kenya Forest Department, *Annual Report 1928*, 6.

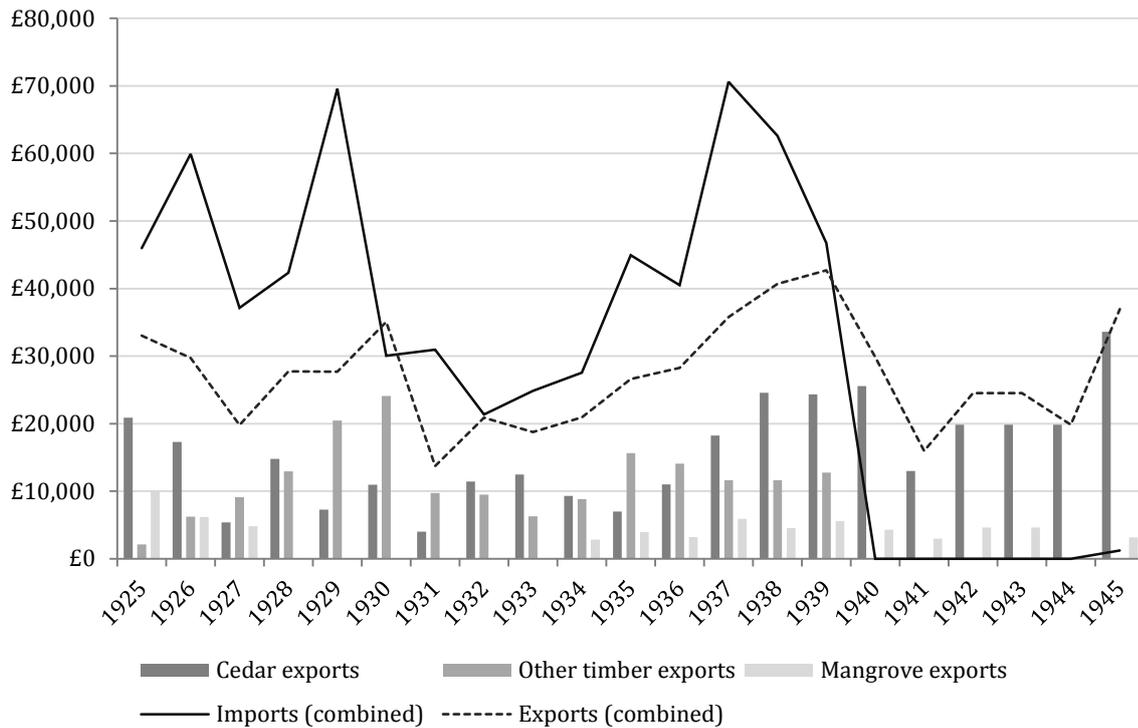


Figure 2-3. Import and export value per annum. Sources: Annual Reports of the Forest Department.

imposed an import duty on timbers to protect the local market from overseas competition, timber imported by or for the government (of Kenya and Uganda) was excluded from this tariff.⁴⁰² Statistics are sporadic, but between 1926 and 1929 this meant 34 to 45 per cent of all the timber imported into the colony was tariff-free. Rather than supporting an ailing sawmilling industry, the government was therefore directly undermining it.⁴⁰³

Teak typically made up a large proportion of these imports (22 per cent in 1928), causing the Forest Department to argue, “teak is a luxury, not a necessity”⁴⁰⁴ and that local timbers could fulfil the same purpose. It called on the growing network of scientific knowledge to support its claims, with research at the Forest Products Research Laboratory at Princes Risborough in England on African olive (*musharagi*; *Olea hochstetteri*) and camphor (*muzaiti*; *Ocotea usambarensis*). Six years

⁴⁰² The timber tariff stood at 50 per cent in 1922 but was reduced to 30 per cent in 1923, a rate that held for the rest of the period covered by this chapter. Significantly, plywood and similarly manufactured woods were excluded from this duty, making it unfeasible to develop local alternatives to these manufactured woods. The Customs Tariff Ordinance, 1922; The Customs Tariff Ordinance, 1923.

⁴⁰³ The lack of development of eucalyptus as telegraph poles was also indicative of the low priority the Forest Department placed on fostering the local market. Eucalypts were extensively used by the army during the First World War as telegraph poles but this use did not continue after hostilities ceased. In 1922, Kenya Creosoting Co. Ltd. sought Forest Department cooperation in an experiment in creosoting eucalypts for pole use and experiments were begun in 1924. When the Chief Telegraph Engineer contacted the department in 1927 about the results of these experiments, the reply he received was that no one knew what had become of the experiment. In the same year Equator Saw Mills began supplying creosoted poles from the indigenous trees it cut, although the short life of these once erected meant that iron poles were beginning to be used by 1930. See correspondence within QB/1/291, KNA.

⁴⁰⁴ Kenya Forest Department, *Annual Report 1928*, 8. Teak was highly valued for its adaptability, strength, and natural durability in harsh climates and to pest attack.

later, however, commercial tests of these woods were still ongoing and preliminary results disappointing. Olive suffered from shrinkage, while both timbers were susceptible to termite attack.⁴⁰⁵ Although government usage of imports did fall slightly in the early 1930s, overwhelmingly the government and private sector continued to rely on imported teak and other timbers during and after the recession (Figure 2-3).⁴⁰⁶

Development of the local timber market was an essential foundation to the building of market share for Kenya's timbers on the export market. In his report on forestry in Kenya, Nicholson urged concentration on the domestic market, believing it to be the sole source of expanding revenue in the near future as preparing timbers for export would require a great deal of research.⁴⁰⁷ In 1934, five years after Nicholson had toured Kenya, Assistant Conservator Samuel Wimbush reported on the export market and determined that even if the market were to expand for good quality timber from Kenya, "the greater portion" of the output of the mills would have to be disposed of locally because that greater portion was of too low quality to export.⁴⁰⁸ Phillip Cunliffe-Lister, the Secretary of State for the Colonies, also urged local development because of the assistance it would give to exports:

...if a local market can be properly organised to make use of some of the lower grade timber, the cost of extraction of the higher grades can be reduced, which may enable them to compete successfully in the English market.⁴⁰⁹

To the colonial secretary, establishing the internal market was a "necessary preliminary" to developing exports.⁴¹⁰ The somewhat greater utilisation of local timber by the government in the early 1930s was part of this realisation.

The Forest Department considered local demand to have been led by the colony's white settlers only. Correspondence between the department and organisations such as Timsales makes

⁴⁰⁵ H.M. Gardner (Conservator) to Secretary of Lumberman's Association of East Africa, 8 March 1933, FOR/1/239, KNA; Wimbush, *Report on Possibilities of Export of Kenya Timbers to England*, 2-4; Streets and Troup, *Exotic Forest Trees in the British Commonwealth*, 39.

⁴⁰⁶ In 1931 Gardner drew public attention to the matter of timber imports in the *East African Standard*. Despite this the government utilised 19 per cent of imported timbers in that year, with the bulk (20 per cent) of these being teak. The principle users were probably the Uganda Railway and Public Works Department. Following this, between 1931 and 1934 (after which records on government utilisation are no longer available), the government did make a concerted effort to increase its usage of local timber and its take of imported timber fell to single figures. Partly, this was because of its significantly curtailed public building programme owing to the general depression, but it was also representative of a government keen to reduce costs and make moves toward reducing the colony's trade deficit, which stood at £1.9 million in 1935. Zwanenberg and King indicate that Kenya was running a trade deficit between 1923 (£1.3 million) and 1970 (£48.1 million). This did reduce in the late 1930s, being £500,000 in 1939, but rose rapidly thereafter, being £43.5 million in 1955. Although lack of data on government usage rules out a definite conclusion that the government was again turning to imports rather than domestic sources of timber after the depression, this rise in imports does indicate a general need for foreign timbers within the colony and therefore the continued failure of the local market to satisfy its customers. The Lumberman's Association of East Africa, 'Bulletin No. 42', 11 May 1931, QB/1/281, KNA. R. V. Zwanenberg and Anne King, *An Economic History of Kenya and Uganda 1800-1970* (London: Macmillan, 1975), 194-97.

⁴⁰⁷ Nicholson, 'The Future of Forestry in Kenya', 63.

⁴⁰⁸ Wimbush, *Report on Possibilities of Export of Kenya Timbers to England*, 18.

⁴⁰⁹ P. Cunliffe-Lister (Colonial Secretary) to Sir Joseph Byrne (Governor, Kenya), 4 March 1933, FOR/1/239, KNA.

⁴¹⁰ *Ibid.*

no mention of the timber needs of the country's sizable Indian population and how this could have been developed. As regards the African portion of the local market, the only explorations to be performed were by the industry itself. In 1930 the Lumberman's Association of East Africa conducted enquires into the state of the African demand for timber within South Nyeri.⁴¹¹ The response was not encouraging. The state of the economy meant, regarding sawn timber, boxes, and stools, "the demand for such things is not very effective."⁴¹² It was a reflection of the wider African disinterest in products of the colonial economy; a trend that was bucked only by wealthier Africans such as Chief Nderi and Chief Murigo of South Nyeri, who both purchased timber from sawmills "for houses, or sheds and garages, of a primitive type of course."⁴¹³ African housing was marked by its continuity with traditional building methods that had little need for the products of the sawmills. From the timber industry's perspective, an opportunity was lost as the government did little to push the development of African housing before 1945.⁴¹⁴ Developing African interest in the products of the colonial timber industry depended not just on the economic status of Africans but on providing convincing arguments for the adoption of timber products over already cheap and plentiful materials that Africans were experienced in using. There is no evidence that the timber industry tried to make such arguments, and the Forest Department did not even try to push its own forest squatter employees to change their building habits.⁴¹⁵ In short, as the majority of Africans in Kenya continued to use traditional building materials and colonial actors remained uninformed about their material needs, the local market for timber was largely restricted to demand from the government, settlers, and Indians living and working within Kenya.⁴¹⁶

⁴¹¹ In contrast to the larger Timsales, the Lumberman's Association of East Africa operated without capital or facilities to *laissez* between the major sawmilling firms and mainly served an advisory function on matters of government timber policy. It is unclear why the Lumberman's Association conducted its enquiries in South Nyeri, and that location only. Speculatively, being situated close to the vast forests of the Aberdares and Mount Kenya, which were both of course being exploited, South Nyeri may have been seen as having the most developed African demand for timber.

⁴¹² The Lumberman's Association of East Africa, 'Bulletin No. 26', 24 July 1930, 2, QB/1/281, KNA.

⁴¹³ *Ibid.*, 1.

⁴¹⁴ Wattle and daub or grass huts with thatched roofs dominated, even in areas directly exposed to colonial housing influences such as plantations and settler farms. Where 'modern' materials were employed, the still ubiquitous corrugated iron dominated over the wooden board and roof shingle. Alison Hay and Richard Harris, "'Shauri Ya Sera Kali": The Colonial Regime of Urban Housing in Kenya to 1939', *Urban History* 34, no. 3 (December 2007): 504–530, doi:10.1017/S096392680700497X; Richard Harris and Alison Hay, 'New Plans for Housing in Urban Kenya, 1939–63', *Planning Perspectives* 22, no. 2 (April 2007): 195–223, doi:10.1080/02665430701213580; Robert L. Tignor, *The Colonial Transformation of Kenya: The Kamba, Kikuyu, and Maasai from 1900 to 1939* (Princeton University Press Princeton, 1976), 5, 179, 180, 201. Tignor argues that although the colonial government enacted rules to regulate housing provided for Africans by Europeans, the cost implications of this meant that it was largely ignored. This argument is supported by Harris and Hay's work on urban planning, or the lack of it, in Kenya and the general absence of government enforcement of housing regulations.

⁴¹⁵ 'Squatter and Shamba Management (Bulletin No. 33)'.

⁴¹⁶ In his 1931 report, Nicholson attempted to quantify the demand for timber and woodfuel. Providing no information on the source of his data, he estimated that settlers in Kenya would consume 150 to 250 cubic feet per capita per annum, while 'African' consumption is given as 5 cubic feet (clearly little more than an extremely general guess, this figure applies to *all* of Africa). Unless Nicholson was grouping Kenya's Asian population with that of 'settlers' he provides no estimate of their timber or woodfuel utilisation needs. Nicholson, 'The Future of Forestry in Kenya', 3.



Figure 2-4. Natural pencil cedar, *Juniperus procera*, in the Kinangop Forest, southern Aberdares, c.1937. The figure at the base of the central tree indicates the scale of this mature forest. Photo by H.M. Gardner, copyright and reproduced with permission of Commonwealth Forestry Association. Source: S. H. Wimbush, 'Natural Succession in the Pencil Cedar Forest of Kenya Colony', *Empire Forestry Journal*, 1937, 49–53.

This deficiency in local development was confirmed to the department by a report on forestry in India by James Rammell, Senior Assistant Conservator of Forests. Rammell's tour of India in 1933-34 and subsequent report were indicative of increasing metropolitan interest in developing empire forestry, although this interest did not always extend to financial assistance: Rammell's tour was funded by the Carnegie Corporation of New York. In India, Rammell observed, internal demand for timber was large and steady, allowing a sustainable, predictable yield to be utilised each year and forming a solid foundation for forest development. He saw this as a fundamental difference to

Kenya, where he complained that of the output of timber “the native [is] using little of it.”⁴¹⁷ The timber industry in Kenya, Rammell argued, was tied to the European population, “whose varying fortunes it must follow. In good years it is high, and soon after may be almost non-existent.”⁴¹⁸ Rammell suggested that local demand, African demand, for forest products could be increased by looking beyond scientific forestry’s limited view of forests’ value that encompassed only timber, woodfuel, and water catchment. That is, investigating the many local African uses for plants and tree products and expanding on these.⁴¹⁹ The Forest Department in Kenya, however, made no moves in that direction.

Greater government and metropolitan interest in developing Kenya’s timber industry came with the Great Depression. The rhetoric of local market development and its implied modernisation of African lifestyles however were eclipsed by desire to encourage exports and trade within the empire. Important technical issues undermined this development, however, as Kenya’s mainly unseasoned timber was of notoriously poor quality. While some sawmills could profit by producing roughly cut, unseasoned timbers for the local market, the failure of some and overall poor financial performance of the sawmills indicates this was a state of affairs that could not continue indefinitely. The low cost of this timber when sold locally no doubt compensated the buyer somewhat for the poor quality of the product, especially when the timber would have to be replaced comparatively sooner because it was unseasoned. However, Nicholson argued this low cost, low quality approach meant that:

... the timber industry may be heading to disaster as continuation on the same lines will lead to automatic self extinction or to revolt on the part of the public at having to bear the burden of supporting an industry which fails to supply their needs.⁴²⁰

This was a situation reflected in Kenya’s principle export timber, pencil cedar (*Juniperus procera*), which determined the colony’s position as a timber exporter. The overall annual value of exports of timber closely paralleled that of cedar (Figure 2-3) since cedar comprised between 26 and 91 per cent of the total value of timber exports from the colony between 1925 and 1946. At the end of the 1920s the market for cedar, which was primarily used in pencil manufacture in competition against timbers from the United States, suffered a decline. This was due to the sudden appearance of cheaper substitutes to the traditional cedar on the market and their uptake by pencil manufacturers in the UK.⁴²¹ Although the export value of cedar recovered somewhat throughout the 1930s, it only returned to its 1925 level in 1938 after dipping again in 1935 following the liquidation of the London company that distributed Kenya cedar in England.⁴²²

⁴¹⁷ J.C. Rammell, *Report of a Tour of Indian Forests 1933-34* (Nairobi: Colony and Protectorate of Kenya, Government Printer, 1935), 5.

⁴¹⁸ *Ibid.*, 35.

⁴¹⁹ *Ibid.*

⁴²⁰ Nicholson, ‘The Future of Forestry in Kenya’, 66.

⁴²¹ Kenya Forest Department, *Annual Report of the Forest Department, 1929* (Nairobi Government Printer, 1929), 9.

⁴²² Kenya Forest Department, *Annual Report 1935*, 11.

Although export quantities of what the department classified as 'other timber' (all species except mangrove and cedar) often outstripped pencil cedar, in value they were typically lower. Between 1927 and 1939, when statistics are available on destination countries for exports of timber, the vast majority of this other timber was sent to Uganda and Tanganyika, compensating for the under-exploitation of forests in those colonies. By 1936 some of this timber had found a market in South Africa and the United Kingdom, with one and 2 per cent of exports of other timber going to those countries, respectively.⁴²³ South Africa had been held up as an ideal destination for Kenyan timbers as early as 1909, when Hutchins wrote on the potential market at length.⁴²⁴ This trade was due not to government action but the presence of Timsales in the East Africa pavilion of the Johannesburg Exhibition in 1936.⁴²⁵ Although some recipients in South Africa seemed pleased with the quality of East African timbers and wanted more,⁴²⁶ this was hindered by apparent protection of the existing South African timber market. This took the form of the refusal of the South African Railways and Harbours Administration to grant special transportation rates to East African timber and a similar rejection by the South African Department of Trade and Industries to lower timber import duties.⁴²⁷

The failure to compete in South Africa was symptomatic of the reality that throughout this period Kenya was attempting to find a place within an efficient and competitive international timber market. As metropolitan forces in the form of the Empire Timbers Committee, backed by Cunliffe-Lister, sought to expand the contribution of timbers from the empire to the timber trade within Britain, it was realised that "the Empire is in the main competing against a highly organised foreign trade"⁴²⁸ dominated by the United States and Europe. Exports of Kenya timbers totalled just

⁴²³ Exports to South Africa constituted only 5 per cent of the exports of other timber (that is, not cedar) in 1927, 2 per cent in 1938, and 10 per cent during the wartime conditions of 1939.

⁴²⁴ Hutchins, *1909 Report on the Forests of British East Africa*, 56–59.

⁴²⁵ Kenya Forest Department, *Annual Report 1936*, 10.

⁴²⁶ F.W. Body (timber merchant, Durban, South Africa) to Officer in Charge, Kenya Forest Department, 6 December 1938, FOR/1/241, KNA.

⁴²⁷ Director of Forestry (Department of Agriculture and Forestry, Union of South Africa) to Conservator of Forests (Kenya Forest Department), 28 May 1938, FOR/1/241, KNA. Further documents within FOR/1/241 indicate that Timsales was sometimes seen within South Africa as not being wholly committed to developing the South African market.

⁴²⁸ John Stirling Maxwell, 'Report on the Work of the Empire Timbers Committee' (London: Empire Timbers Committee, appointed by the Department of Scientific and Industrial Research in consultation with the Empire Marketing Board, 23 June 1932), 4, FOR/1/239, KNA. Statistics for the value of timber imports into Britain in 1939 illustrate the continued dominance of foreign (that is, sources outside the empire) timber producers. Timbers from the empire constituted only 31 per cent of the value of timber imported into Britain in that year and timbers from Kenya (mainly pencil cedar) less than 1 per cent of this empire figure while Canada represented 85 per cent. Burma was the second largest source of empire timbers to Britain, followed by Australia. If Canada's contribution to empire timbers is excluded, the combined imports of the rest of the empire still fell well below those of the individual main foreign importing countries such as (in order of value of imports) Finland, the USA, Sweden, the Soviet Union, and Poland. During the Second World War the situation reversed and empire timbers represented the vast bulk of timber imports to the UK, although this was largely due to increased Canadian output and, to a far lesser degree, the combined contribution of West Africa after the fall of Burma. Statistics from: Hugh Watson, 'Imports of Timber into the United Kingdom, 1939-44', *Empire Forestry Journal* 24, no. 1 (1945): 202; Kenya Forest Department, *Annual Report of the Forest Department, 1939* (Nairobi Government Printer, 1939).

£17,520 out of the £37,128,700 worth of timber that the UK imported in 1939.⁴²⁹ Attempts to establish pencil cedar in this market were dependent on it being of high enough quality to compete with the highly efficient, mechanised, and cheap industry in other countries. However, the pencil cedar produced in Kenya had numerous quality issues. After trial shipments were made to the US in 1924, the American manufacturers refused to process the timber or order more because of the considerable amount of warping that it had suffered.⁴³⁰ This was repeated in 1930, with Alpco Pencils Ltd., in England reporting it was “obliged to destroy a considerable proportion of the slats [of Kenya cedar],”⁴³¹ because the cedar was either unseasoned or non-uniform in thickness. In 1933, the director of the Forest Products Research Laboratory at Princes Risborough in England argued that issues such as this gave specific timbers and the colonies they came from a “very bad name”⁴³² within the international timber industry. The creation of this negative reputation represented an almost insurmountable obstacle to the success of timbers like the pencil cedar.

The Forest Department was aware of the quality issues of Kenya’s timbers. In the 1920s it sought to remedy this situation by urging the mills to build seasoning facilities; an initiative that it also stated in its annual reports, thereby publically shaming the mills and establishing that the department itself was not responsible for the poor state of production.⁴³³ The Uganda Railway and Public Works Department both began building their own seasoning facilities by 1927 in order to produce timber more suited to their uses and act as an example to the sawmillers. The dire financial condition of the majority of sawmillers from the late 1920s to mid-1930s meant, however, that few could follow suit. In 1931, the Public Works Department attempted to ease the situation by producing a report on kiln seasoning of timber based on its own experience, but the main issue remained the sawmillers’ lack of capital.⁴³⁴ The creation of Timsales in 1932 began to improve this situation.⁴³⁵ Timsales would build its own seasoning facilities, coordinate mills to handle larger orders, attempt to ensure consistency in cutting and sizing, and explore new markets (notably,

⁴²⁹ Watson, ‘Imports of Timber into the United Kingdom, 1939-44’, 202.

⁴³⁰ H.W. Ball (Managing Director, Burnt Forest Saw Mill, Ltd.) to E.B. Battiscombe (Conservator), 16 June 1924, FOR/1/239, KNA.

⁴³¹ J.G. Aronson (Managing Director, J.G. Aronson Ltd., timber merchants) to the Chief Storekeeper (Kenya & Uganda Railways and Harbours), 6 December 1930, QB/1/281, KNA.

⁴³² R.S. Pearson, ‘The Problem of Creating and Developing Markets for Empire Hardwood Timbers at Home’ (London: Forest Products Research Laboratory & Colonial Office, 17 January 1933), 2, FOR/1/239, KNA.

⁴³³ Kenya Forest Department, *Annual Report 1929*, 1929, 10.

⁴³⁴ Kenya Forest Department, *Annual Report 1929*, 1931.

⁴³⁵ ‘Minutes of a Meeting between C.R. Lockhart (Financial Secretary), H.M. Gardner (Conservator of Forests), F.W. Cavendish-Bentinck (Chairman – E.A. Timber Co-Operative Soc. Ltd.), W.J. Beeston (Director - E.A. Timber Co-Op), B.R. Hoddinott (Director - E.A. Timber Co-Op), A.Q. Roberts (Director - E.A. Timber Co-Op), and H.W. Gill (General Manager – E.A. Timber Co-Op)’, 2.

South Africa).⁴³⁶ By 1938, 85 per cent of the timber trade originating in the forests reserves was handled by Timsales.⁴³⁷

It was metropolitan concern for the development of Kenya's timber exports that drove greater Forest Department and wider government intervention in the industry. Secretary of State for the Colonies Cunliffe-Lister took a keen interest in the matter and believed firmly in the "exceptional opportunity of developing markets for Empire timbers in the United Kingdom."⁴³⁸ Conditions for this were made even more favourable as Cunliffe-Lister was a supporter of tariff reform and ensured, as of 1932, that timber imported into Britain from the empire was tariff-free, while foreign timber was subjected to a ten per cent import duty.⁴³⁹ With the new interest of London in forest development within Kenya, the post of Forest Research and Utilisation Officer was created within the Forest Department. Initially planned to serve Kenya, Tanganyika, and Uganda, the uneven development of the timber industry in these colonies (with Kenya's industry being comparatively advanced) led to Kenya eventually being granted its own officer. Samuel Wimbush, Assistant Conservator, was promoted to the role in 1933 and began studying timber utilisation and the timber trade in England under the auspices of the Colonial Development Fund.⁴⁴⁰ On his return to Kenya in 1934 he set about disseminating the information he had gathered, published a report on the possibility of exporting Kenya timbers to England, and attempted to coordinate the timber industries across the East African colonies.⁴⁴¹

Greater government commitment to financially aiding the enterprises of the settlers occurred with the creation of the Land Bank in 1930. Loans given by the Land Bank, however, were more akin to financial aid to see farmers through the depression than sources of capital that settlers could use to modernise their operations, farm or sawmill.⁴⁴² Government involvement in fostering the timber export industry was equally muted. In 1933, a 60 per cent refund was granted on the timber

⁴³⁶ Kenya Forest Department, *Annual Report of the Forest Department, 1934* (Nairobi Government Printer, 1934), 7. Prior to Timsales the Lumberman's Association fulfilled some of its duties in coordination of the industry. However, a significant number of sawmills refused to join the association, perhaps because of the financial commitment that membership entailed; in 1932 many mills withdraw their membership because of the cost and little apparent benefit (Kenya Forest Department, *Annual Report 1929, 1931*, 6; Kenya Forest Department, *Annual Report 1932*, 7.) Coordination was also attempted through the Timber Advisory Committee, formed in 1929 and comprising sawmillers, builders, architects, and representatives from the Public Works, Railway, and Forest Departments. The key achievement of the committee was agreement on standardised sizes for timber, however in reality there were continued complaints about inconsistency in the product delivered (Kenya Forest Department, *Annual Report 1929, 1929*, 8; H.M. Gardner, *Report of the Standing Timber Committee, Colony and Protectorate of Kenya* (Nairobi: Colony and Protectorate of Kenya, 1931).).

⁴³⁷ H.M. Gardner (Conservator of Forests) to Chief Secretary (Nairobi), 'Economic Development Programme', 4.

⁴³⁸ P. Cunliffe-Lister (Colonial Secretary) to Officer Administering the Government of Kenya Colony, 12 March 1932, FOR/1/239, KNA.

⁴³⁹ *Ibid.*

⁴⁴⁰ P. Cunliffe-Lister (Colonial Secretary) to Sir Joseph Byrne (Governor, Kenya), 13 July 1932, FOR/1/239, KNA; H.M. Gardner (Conservator of Forests) to Colonial Secretary, 30 March 1933, FOR/1/239, KNA; Native Affairs Department, *Annual Report of the Native Affairs Department, 1933* (Nairobi Government Printer, 1933), 8.

⁴⁴¹ Wimbush, *Report on Possibilities of Export of Kenya Timbers to England*. See also correspondence and minutes of several meetings within FOR/1/241, KNA.

⁴⁴² Mosley, *The Settler Economies*, 179.

royalty sawmillers' paid to the department if that timber was exported. Such a policy fit well with the government's disinclination toward aiding industrial development apart from tariff measures prior to the Second World War, a general colonial attitude stemming from a mindset of protection toward metropolitan industry.⁴⁴³ This expanded to a 100 per cent royalty rebate on exported timber in 1935. The timber industry complained, however, that this did little for the industry as the rebates were granted on processed timber whereas the royalty was paid on measurement of the log. In reality, the rebate received typically amounted to approximately a third of the royalty the mill had to pay the Forest Department. The failure of the rebate approach led to the creation in 1938 of the Timber Export Development Grant of £1,000 per annum, paid to Timsales. With this, capital finally became available for more widespread uptake of seasoning facilities, although the outbreak of war and the huge military demand for timber of any quality delayed such development once again.⁴⁴⁴

These moves to increase government assistance to the timber industry and position the Forest Department as a central source of guidance were only somewhat successful. Partly this was a result of the continued realities of the poor financial positions of the Forest Department and the timber industry. Wimbush, for example, was expected to split his time between the considerable duties of an assistant conservator and his new role as utilisation and research officer. His influence was therefore rather limited and it is not surprising that complaints of poor quality timber were still forthcoming in 1938.⁴⁴⁵ With little appreciation for the financial troubles of the sawmillers, a 1937 Forest Department statement characterised the industry as backward and ungrateful:

... as a whole the saw-millers are unwilling to take much trouble in this direction [of seasoning].
... It is often forgotten that the trade is protected by a high import duty and that when urging on Government the retention of this duty, one of the main arguments of the trade was that it would enable saw-millers to provide the public with seasoned timber.⁴⁴⁶

Imports during the war were cut to virtually nil, as were exports of all timbers except for pencil cedar (Figure 2-3). All local domestic and military needs for timber were therefore met by the vastly increased production of timber from the sawmills, which benefitted from the fixed prices set by the

⁴⁴³ Zwanenberg and King, *An Economic History of Kenya and Uganda 1800-1970*, 125–29.

⁴⁴⁴ By 1944 there were 53 sawmills operating in the government forest reserves, including at least one operated exclusively by the military. With the huge wartime demand for timber there was no accumulation of stock and therefore no, or virtually nil, seasoning took place. The duties of forest officers were overwhelming concerned with the regulation of this cutting and maintaining the afforestation programme, resulting in little development of the timber industry as a whole. 'Minutes of a Meeting between C.R. Lockhart (Financial Secretary), H.M. Gardner (Conservator of Forests), F.W. Cavendish-Bentinck (Chairman – E.A. Timber Co-Operative Soc. Ltd.), W.J. Beeston (Director - E.A. Timber Co-Op), B.R. Hoddinott (Director - E.A. Timber Co-Op), A.Q. Roberts (Director - E.A. Timber Co-Op), and H.W. Gill (General Manager – E.A. Timber Co-Op)'; The East Africa Timber Co-operative Society Ltd., 'Memorandum: Export of Timber - Government Assistance', 16 May 1939, FOR/1/241, KNA; Kenya Forest Department, *Annual Report of the Forest Department, 1940* (Nairobi Government Printer, 1940), 2; Kenya Forest Department, *Annual Report of the Forest Department, 1944* (Nairobi Government Printer, 1944), 4.

⁴⁴⁵ C.W. Elliot (Assistant Conservator of Forests) to S.H. Wimbush (Research Officer), 6 April 1938, FOR/1/157, KNA. Furthermore, Wimbush relieved a divisional officer for seven months in 1937 owing to lack of staff and therefore did not conduct any utilisation or research work. In 1939 he proceeded on long leave; effectively, Wimbush was unable to fulfil his role after 1936. Kenya Forest Department, *Annual Report 1939*, 13–14.

⁴⁴⁶ Kenya Forest Department, *Annual Report of the Forest Department, 1937* (Nairobi Government Printer, 1937), 8.

1939 Defence Regulations (Timber Control). The Forest Department benefitted from the war through the creation of a Forest Replanting Fund (later Forest Replanting and Development Fund) in 1941 that was initially intended just to cover the costs of reforesting the large areas clear-cut during the war. The department ensured that royalties were charged on timber sold to the military, which had priority over all other customers, with the excess revenue from these royalties being sunk into the fund. When the fund was finally closed after military need ended in 1947, its balance stood at £523,150.⁴⁴⁷ The fund would allow the department to pursue a forest development policy in the post-war period far in excess of simply replanting the cleared forest areas.⁴⁴⁸

2.2.3 Enumeration and Expansion

Though the Forest Department maintained throughout this period that the annual exploitation of the colony's forests was not exceeding the rate of regeneration it did not in fact have anything like an accurate assessment of the quantity of timber contained in the forests. Its statements on exploitation being sustainable were, therefore, based purely on casual observation not scientific enumeration. The department was well aware of this situation and insisted in 1933 that a comprehensive timber survey "is essential *before* a real export trade can be developed with any confidence."⁴⁴⁹ It was impossible, for example, for the department to estimate how much of a given indigenous timber could be exported or whether it was worth developing a market for it before the actual quantity of standing timber was known. It was a matter that Nicholson had also brought attention to in his assessment of forestry in Kenya, although he was adamant that a full forest survey must be completed to allow proper classification of conservation (for climatic reasons) forests, land to be afforested, and what was needed to meet the needs of the colony.⁴⁵⁰ Similarly, Cunliffe-Lister also realised its necessity, arguing in 1932 that failing an adequate survey being done "the interest in Colonial timbers, which is now developing amongst timber users in this country [i.e. the UK], will rapidly evaporate."⁴⁵¹ The following year, Gardner expressed to the colonial secretary that although "progress at present is slow"⁴⁵² he had hopes of accelerating the matter. No such acceleration came in this period. By 1938, Gardner admitted, "the actual enumerations are very inadequate as yet."⁴⁵³

Piecemeal surveying was carried out, however this was prioritised to select forests only as the stretched resources of the department meant that the level of surveying truly required for scientific

⁴⁴⁷ Kenya Forest Department, *Annual Report of the Forest Department, 1941* (Nairobi Government Printer, 1941); Kenya Forest Department, *Annual Report of the Forest Department, 1943* (Nairobi Government Printer, 1943); Kenya Forest Department, *Departmental Report 1945-1947*, 41.

⁴⁴⁸ See chapter 3, section 3.1.1. for post-war forestry development and the importance of the Forest Fund.

⁴⁴⁹ Kenya Forest Department, *Annual Report of the Forest Department, 1933* (Nairobi Government Printer, 1933), 1. Emphasis added.

⁴⁵⁰ Nicholson, 'The Future of Forestry in Kenya', 9.

⁴⁵¹ P. Cunliffe-Lister (Colonial Secretary) to Officer Administering the Government of Kenya Colony, 12 July 1932, FOR/1/239, KNA.

⁴⁵² H.M. Gardner (Conservator of Forests) to Colonial Secretary, 30 March 1933.

⁴⁵³ H.M. Gardner (Conservator of Forests) to Chief Secretary (Nairobi), 'Economic Development Programme', 3.

forestry, such as the comprehensive national survey proposed by Nicholson, could never be done. This was connected to the larger issue of the continued inadequacies in the Forest Department's working plans. Such plans, formed atop adequate surveys, would have allowed the ideal of scientific forest development to take place. At the end of the 1920s, "the whole position in Kenya is unsatisfactory as proper working plans have not yet been prepared."⁴⁵⁴ Working plans, tellingly described as planting plans by the department, were created for the smaller, more easily worked and accessible forests such as Ngong and Karura near Nairobi, but for the majority of the forests there were none. The department itself argued that working plans should be secondary to surveys of standing timber as the level of exploitation was at such a low level, it maintained, that working plans to prevent over-exploitation were not strictly needed.⁴⁵⁵ In reality, this was a position that suited a department which was so deficient in staff levels that it was unable to carry out what Nicholson, and Troup before him, considered to be core, indispensable aspects of scientific forest management. In the early 1930s the department did have the services of two forest surveyors, employed in the Survey Department, who assisted with extending surveys in the most economically important forest areas and in areas that were scheduled to be redefined following the Land Commission report of 1934. Following the recommendations of the 1935 Select Committee on Economy, these surveyor positions were abolished, a move which the annual report for that year described as a "retrograde step."⁴⁵⁶ The department would not have the services of a full-time surveyor again until 1939, and even then much of his time was engaged with re-surveying plantations that had been poorly surveyed by inadequately trained forest officers.⁴⁵⁷

The Forest Department was therefore following a policy of expanding exploitation without adequate development of the local and export markets to absorb the results and without a comprehensive, scientific assessment of the country's standing stock of timber. This was despite recommendations from forestry advisors (most particularly Nicholson) that such a survey must come first. It was perhaps because of this contradiction that the Forest Department continued to expand government forest reserves and, during the 1930s, the control of forests within the native reserves.

Between the mid-1920s and the end of the Second World War the Forest Department expanded the area over which it had legal control by approximately 42 per cent, increasing from 3,911 square miles in 1926 to 5,713 in 1944. This easily compensated for the reduction of approximately 31 square miles during the mid-1930s owing to redistribution of land in the wake of the Kenya Land Commission and moves to eliminate non-forested land (that is, grassland,

⁴⁵⁴ Nicholson, 'The Future of Forestry in Kenya', 30.

⁴⁵⁵ Kenya Forest Department, *Annual Report 1933*, 6.

⁴⁵⁶ Kenya Forest Department, *Annual Report 1935*, 6–7.

⁴⁵⁷ Kenya Forest Department, *Annual Report of the Forest Department, 1938* (Nairobi Government Printer, 1938), 1, 5–6; Kenya Forest Department, *Annual Report 1939*, 4.

moorland, rocky ground) from departmental control.⁴⁵⁸ However, in 1928 Nicholson estimated that the colony as a whole only had 1,471 square miles of merchantable forest, which included forest land not already gazetted to Forest Department control, while 'merchantable forest' meant forest that contained trees that could be accessed economically and had utility as either timber or woodfuel. Once again, of course, these were estimates based on incomplete surveys of the actual composition of the forests. Nevertheless, based on his projections of population growth, Nicholson determined that Kenya would require 3,125 square miles of merchantable timber to meet its needs, although he did not state when needs would reach the level to necessitate this area of exploitable forest.⁴⁵⁹ While the figures Nicholson presented were never again reproduced in any publication of the Forest Department, the attitude behind them was. It was a core belief within the department that any and all opportunities for the expansion of exploitable or conservation forest should be taken. In 1938, Gardner drew the chief secretary of the colony's attention to Kenya's comparatively low percentage of forest cover, which amounted to approximately two and a half per cent of its land (8 per cent if the more arid northern areas of Kenya were excluded), when "it is generally considered to be desirable that for the healthy development of a country at least 15% of the area should be maintained permanently under forest."⁴⁶⁰ His figure of 15 per cent was based on consideration that in "highly developed countries"⁴⁶¹ such as Germany, France, and Japan the percentage was far above this (26 per cent, 18 per cent, and 55 per cent, respectively). His inclusion of these figures in an economic development report that dealt primarily with the timber industry is significant. Gardner's argument was clear: if the local and export timber industry in Kenya was to be a success, let alone maintain the colonial apparatus that had used timber extensively, then the colony must push ahead and expand the forested area. Here, again, was the Forest Department's response to the declining use of woodfuel by the railway; forestry was to remain relevant because it was essential in any 'highly developed' country. As well as afforesting denuded and forest-less areas, dealt with in the following discussion of the *shamba* system, Gardner stated: "This can be done ... by reserving all remaining forest which is still undemarcated. This I consider urgent."⁴⁶²

Ultimately, this objective lay behind the extension of Forest Department control over forests found within the native reserves. The proclamation of native forest reserves increased significantly in the 20 years preceding the Second World War. By the time of preliminary surveys of the forests within native reserves, in 1930, the department was theoretically responsible for the management of 119 square miles of these. This figure would rise to 387 square miles by 1938, when native

⁴⁵⁸ Unless otherwise stated, statistics on the area controlled by the Forest Department come from its annual reports. All such figures should be considered approximate owing to the deficiencies of comprehensive surveying within the department. For example, in 1947 the area under control increased to 5,725 square miles, not because of any additions but because of "re-computation" (Kenya Forest Department, *Departmental Report 1945-1947*, 7).

⁴⁵⁹ Nicholson, 'The Future of Forestry in Kenya', 4-5.

⁴⁶⁰ H.M. Gardner (Conservator of Forests) to Chief Secretary (Nairobi), 'Economic Development Programme', 1.

⁴⁶¹ *Ibid.*

⁴⁶² *Ibid.*, 2.

reserve forests accounted for 7 per cent of government-controlled forests.⁴⁶³ This was a process accelerated in the 1930s by the Forest Department's previous inattention to forests within the native reserves, the role of afforestation in soil conservation, increased government interest in the economic reality of forestry, and the Forest Department's reinvigorated focus on securing control over forests. Such control had, in fact, been proposed as early as 1914 by John Ainsworth, future Chief Native Commissioner:

Inasmuch as the Native do not, in the great majority of cases realise the great climatic and economic value resulting from the proper preservation of Forests, and as their methods, if left to themselves, are extremely wasteful, and harmful, and have no regard to the claims of posterity, such Forests must be subjected to a regular form of supervision and control.⁴⁶⁴

Ainsworth's memorandum set general government policy on the matter of forests within native reserves, but the Forest Department expended little energy toward putting this policy into effect under Battiscombe's leadership. In 1924 the Native Affairs Department complained of the unsatisfactory position:

Not only is there no organisation for the conservation and judicious exploitation of existing native forests, but there is no staff available to undertake or even to supervise the work of reafforesting denuded areas.⁴⁶⁵

Such inattention was symptomatic of the Forest Department's attitude toward the purpose of forestry. Despite deploying the utilitarian argument that forestry was for the benefit of the whole colony, the department largely ignored the needs of the African reserves and concentrated on meeting the needs of the colonial government. Realising that colonial needs required an even more extensive area of forest, and finding a government alert to the role of trees in countering soil erosion, Gardner began to reverse this situation, although he was no doubt reminded of this by the criticism Nicholson levelled at the department for allowing its focus to fall too strongly on Crown forests to the detriment of those in the native reserves.⁴⁶⁶ By 1930 the fundamentals of the system of Native forest reserves were in place: Forest Department expenditure was used for management and afforestation and it collected all royalties and licence fees, while any profit from these was returned to the respective Local Native Council.⁴⁶⁷ While the Forest Department was accused of inattention toward native reserve forests, the same certainly cannot be said of the system of

⁴⁶³ For an examination of how local politics played out in the formation of these reserves, including how African elites were able to exploit reserve creation for their own benefit, see Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s'; Otieno, 'Conjunction and Disjunction'.

⁴⁶⁴ John Ainsworth, 'Memorandum by Mr. Ainsworth Regarding Forests in Native Reserves' 2 March 1914, 1, PC/COAST/1/2/49, KNA. This proposal fitted well with Ainsworth's general attitude toward colonial rule, in which "Whatever our policy, whatever our ideal as regards the destiny of the native races there must and can be only fundamental as regards rule, and that is that the white-man must be paramount. From this axiom there can be no divergence." (John Ainsworth, 'The Black-Man and the White-Man in East Africa. Some Ideas and Suggestions for the Future Based on Past and Present Requirements and Experiences' n.d., MSS.Afr.s.382, Oxford: Bodleian Library.)

⁴⁶⁵ Native Affairs Department, *Annual Report of the Native Affairs Department, 1924* (Nairobi Government Printer, 1924), 23-24.

⁴⁶⁶ Nicholson, 'The Future of Forestry in Kenya', 11.

⁴⁶⁷ Native Affairs Department, *Annual Report of the Native Affairs Department, 1930* (Nairobi Government Printer, 1930), 55.

afforestation it developed to meet the goal of forest expansion and sustainable exploitation: the *shamba* system.

2.2.4 *The Economic Imperative of Shamba*

The success or failure of forestry within Kenya rested on the *shamba* system. If the Forest Department was to fulfil that most essential element of modern forestry, sustainable exploitation that involved compensation for the loss of forest capital via the establishment of new trees, it needed a large and inexpensive labour supply to carry out the very labour-intensive tasks of afforestation and reforestation.⁴⁶⁸ The financial trials of the first quarter century of the department's existence had shown to foresters that the atmosphere of sometimes open hostility if not suspicion toward forestry that permeated through Kenya meant forestry within the colony had always to justify and prove its economic worth. This was only possible because the department was able to redirect indigenous shifting cultivation practices into a remarkably efficient form of reforestation. *Shamba* made the core goals of forestry in Kenya economically feasible.

The primary duty of *shamba* squatters employed by the department was the establishment of new plantations in government forest reserves that had already been exploited or were suitable for afforestation. Duties also included the repair and maintenance of existing plantations as well as assisting the natural regeneration of indigenous trees by clearing weeds and creepers, and the prevention and fighting of forest fires. The *shamba* squatters were the department's primary workforce and, as shown in Table 2-1, the use of these squatters was remarkably economic in comparison to the employment of wage labour, which the department used in those areas (such as the coastal forests) where it was difficult or impossible to recruit Africans into the *shamba* system.

The cost of establishing plantations using wage labour between 1924 and 1936 averaged at 27 shillings per acre. By comparison, the cost per acre for establishing a plantation in the *shamba* system was 7.80 shillings. Wage labour thus accrued almost four times the expense. Senior Assistant Conservator James Rammell's statement that without *shamba* squatters the costs of creating plantations would increase 400 to 500 per cent may have been an exaggeration when he made it in 1930, but it holds true for the period as a whole.⁴⁶⁹

⁴⁶⁸ Afforestation is used to refer to the establishment of forest on land in which the preceding dominant vegetation was not forest, most often this was the creation of plantations on grassland. Reforestation is used to refer to the assisted natural or artificial regeneration of existing tree species in cutover forest or the establishment of new (exotic and indigenous) tree species in cutover forest. The Forest Department simultaneously referred to both of these processes with the term reforestation.

⁴⁶⁹ J.C. Rammell (Snr. Asst. Conservator of Forests, Londiani) to Secretary of the Molo Farmers' Association, 10 March 1930.

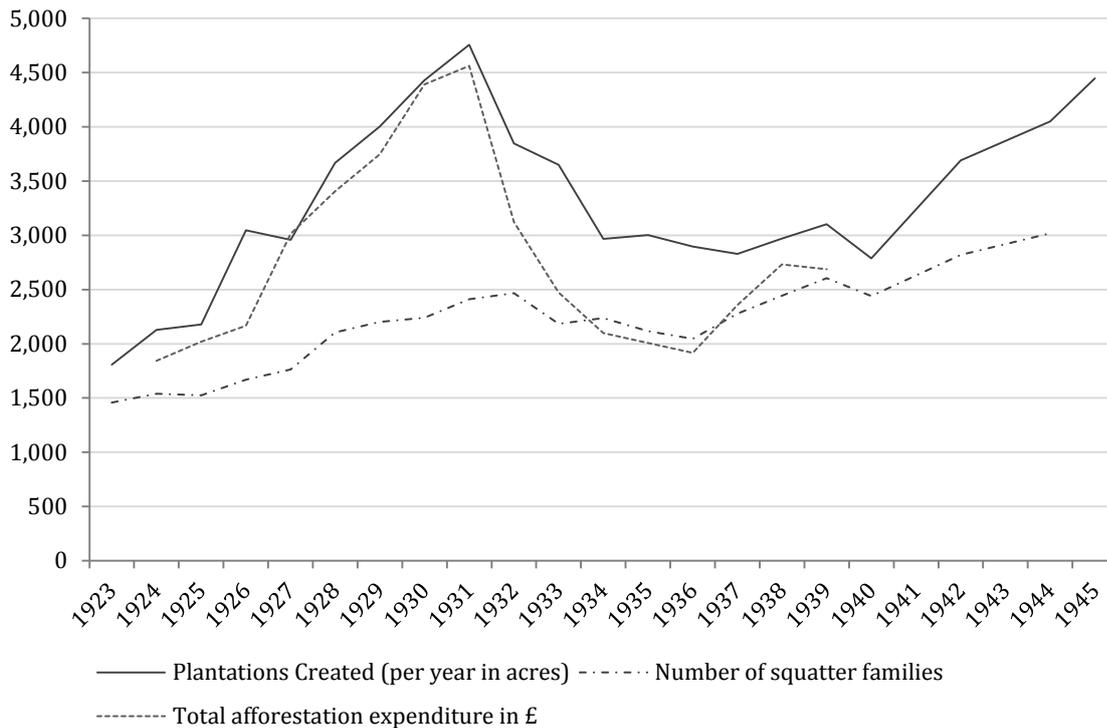


Figure 2-5. Comparison of yearly acreage of plantations created with the number of squatter families engaged in the *shamba* system and the Forest Department's yearly afforestation expenditure. Sources: Annual Reports of the Kenyan Forest Department.

Throughout the 1930s the department spent more on reforestation than any other item of expenditure with the exception of personnel yet also had to reduce its annual expenditure owing to budgetary cutbacks in the wake of the Great Depression, which took effect in the 1932 budget. The direct budgetary effects of the depression lasted four years, reaching their lowest point in 1936. The majority of the budget was allocated to retaining personnel, as spending on personnel rose from 60 to 69 per cent of the total expenditure between 1931 and 1936, while spending on reforestation fell from 13 to 7 per cent, the same level it had been between 1924 and 1926. The effect of this was a drastic fall in the amount of money available to the nursery and planting programme and therefore the number of *shamba* squatters who could be employed. Illustrated in Figure 2-5, by 1936 spending on reforestation was £1,916, less than half the amount spent in 1931. The effect on reforestation was compounded by unfavourable weather conditions. The years 1932, 1933, and 1934 saw either erratic rainfall or the partial or complete failure of either of the two main rains of the year, the short rains (October to December) and long rains (March to May), creating drought conditions. Seedlings died in nurseries, further increasing costs, while more trees that were planted died. The slight increase in the acreage of plantations established in 1935 was precisely because these drought conditions had lifted and good rains increased the success rate of planting.⁴⁷⁰

⁴⁷⁰ Annual Reports of the Forest Department, 1931-1936.

Year	Plantation establishment cost using		Plantation maintenance cost using	
	Squatters	Wage labour	Squatters	Wage labour
1924	10.00	25.00	2.76	10.45
1925	9.14	28.93	4.11	9.70
1926	9.52	27.10	3.10	12.78
1927	9.16	26.31	3.04	12.74
1928	9.19	21.20	3.01	8.98
1929	8.76		3.61	
1930	9.74		3.55	
1931	8.86		2.89	
1932	7.13			
1933	5.30		3.95	
1934	5.55		3.42	
1935	4.80	30.00	2.61	
1936	4.53	35.00	6.04	

All figures are in Kenyan shillings per acre

Table 2-1. Per acre comparative cost in Kenyan shillings of the establishment and maintenance of forest plantations using squatter labour and wage labour. Data from before 1924 and after 1936 do not allow extrapolation of such statistics. Sources: Annual Reports of the Kenyan Forest Department.

The combined effect of the depression and drought was a dramatic reduction in the annual acreage of plantations created, which only showed a genuine upturn in 1938 (Figure 2-5). These events had the potential to effectively stall forestry operations in Kenya, yet their effects were greatly mitigated by the use of squatters rather than wage labour. The low cost of plantation establishment under the *shamba* system meant that more plantations could be created, albeit at a reduced rate during these harsh years. Moreover, the dramatic increase in efficiency of the *shamba* system between 1924 and 1936 that saw more than a 50 per cent reduction in costs (Table 2-1) further reduced the impact of the depression and allowed the department to continue with its planting programme. If wage labour had been used at a potential 400 per cent increase in costs it is very doubtful that large acreages of plantations would have been established during the recession years. Without the squatters in the *shamba* system it seems entirely likely that the creation of new plantations and adequate maintenance and repair of existing plantations would have been effectively impossible without a dramatic increase in budget or reduction in salaries.

The *shamba* squatters continued to be vital to forestry after 1936. In particular, they had a very significant role in assisting the department to play its part in the war effort of the 1940s. The Second World War saw a fivefold increase in timber and fuel production from the forests of Kenya, with the bulk of this going towards the war effort.⁴⁷¹ The revenue of the Forest Department clearly

⁴⁷¹ Kenya Forest Department, *Annual Report 1944*, 11.

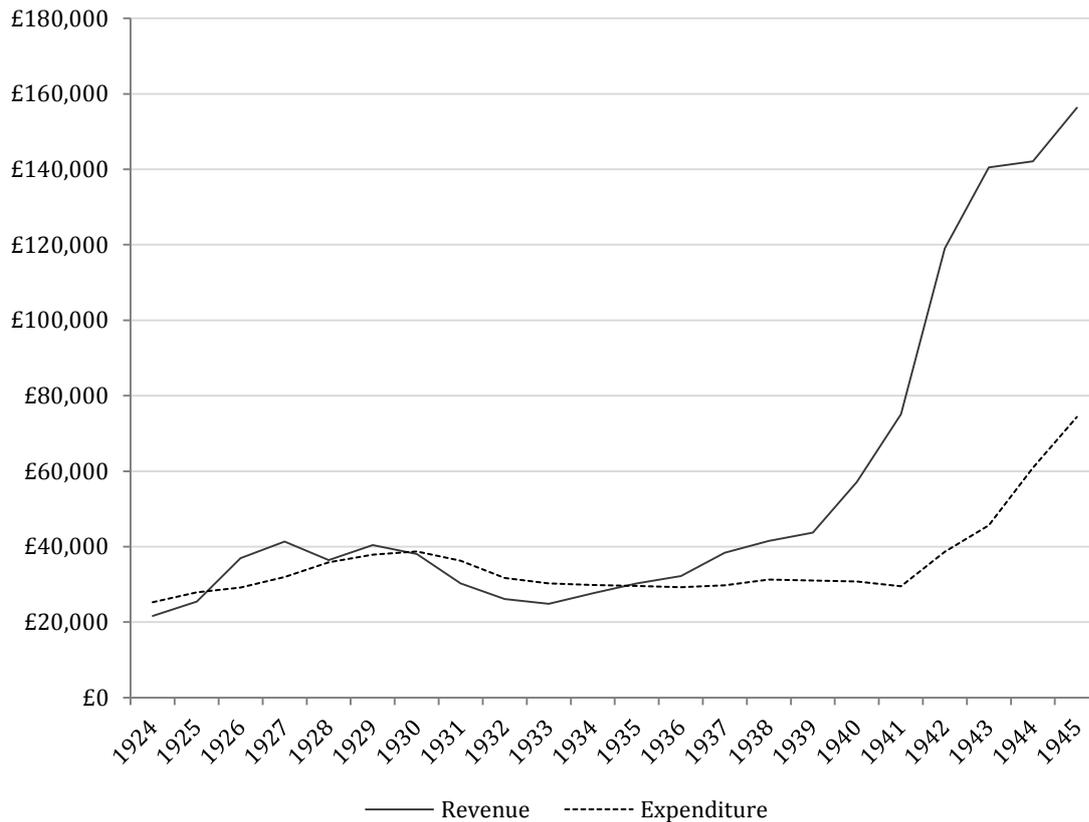


Figure 2-6. Forest Department revenue and expenditure (in pounds) between 1924 and 1944. Sources: Annual Reports of the Kenyan Forest Department, 1924-1944.

illustrates the huge increase in forest exploitation that occurred during the war. Already rising before the outbreak of hostilities, revenues from the forests surged during the war (Figure 2-6).

The already established timber and fuel plantations were vital in allowing the supply and revenue increase to occur. Already by 1940, they were the source of the supply of “the whole of the requirements for poles ... and a considerable proportion of the fuel, thus reducing the demands on the natural forests.”⁴⁷² Aside from these plantations being, of course, created using the *shamba* system, the *shamba* squatters also became instrumental in the expansion in forest exploitation that was occurring. In addition to its usual supervisory role, wartime necessity forced the department to become directly involved in exploitation. The squatters were key in this, as the 1942 annual report explained, “Poles and bamboos in vast numbers were supplied direct by the department and entailed very heavy work on the part of the staff and forest squatter force.”⁴⁷³

The squatters were also expected to continue to contribute to forest fire fighting duties and provide labour for the expanded road-building programme.⁴⁷⁴ The extra duties placed on the forest

⁴⁷² Kenya Forest Department, *Annual Report 1940*, 1.

⁴⁷³ Kenya Forest Department, *Annual Report of the Forest Department, 1942* (Nairobi Government Printer, 1942), 1.

⁴⁷⁴ Kenya Forest Department, *Annual Report 1939*, 1. The Forest Department believed the experience and training it gave its forest squatters in firefighting made them an ideal force for this duty. Compared to African soldiers within the King’s African Rifles, who were called upon to assist in firefighting in 1944, “the ordinary forest squatter is infinitely superior in work of this nature and is worth many of him.” J.C. Rammell (Snr. Asst. Conservator of Forests) to K.M. Cowley (Chief Secretary), 28 March 1944, VF/1/23, KNA. The frequent dry periods and droughts of the war

squatters described above were in addition to the existing programme of plantation creation and maintenance. As shown in Figure 2-5, despite these extra labour requirements the reforestation programme expanded during the war, returning to the level of yearly acreage increase that had existed before the impact of the Great Depression. Although forestry statistics published during the war are incomplete, they do indicate that the increased labour demands of wartime forestry and plantation establishment were at least partly achieved by recruiting more Africans into the *shamba* system. By 1944, the *shamba* system reached a new height with 3,018 families engaged, representing at the very least 6,000 individuals but more realistically over 12,000 individuals if a very conservative estimate of a household of a single man, woman, and two children is used.⁴⁷⁵

2.3 Settler Reactions

Throughout the period under review by this chapter the Forest Department maintained an often tumultuous relationship with many of the white settlers within Kenya. Much of this section will focus on these conflicts, however, co-operation also existed and although limited is revealing of settler and Forest Department needs and attitudes.

2.3.1 Co-operation and co-option

In contrast to the lack of Forest Department assistance of settler farm development seen under Battiscombe's leadership, within this period the department was willing to supply for free to settlers who resided on "timberless"⁴⁷⁶ farms a certain quantity of timber for up to five years after the start of the settler's land grant.⁴⁷⁷ Between 1925 and 1939 the department gave away £7,638 worth of timber and fuel, largely to settlers. However, the value and quantity of this fell between 1925 and 1933 and then rose only in 1934 and 1935, presumably in response to the continued economic woes of many settler farmers.⁴⁷⁸ Generally, the Forest Department was extremely reluctant to grant free issues to anyone – settler, African, or other branch of the government –

years made this role imperative. In 1939, for example, the department reported that thanks to "stout work by forest squatters no really serious damage was done" by the extensive fires that swept through the forests in that year. It was the number of forest fires that occurred during the war, coupled with the heightened need for forest exploitation that compelled the department to begin an extensive road-building programme. Prior to the war, the department had typically only built roads to access its forest stations and for inspection of its plantations, otherwise relying on the sawmillers and others holding forest exploitation licences to put roads through forests. Although the majority of the labour for this road-building programme came from Italian prisoners of war during the Second World War, their "unsatisfactory" performance led the department to also use large numbers of its forest squatter workforce. Kenya Forest Department, *Annual Report 1944*, 9.

⁴⁷⁵ Kenya Forest Department, *Annual Report 1944*. The department did not archive records of its squatters and so ascertaining the total number of individuals engaged in the system is difficult. A list of squatters from Rongai Forest Station from 1918 (KNA QB/1/209) suggests that it was commonplace for a man to have two or three wives and up to five children. If it is estimated that each squatter in 1944 had two wives and three children, the total population would be approximately 18,000.

⁴⁷⁶ Kenya Forest Department, *Annual Report 1928*, 13.

⁴⁷⁷ H.M. Gardner (Conservator of Forests) to W.E. Powys, 16 January 1931, FOR/1/293, KNA.

⁴⁷⁸ Forest Department Annual Reports, 1925-1939. Statistics on the quantities of free issues are not available for the Second World War period. As the military had first call on any timber produced it is likely that no free issues took place.

because of the precedent it would set. In 1932, for example, the department refused to issue free timber to mission hospitals, despite the local district commissioner requesting this should be done.⁴⁷⁹ After multiple appeals from impoverished settlers, in 1934 the department began granting one-year extensions to free issue permits and lowered royalties on timber for those settlers that did not have permits.⁴⁸⁰

This attempt to define the settler relationship on terms that suited forestry is also evident in the Learner Foresters Scheme, which existed under the auspices of the Local Civil Service Scheme begun in 1935. The Forest Department hoped that this scheme would allow the majority of future forest officers to be drawn from the sons of settlers and civil servants residing within Kenya, effectively providing a cheap and local solution to the department's perennial staffing problems.⁴⁸¹ It would also have the effect of drawing settlers into the department, creating a voice for forestry within the community that most opposed it. Candidates were trained for 12 months at Karuma, Uganda and recruitment began with Eric Rundgren in 1935.⁴⁸² However, by 1960 only seven men had been employed under the scheme, and out of these three remained in the job for less than two years.

The department had more success with bringing settlers into touch with forestry via its system of honorary forest officers, which began in 1928. These officers were essentially volunteers from among the settler community who agreed to act as agents for the department in areas where the department's staff was stretched thin or non-existent. At least 18 such officers worked for the department before independence, with the majority being recruited in the 1930s.⁴⁸³ Despite their lack of forestry training, these officers were occasionally given supervisory powers over African and Indian assistant foresters and squatters in the *shamba* system, even being allowed to issue fines for forest offences; their only qualification was their skin colour.⁴⁸⁴ Reports of the effectiveness of this programme, apparently also undertaken in Tanganyika, reached England, where R.S. Troup remarked it had been of great assistance to forestry in Kenya.⁴⁸⁵ The existence of honorary forest

⁴⁷⁹ Harrison-York (District Commissioner) to H.M. Gardner, 23 February 1932, FOR/1/293, KNA.

⁴⁸⁰ S.H. Wimbush (for Conservator of Forests) to Asst. Conservator of Forests (Nyeri), 29 November 1937, FOR/1/293, KNA.

⁴⁸¹ Kenya Forest Department, *Annual Report 1935*, 2.

⁴⁸² Holman, *Inside Safari Hunting, with Eric Rundgren*, 60.

⁴⁸³ Honorary Forest Officers recruited in this period were: R.W. Ball, Esq. (Nabkoi), T.H. Barnley (Kapolet & Kapkanyan), W.J. Beeston, Esq. (Njoro), Gilbert Colville, Esq (Eburru), Capt. H.H. Cowie (South Ngong), E.J. Davies, Capt. R.E. Dent (Mtwapa), W.S. Lillywhite (Sokoke), W. Martin (Eburru), F. Nye Chart (Kipiperi), E.G. Powell (Thika/Garissa), Capt. K. Rawson-Shaw (Elgeyo), D. Ruben, Esq (Eldalat), H.J. Sankey (Njabini), Capt. J.F. Sherrard (Ndare), H.L. Squair, Esq (South Laikipia/Aberdare), Brig-Gen. A.R. Wainwright (North Aberdares), and Dr C.J. Wilson (South Kinangop). Compiled from Forest Department Annual Reports.

⁴⁸⁴ C.F. Elliot (for Acting Conservator of Forests) to F. Nye Chart (Manager, Statimma Farm, Gilgil), 30 March 1935, FOR/1/243, KNA.

⁴⁸⁵ R.S. Troup, *Colonial Forest Administration* (Oxford: Oxford University Press, 1940), 286.

officers indicates a willingness amongst at least a minority of the settlers to engage with and support forestry work.⁴⁸⁶

On first appearance, the formation of the Kenya Arbor Society in 1934 also seems to reflect this positive engagement with forestry.⁴⁸⁷ Established under the triple aims of protecting forests, encouraging tree planting, and conserving soil and water, the society boasted a membership of more than 300, including one African, by 1945.⁴⁸⁸ Composed largely of settlers before 1946, the society engaged itself mostly with tree planting in towns and along roads, aesthetic concerns also having a strong bearing on its views, as well as producing pamphlets on the utility of trees for soil conservation for distribution among the African population.⁴⁸⁹ The significance of this society becomes clear, however, in its criticism of the Forest Department. This reached a particular high after the numerous forest fires of 1944 threatened settler farms. The society felt:

The steps taken by the Department have been quite inadequate to protect the forests of the country, and that ultimately responsibility for these disastrous fires must rest with the hand of the Department.⁴⁹⁰

Although the society did work with the department and government, particularly in an advisory capacity during the drafting of forest rules, it also argued that the Forest Department was “neglectful of its high charge”,⁴⁹¹ protecting the forests. Although they cut short of declaring so publically, the implication was that the department should either face dramatic change or be replaced by private bodies. The society was therefore far more than just an exemplification of growing settler understanding of the importance of forests in relation to soil and water conservation, as it represented the implicit settler belief that the forests would be better off in the hands of private landowners. By the close of the Second World War, the Forest Department seems to have suspected this motivation, refusing to approve of a scheme whereby a government grant or loan would be issued to the society to allow it to establish plantations of its own.⁴⁹² In accordance with the principles of scientific state forestry, the department was determined that private enterprise would not encroach on its own activities, instead being allowed only to be involved in

⁴⁸⁶ It appears these honorary forest officers were also unpaid, as no records or statements of salaries for these men appear in the department’s annual reports, the Colony’s blue books, or in correspondence. It is possible, however, that they were paid informally from the budgets of forest stations or received other material benefits from their work, but again lack of records prevents proper investigation of this.

⁴⁸⁷ Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1945* (W. Boyd & Co., Nairobi, 1945), 3.

⁴⁸⁸ Kenya Arbor Society, *Wartime Progress Report, August, 1943-February, 1945* (W. Boyd & Co., Nairobi, 1945), 1.

⁴⁸⁹ After 1946 many Local Native Councils also joined the society as corporate members. In 1946 representatives of the Forest Department also began sitting on its council, perhaps indicating awareness within the department of the importance of engaging directly with a potentially powerful pressure group. Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1946* (W. Boyd & Co., Nairobi, 1946).

⁴⁹⁰ Mrs R. Fane (General Secretary, Kenya Arbor Society) to Chief Secretary (Kenya Colony), 22 February 1944, VF/1/23, KNA.

⁴⁹¹ Kenya Arbor Society, ‘Forest Fires in the Aberdares’, February 1944, VF/1/23, KNA.

⁴⁹² Kenya Arbor Society, *Wartime Progress Report, August, 1943-February, 1945*, 6.

the exploitation and selling of forest produce. For its part, the society insisted that it “will not desist from its endeavours to get some plan of this kind adopted.”⁴⁹³

2.3.2 *Settlers and the shamba system*

The department faced criticism, largely originating with settler farmers, of its *shamba* system throughout this period. Much of this criticism has now been either lost or was not recorded originally and is only alluded to in documents retained by the Forest Department. For example, criticism of the department’s struggles to control its forests seems to have been common in 1926, as Gardner reported, “In spite of many assertions to the contrary it can be definitely stated that there are no unauthorised Natives in any of the Forest Reserves.”⁴⁹⁴ In 1929, an exceptionally dry year in which many wildfires spread through forests, grassland, and moorland, the department’s squatters were “often blamed, quite gratuitously”⁴⁹⁵ for carelessly starting such fires. The department defended its squatters, who carried out the bulk of the forest firefighting duties, and announced they “show very fine qualities indeed”⁴⁹⁶ in this endeavour. Gardner ended his report on fires in that year with a thinly disguised attack on those who disparaged the department and its workers:

With a few noteworthy exceptions for which the Department was very grateful, little help was received from outside sources but plenty of criticism.⁴⁹⁷

The department’s fire policy again came under criticism in 1936, when the preventative burning of grassland on Mount Elgon, bordering Uganda, was misunderstood as a forest fire. “Criticism was raised” over this, the department reported but the “fears of the uninformed members of the public were allayed by an explanation in the local Press.”⁴⁹⁸

Sometimes it was not a case of the Forest Department versus the settlers, but an individual forest officer locked in conflict with a settler. In late 1931, several sheep and goats belonging to the settler farmer Dr Wetherall of Uasin Gishu were confiscated by a forest guard when they were found within Karati forest reserve. The guard handed the livestock over to the local forester, Basil Fuller who proceeded to keep them at the forest station where several of the sheep died. The confiscation was, Gardner alleged, carried out by the guard and Fuller in retaliation for a fine that Wetherall had made forest squatters pay for grazing their animals on his land.⁴⁹⁹ It was an unusual incident that was made worse by the disrespect Fuller paid Wetherall in firstly failing to reply to his letters and then replying with a “curt minute, ... This is considered a discourtesy to a member of the public

⁴⁹³ Ibid.

⁴⁹⁴ Kenya Forest Department, *Annual Report 1926*, 21.

⁴⁹⁵ Kenya Forest Department, *Annual Report 1929*, 1929, 12–13.

⁴⁹⁶ Ibid.

⁴⁹⁷ Ibid.

⁴⁹⁸ Kenya Forest Department, *Annual Report 1936*, 15.

⁴⁹⁹ H.M. Gardner (Conservator of Forests) to Provincial Commissioner (Rift Valley Province, Nakura), 1 February 1932, FOR/1/243, KNA.

which should not have been committed.”⁵⁰⁰ Fuller then insulted the acting provincial commissioner by failing to report to him to explain the matter.

The case reveals the importance of formality and correct etiquette when dealing with members of the settler community. Had Fuller followed accepted standards of respect the incident could have been settled locally rather than requiring the intervention of the Conservator of Forests and Provincial Commissioner.⁵⁰¹ Fuller could not balance the competing priorities of colonialism that his role required, blaming his “over-zealous pursuance of the Forest Department’s policy” for one dispute.⁵⁰² The correct etiquette and cordiality were key to the maintenance of the department’s working relationship with the settlers. Where this collapsed the conflicting priorities of forestry and white settlement were laid bare.

These competing priorities came to the fore of confrontations between the department and the settlers over the issue of forest squatters. This was a matter that intensified during the Second World War, reinforced by confusion over who in the forests the Forest Department actually controlled during a period of a huge surge in forestry activity by the department, its contractors, and the military, and a resurgence in settler campaigns to end the practice of resident labour on their farms.⁵⁰³ Complaints came from influential members of the settler community who were able to direct them at the governor’s office. By April 1944, Gardner felt it all amounted to “constant but ill formed and quite unjustified criticism of the Forest Department’s squatters.”⁵⁰⁴ One month before Gardner felt compelled to lodge his disquiet with the Chief Secretary, the Nakuru District Production and Manpower Committee had met and the farmers present argued that the forest squatters “were a menace to the timber grown in the forests owing to the fires which they started, the extensive cultivation they carried out and the amount of stock they were allowed to keep.”⁵⁰⁵ As will be seen in section 2.4.4, below, forest squatters were sometimes responsible for the starting of destructive forest fires that threatened settler farms. While obvious and dramatic, such events

⁵⁰⁰ Acting Provincial Commissioner (Rift Valley Province) to H.M. Gardner (Conservator), 18 January 1932, FOR/1/243, KNA.

⁵⁰¹ Basil Muncey Fuller’s background of a Cambridge education and experience working in Rhodesia and South African should have made him ideally suited for the task of working alongside the settlers, yet in his nine years with the Forest Department he worked at five different forest stations and caused numerous disputes. At Londiani in 1936, the local saw mill refused to work with him, and he also clashed with the assistant conservator and Africans. Fuller was considered a “serious handicap to the department” by 1937 and was let go in 1938. H.M. Gardner (Conservator) to Colonial Secretary, 25 October 1937, FOR/1/377, KNA. The case of Basil Muncey Fuller appears to have been unique within the Forest Department. No other forest officer during the colonial period had so many complaints directed toward him. Yet, such was the need for officers, that the department retained him for nine years. Partly, Gardner’s decision to do so might have stemmed from the misfortune of Fuller and his wife in contracting sleeping sickness in 1929 while he was assigned to Kavirondo; his wife allegedly being the first white woman in Kenya to suffer from the disease. Fuller never appears to have completely recovered from this, and the ensuing dispute between him and the department over his desire for a ‘healthy station’ must surely have tainted his attitude to his work. Fuller’s case is detailed at length in numerous correspondence within FOR/1/377, KNA.

⁵⁰² B.M. Fuller (Forester) to H.M. Gardner (Conservator), 21 November 1936, FOR/1/377, KNA.

⁵⁰³ Youé, ‘Settler Capital and the Assault on the Squatter Peasantry in Kenya’s Uasin Gishu District, 1942-63’, 395.

⁵⁰⁴ H.M. Gardner (Conservator of Forests) to the Chief Secretary, 4 April 1944, VF/1/11, KNA.

⁵⁰⁵ Nakuru District Production and Manpower Committee, ‘Proceedings of the Nakuru District Production and Manpower Committee’ 22 February 1944, VF/1/11, KNA.

were rare: the issues of forest squatter cultivation and stock were the real points of complaint the settlers upheld. Debate in the Nakura Committee further expounded on what was perceived to be the soft touch of the Forest Department in that it only required its squatters to work as labourers for 180 days per year (technically correct but in reality far from the actual practice during the war). The settlers wanted stricter control over their own squatters, including the ability to compel them to labour for 270 days a year, a tactic that wealthier settlers were pursuing to discourage extensive squatter cultivation on their farms in order to increase their own acreages of cultivation. As Youé has argued, this was part of a wider move to consolidate white production in the colony and ultimately make the prospect of white self-rule more likely.⁵⁰⁶ The farmers of Nakura feared that if the Forest Department maintained its current policy the settlers' squatters would simply abandon the settler farms for the forests after the stricter rules were introduced, thus threatening the wider goals of the settlers. Gardner, present at the meeting, countered that the department was now adopting a policy of compelling its squatters to work 240 days per year and that, besides, the Forest Department would never be able to accommodate a mass exodus of squatters from the settler farms.⁵⁰⁷ Gardner's arguments were ignored. A month later he found himself again defending the necessity of the forest squatter system, this time after an article had appeared in the *Kenya Weekly News* that disparaged the squatters.⁵⁰⁸ The paper was owned by F.J. Couldrey, member of the Legislative Council for Nakura, President of the Nakuru Chamber of Commerce, and holder of a seat on the Nakuru District Production and Manpower Committee.⁵⁰⁹

The Forest Department was clearly facing criticism from powerful individuals within the settler community, but it fought back. In 1944 Gardner invited settlers sitting on the Nakura Committee to his forests, had them shown the forestry operation and made it clear that the forest squatters performed essential duties far beyond the days they were simply contracted as labour. One settler at least, H.G. Prettijohn was convinced and circulated a letter stating:

Perhaps my greatest reaction, being such a violent anti-squatter, was that although I still maintain that the squatter system is an abomination of the first water on European farms, both from the point of view of wastage of labour and from the wrong use of land, and should be abolished as soon as possible, I do consider that the Forest Department should continue to use it, and extend it if necessary.⁵¹⁰

⁵⁰⁶ Christopher Youé, "A Delicate Balance": Resident Labour on Settler Farms in Kenya, Until Mau Mau', *Canadian Journal of History* 22, no. 2 (August 1987): 223–25.

⁵⁰⁷ There were 38,492 squatters (including families) on settler farms in Nakura in 1948 versus 21,383 squatters employed by the Forest Department across the whole of Kenya. It is clear that the Forest Department would not have been able to take on even a relatively small percentage of these settler squatters. Figures given in RMA van Zwanenberg, *Colonial Capitalism and Labour in Kenya 1919-1939* (Nairobi: East African Literature Bureau, 1975), 219.

⁵⁰⁸ H.M. Gardner, 'Response to a Kenya Weekly News Article of 30 March 1945' n.d., VF/1/11, KNA.

⁵⁰⁹ Alice Amsden, *International Firms and Labour in Kenya 1945-1970* (Routledge, 2013), 48; Government Notice No. 502 *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 47, 23 (Nairobi, 1945), 232.

⁵¹⁰ Extract from a letter by H.G. Prettijohn included in H.M. Gardner (Conservator of Forests) to the Chief Secretary, 4 April 1944.

There is no evidence the other members of the committee were quite so hospitable. Despite strong criticism, the *shamba* system continued and grew to its largest extent in the 1950s. Clearly, then, by the time of the Nakuru District Production and Manpower Committee's attacks in 1944 the government itself was largely supportive of the system. Nevertheless, the statements of the committee highlight the issue that the forest squatters were seen by the settlers as a threat to their economic position and ultimate goals. It was this that lay at the heart of numerous major incidents of conflict between the department and the settlers in the interwar years.

2.3.3 *Settlers and squatter cattle*

In contrast to his predecessor, Conservator of Forests Gardner appears to have placed considerable pressure on his forest officers over the issue of squatter-owned cattle; a point illustrated by the rapidity with which the number of legally-owned cattle was reduced after he assumed the office of Conservator of Forests. Battiscombe had attempted to reduce the number of cattle kept in Karura forest, a key fuel forest close to Nairobi, since 1921 when he identified the presence of cattle there meant that "some of the plantations are being ruined."⁵¹¹ Seven years later, the number of cattle remained an issue. Gardner instituted a policy of 'slow' reduction to combat the problem. In this, the number of cattle would be reduced gradually each year until a target population figure was reached. After the forester at Karura reported a reduction from 280 African-owned cattle in 1927 to only 39 in 1928, illustrating that the process was not always 'slow', Gardner congratulated him:

The result of the policy of slow reduction is very excellent and I trust that it will continue. On no account should fresh cattle be allowed into the forests and natural increase must be disposed of by the owners.⁵¹²

By 1928 the slow reduction policy was being applied to African-owned cattle in forests across the colony, with Gardner reporting that cattle belonging to forest squatters remained only in Karura, Ngong Road, Kikuyu, Lari, Escarpment and Kinobop, and Tinderet (all areas the department placed within its Nairobi division) by May of that year. Gardner explained to the Attorney General of the colony in 1928 that this was a policy directly related to settler needs, as:

This department is willing to exclude squatters' cattle from Forest Reserves adjoining areas where such cattle are excluded from settlers' estates and is in fact doing so in several areas where settlers are not yet excluding them, e.g. Laikipia.⁵¹³

As shown in Table 2-2, it was in 1928 that this policy of slow reduction of squatter cattle really took effect, with an initial change from 0.7 cattle per squatter to 0.5. In the following 11 years (until cattle numbers reached zero), the department was remarkably successful in either keeping cattle numbers down or reducing the total and reversing the upward trend in cattle ownership prior to

⁵¹¹ E.B. Battiscombe, Conservator of Forests, to Forester, Karura, 16 November 1921, QB/1/209, KNA.

⁵¹² H.M. Gardner, Conservator of Forests to Forester, Karura, 20 November 1928, QB/1/209, KNA.

⁵¹³ H.M. Gardner, Conservator of Forests to Attorney General, 4 May 1928, QB/1/209, KNA.

<i>Year</i>	<i>Number of squatter families</i>	<i>Number of cattle owned by squatters</i>	<i>Cattle per squatter</i>
1923	1,458	786	0.54
1924	1,539	718	0.47
1925	1,526	867	0.57
1926	1,669	1,065	0.64
1927	1,762	1,355	0.77
1928	2,105	1,164	0.55
1929	2,202	799	0.36
1930	2,239	1,027	0.46
1931	2,410	955	0.40
1932	2,466	918	0.37
1933	2,184	624	0.29
1934	2,237	434	0.19
1935	2,116	537	0.25
1936	2,047	507	0.25
1937	2,279	421	0.18
1938	2,444	169	0.07
1939	2,604	0	0.00

Table 2-2. Comparison of the number of squatter families to number of cattle owned by them. The third column represents the number of cattle each squatter would own if they were theoretically divided equally; this serves analytical purposes but is not intended to indicate actual ownership rates as in many areas squatters kept no cattle at all. Sources: Forest Department of Kenya Annual Reports.

1928. Even when numbers increased in 1930, 1931, 1935 and 1936 this was by a low amount. The overall trend is a clear, slow reduction in cattle, just as the Forest Department policy demanded. Of further note is the low level of cattle ownership among the forest squatters compared to the wider African population. Figures provided by Mosley based on Agricultural Department reports indicate a cattle ownership rate of 1.25 cattle per person in 1926 and rising thereafter until falling in the 1950s.⁵¹⁴ The low level of cattle ownership among the forest squatters, even before reductions, indicates that these squatters were materially poorer (as cattle represent stored wealth) than the colonial average.

Correspondence from 1926 reveals just what the Forest Department was sacrificing by introducing this policy and the importance of settler opinion to the department. Responding to a request from his assistant conservator of forests in Laikipia to grant grazing licences to Africans in the forest there, Gardner conjectured that such grazing would actually benefit the department because licences would be sold and that “there is no legal reason why a grazing licence should not be granted to a native just as to Europeans and also to natives in other districts.”⁵¹⁵ From this statement it appears that the department attitude to cattle was not so clear-cut in 1926. However,

⁵¹⁴ Mosley, *The Settler Economies*, 73.

⁵¹⁵ H.M. Gardner, Conservator of Forests to Assistant Conservator of Forests, Laikipia, 17 July 1926, QB/1/209, KNA.

the importance of maintaining a civil relationship overrode any concern about the apparent legal right of Africans to have cattle in the forests:

But the granting of these licences in your district would certainly be criticized by Settlers some of whom would inevitably take the opportunity to blame this department for introducing disease etc. Such charges, however unfounded, would harm the department and the question is - is the revenue to be obtained and the chance of pleasing the Squatters worth the risk of arousing antagonism to the department among the Settlers of Laikipia.⁵¹⁶

Under the leadership of Battiscombe and Gardner the Forest Department was clearly highly concerned with maintaining a cordial relationship with the settlers, fully aware of the political power the settlers held in Kenya, the willingness of the government to sacrifice forestry issues to placate this volatile group, and the settlers' turbulent relationship with their own squatters. The increasing amount of farm and forest squatter stock was also considered a problem by the wider government, and by 1927 there were calls from the Labour Department for an absolute limit on stock numbers.⁵¹⁷ The issue of African rights was secondary to this colonial priority, as was the revenue concerns of the department. That Gardner was displaying this clear concern in 1926 is telling: it was the year before the department began following its slow cattle reduction programme in earnest. The programme should therefore very much be seen as a response to the necessity of maintaining a working relationship with the settlers in Kenya's political climate. Gardner even went so far as giving an assistant conservator permission to discuss with the settlers in Laikipia whether they would tolerate African-owned cattle in that district, although he was emphatic that the assistant conservator's discussions should not be construed as the department asking settlers for permission to keep cattle. Evidently, Gardner wanted to ensure that the department at least appeared to be holding the reins of power, even if the reality was less clear-cut.⁵¹⁸

The Forest Department cattle reductions of the 1920s also began before the Hall Commission of 1929 recommended a general policy on restricting and reducing in number the cattle owned by squatters on settler farms, a move designed to protect settler farming interests.⁵¹⁹ Within this context, the 'proactive' policy of the Forest Department stands out as a result of the pressure the department was under from the settlers and government, and the necessity of maintaining forest squatters against this pressure. For Africans, the Forest Department policy meant a drastic reduction or total elimination of the cattle they could own and graze in the forests. Such an extreme policy was seen by the department as the only workable solution to ending settler grievances about African cattle because the department simply lacked the manpower and ability to effectively police its forests. A blanket ban on cattle or the maintenance of a low number of Forest Department-

⁵¹⁶ Ibid.

⁵¹⁷ Zwanenberg, *Colonial Capitalism and Labour in Kenya 1919-1939*, 256.

⁵¹⁸ H.M. Gardner, Conservator of Forests to Assistant Conservator of Forests, Laikipia, 28 July 1926, QB/1/209, KNA.

⁵¹⁹ Zwanenberg, *Colonial Capitalism and Labour in Kenya 1919-1939*, 236.

<i>Division</i>	<i>District</i>	<i>Forest Squatters</i>	<i>Cattle</i>	<i>Sheep</i>	<i>Goats</i>
Kikuyu	Ngong	103	0	385	0
	Kerita (Escarpment)	107	214	1,807	0
	Kikuyu	138	89	873	0
	Karura	92	162	443	39
	Kinobop	130	0	4,320	0
	Lari (Uplands) *	166	159	7,409	0
Nyeri	South Kenya *	140	0	101	918
	Aberdares *	151	0	1,225	3,686
	Nyeri	6	0	24	39
	South West, West, & North West Kenya	143	0	2,339	2,473
Laikipia	Bahati	127	0	3,373	1,739
	Rumuruti	30	0	657	727
	Aberdares and Thomson's Falls	105	0	4,551	2,091
Londiani	Londiani	208	0	6,803	0
	Elburgon	202	0	4,000	0
	Maji Mazuri	181	0	2,020	0
Eldoret	Kaptagat	131	25	3,325	0
	Elgon	24	30	55	0
Totals		2,184	679	43,710	11,712

* Districts that adjoined native reserves.

Table 2-3. Number of registered Forest Department squatters and their livestock per division and district in 1934. Source: C.W. Elliot (Assistant Conservator of Forests) to Chief Veterinary Officer, 29 May 1934, FOR/1/210, Kenya National Archives.

branded cattle allowed the department to more easily govern the forests as it made the presence of 'illicit' cattle all the more obvious.

In the midst of economic depression in the early 1930s, settler farmers were again alert to anything that they perceived as a threat to their economically fragile farms. This perception was further spread through the settler community as an increasing number of farmers were transforming their farms to a mix of arable and livestock, a move encouraged by the Land Bank to diversify the settler economy.⁵²⁰ In 1932, for example, H.H. Anstey, the forester assigned to the forest station in Kerita reported to his superior that a settler had been inspecting forest squatter-owned cattle kept in the forest. The settler near Kerita subsequently made a complaint to government apparently about this stock straying over the forest boundary.⁵²¹

⁵²⁰ Anderson and Throup, 'Africans and Agricultural Production in Colonial Kenya', 331.

⁵²¹ Anstey was keen to show that the department was no lapdog to the settlers in this instance, adamantly reporting that his squatters never allowed their cattle to wander so far and that in fact "I have several times found herds of the [settler] farmer's cattle well in the forest and no herdsman in charge." H.H. Anstey, Forester Escarpment/Kerita to J.C. Rammell, Senior Assistant Conservator of Forests, 16 May 1932, FOR/1/210, KNA. This apparent defence of the forest squatters should not be seen as a change of approach on behalf of the department, however, as correspondence from a year earlier reveals that the department was itself concerned about the number of cattle their squatters were now keeping in the forests. In 1931 I.R. Dale, assistant conservator of forests, ordered the forester of Kikuyu district to strictly follow department policy on cattle by eliminating the majority of the 300 cattle owned by five or six squatters there. Each squatter, Dale outlined, was allowed to keep 15 head of cattle in the forest and grazing rates had to be applied to any cattle in excess of this. The department thus accrued revenue by limiting the number of cattle, even if this was effectively violating the agreement the squatters had signed with the department. Dale stated: "If they protest that they are allowed the 300 on their agreement forms give them 6 months

Complaints such as that made at Kerita kept the fire of the slow reduction programme burning. The approximate 300 cattle present in Kikuyu district in 1931 were, for example, reduced to 89 by 1934 (Table 2-3). Such complaints were joined by escalating criticism of government control of forest reserve in the early 1930s that would see 5,462 acres of grassland (that were within forest reserves) removed from Forest Department control and placed under the authority of the Commissioner of Lands for redistribution in 1934.⁵²² This removal of grassland from the forest reserves was a matter that settlers in the Legislative Council had been pursuing since 1927, eager to gain access to grassland controlled by the Forest Department. The department itself seemed quite willing to excise large portions of unforested land from its reserves and in 1928 identified approximately 37,000 acres of such land that it considered uneconomic from the forestry standpoint.⁵²³ The insinuation is that this land could not be used for forestry or was too far from any area being utilised for plantation establishment to effectively serve the needs of the forest squatters. The land excised by the department in 1934 was part of this earlier 37,000 acres; indeed the 5,462 acres would be the only portion of the earlier figure excised. Settlers pointed not to Forest Department reluctance in this case but other, unidentified, branches of government. No doubt this represented government concern over further land alienation; notably, land was only excised from the forest reserves in 1934 after the Kenya Land Commission had completed its investigation. The 5,462 acres can thus be seen as a minor concession to another settler grievance.

The grassland issue was part of the wider settler grievance that the Forest Department was holding onto land when, settlers believed, it could not take stock of the assets it possessed. On hearing of the department's issues with forest enumeration, the settler F.A. Bemister declared in the Legislative Council session of May 1933:

Well, Sir, I actually was staggered. ... for a Forestry Department, with I do not know how many forest guards, and this, that and the other, to admit that in 1933 they have not got an enumeration of their assets! Now, Sir, is that due to policy or is that due to personality? It is due certainly to inefficiency.⁵²⁴

Bemister was using the same argument made by settlers two decades earlier: the Forest Department was inefficient and incapable of the task it had. The job of enumeration, Bemister argued, could just as well be done by the police. His view is symptomatic of a larger misunderstanding of the nature of scientific forestry work; he apparently believed forest enumeration was akin to counting head of cattle. The government, it seems, was unaware of the gap in knowledge between itself and the settlers, as the Colonial Secretary, H.M.M. Moore, expressed

notice of the termination of the agreement." I.R. Dale, Assistant Conservator of Forests to Forester, Kikuyu, 4 February 1931, FOR/1/210, KNA.

⁵²² Kenya Forest Department, *Annual Report 1934*, 2.

⁵²³ Colony and Protectorate of Kenya, 'Official Report of the Debates in the Legislative Council, 1925' (Vol. 2. Hansard, Nairobi, 11 December 1929), 686-90; Kenya Forest Department, *Annual Report 1929*, 1929, 4. The motion for the issue to be settled was raised by E.M.V. Kenealy and supported by C.G. Durham, H.E. Schwartz, and Conway Harvey – all settlers.

⁵²⁴ Statement by F.A. Bemister in Colony and Protectorate of Kenya, 'Legislative Council Debates, 1933' (Vol. 1. Hansard, Nairobi, 10 May 1933), 429-30.

that he was “almost as staggered” upon hearing Bemister’s understanding that enumeration meant the counting of trees rather than surveying and the formulation of forest working plans. Moore continued that it was the job of assistant conservators and that foresters, let alone policeman, were unqualified for the task.⁵²⁵

It was this continuation of settler misunderstanding of and negatively toward the Forest Department, combined with the repetition of the kind of resistance they presented in the 1920s to forest squatter-owned stock that answer the question of why the department continued with its cattle reduction programme. Maintaining squatter stock was politically costly for the Forest Department, even if it had limited forestry and financial utility.⁵²⁶ This is clearly illustrated in the case of an outbreak of rinderpest in 1935 that would see the Forest Department pitted against settlers and government veterinary officers.

Rinderpest, the disease that had devastated cattle numbers in the last decade of the nineteenth century, remained endemic in Kenya. An outbreak occurred on the farm of Mrs Willoughby of Ngong District (Kikuyu Province) in March 1935. Willoughby suspected that the disease had spread from African cattle, and the government duly dispatched stock inspectors to investigate.⁵²⁷ These inspectors, P.H. Poolman and W.S. Taylor, gathered evidence from neighbouring settlers and Africans that led them to the conclusion that the outbreak did indeed originate with African cattle and that these cattle were in fact the property of Africans employed by the Forest Department, that is, forest squatters.⁵²⁸ The Forest Department response came from Charles Elliot, Assistant Conservator, who had compiled the forest squatter stock report in 1934 (Table 2-3).⁵²⁹ This report

⁵²⁵ *Ibid.*, 440.

⁵²⁶ There were limited advantages to the maintenance of a low number of cattle in the forests for the Forest Department, as when discussing the issue of cattle numbers with the Chief Veterinary Officer, C.W. Elliot, an assistant conservator of forests admitted, “... it is often an advantage to have the forest glades grazed though naturally the Department would prefer this should be done by stock for which grazing fees are paid.” The maintenance of a low number of squatter cattle in the forests of Kikuyu Province therefore kept grass within forest glades low, serving the department’s needs by reducing the chances of forest fires beginning and spreading. Eliminating stock and then allowing the limited return of cattle under licence was likely a profitable, if small, revenue source for the department. C.W. Elliot (Assistant Conservator of Forests, Nyeri) to Chief Veterinary Officer, 29 May 1934, FOR/1/210, KNA. The Forest Department did not record the revenue it accrued from grazing licences separately apart from in 1925-1927, when it accounted for 2 per cent of total departmental revenue, however an analysis of revenue falling under the heading “Miscellaneous Forest Receipts”, the only conceivable heading that it could be included within, with forest squatter numbers in each forest division in 1934 (the only year for which squatter figures for each division exist) does indicate that the department received more revenue from areas with forest squatter cattle. Only in the forest divisions of Kikuyu and Eldoret divisions, where the department allowed 624 and 55 head of cattle in 1934, respectively, did receipts rise above £1 per squatter. Although receipts were also dependent on the number of squatters in each division and Africans residing outside forest reserves purchasing licences for firewood and other forest produce, the receipts per person for Kikuyu and Eldoret do stand in contrast to the other divisions where no cattle were kept. Forest Department Annual Reports, 1925-1927. Annual Report of the Forest Department (1934) and C.W. Elliot (Assistant Conservator of Forests) to Chief Veterinary Officer, 29 May 1934, FOR/1/210, KNA.

⁵²⁷ H.S. Potter (for District Commissioner) to the Chief Veterinary Officer, 21 March 1935, FOR/1/210, KNA.

⁵²⁸ P.H. Poolman (Stock Inspector) to Deputy Director (Animal Industry)/Chief Veterinary Officer, 27 March 1935, FOR/1/210, KNA; W.S. Taylor (Assistant Inspector) to Chief Veterinary Officer, 10 April 1935, FOR/1/210, KNA.

⁵²⁹ The response came from Elliot as Conservator of Forests Gardner was on leave at this time and Rammell, the Acting Conservator, appears to have been indisposed.

showed that in the forest reserve in question, Ngong, the departmental squatters held no cattle and on this basis Elliot began a firm rebuttal of the stock inspectors' accusations. Elliot went as far as to accuse the inspectors of not having visited the forest and that their report on the outbreak was "purely based on hearsay evidence which I consider unreliable."⁵³⁰ As the evidence in question came from the settlers of the area, Elliot was effectively insulting both the inspectors and the settlers by doubting their statements.

Elliot's position lost all grounding, however, when Poolman witnessed Kamura Kiarie, a Forest Department squatter, herding 35 cattle from Ngong forest reserve towards the Kikuyu Native Reserve on 29 April 1935. When questioned, Kiarie admitted he had no grazing licence; he was subsequently arrested and convicted for illicit stock movement.⁵³¹ For Poolman, the evidence was now incontrovertible. The Forest Department's actions of issuing a limited number of grazing licences because low numbers of cattle were useful in keeping grass levels low, a practice the department admitted to the Chief Veterinary Officer,⁵³² was being used by the department's own employees as cover for the illicit movement of stock not covered by those licences. Poolman argued, "by issuing grazing licences to Natives, they are authorising the to and fro movement of cattle from the Kikuyu reserve, which is in permanent quarantine for Rinderpest."⁵³³ The Chief Veterinary Officer demanded the Forest Department apologise for the remarks it had made against the stock inspectors. Unfortunately, there are no surviving documents that reveal whether the department did do so or whether it changed its practice of issuing limited grazing licences.⁵³⁴

The 1935 Ngong rinderpest incident should be seen as an event that reinforced the departmental policy on cattle reduction rather than a key turning point in that policy, while it is an indicator that settler opposition to forest squatter cattle could be passionately driven by fear of stock diseases. The number of cattle registered to Forest Department squatters fell throughout the 1930s until, in 1939, it finally reached zero (Table 2-2). The maintenance of squatter cattle in the forests that potentially competed economically with those of the settlers and, in the eyes of the settlers at least, harboured diseases that threatened settler stock carried with it the constant potential for conflict between the Forest Department and cattle farmers as well as other branches of the government. The political consequences that squatter cattle carried with them outweighed

⁵³⁰ C.W. Elliot (for Acting Conservator of Forests) to Deputy Director (Animal Industry)/Chief Veterinary Officer, 24 April 1936, FOR/1/210, KNA.

⁵³¹ P.H. Poolman (Stock Inspector) to Deputy Director (Animal Industry)/Chief Veterinary Officer, 2 May 1935, FOR/1/210, KNA. Also, see footnote 153, above.

⁵³² Deputy Director (Animal Industry)/Chief Veterinary Officer to J.C. Rammell (Acting Conservator of Forests), 4 May 1935, FOR/1/210, KNA.

⁵³³ P.H. Poolman (Stock Inspector) to Deputy Director (Animal Industry)/Chief Veterinary Officer, 2 May 1935.

⁵³⁴ The records of Forest Department revenue also cannot conclusively prove the department changed its policy on grazing licences after this, as although receipts under the 'Miscellaneous' revenue heading given in its annual reports (which would record grazing licences) did decrease for Kikuyu District in 1936 and 1937 they began to rise again in 1938. Since cattle numbers in Kikuyu were decreasing in all of those years (Table 2-2), it is clear that the revenue headings cannot provide insight into the grazing licence issue after 1935. Kenya Forest Department, *Annual Report 1935*; Kenya Forest Department, *Annual Report 1936*; Kenya Forest Department, *Annual Report 1937*; Kenya Forest Department, *Annual Report 1938*; Kenya Forest Department, *Annual Report 1939*.

the financial gains of grazing licences and the forestry benefits of keeping grass down. The history of the department has shown that it must have been well aware that the greatest opposition to forestry in Kenya came from the settlers and the government itself; it was this awareness that lay behind the cattle reduction programme rather than, for example, concern over the damage cattle do to forests, which was voiced only very rarely.⁵³⁵

2.3.4 *Sheep and goats*

Gardner reiterated the point on concessions to settlers in a letter to his deputy, James Rammell, in 1930 when settlers began demanding department action over the sheep and goats its forest squatters kept:

This Department, against its own interests, has always helped the Stock Industry by refusing to allow squatter cattle. No proof or evidence of any sort has been produced to show that the sheep and goats in the Forest Reserves have caused any harm or loss to the farms and I am not prepared to render impossible the economic reforestation of the Colony's forests by dismissing the Kikuyu Squatters.⁵³⁶

The settlers in question were those of the Molo Farmers' Association of Kisumu Londiani Province, where the Forest Department had 591 squatter families by 1934. In early 1930, the Molo farmers began clearing out their own squatters' stock and asked the Forest Department "to fall in with this scheme and remove such sheep and goats within your jurisdiction and bordering this area."⁵³⁷ Rammell immediately resisted, believing the department should not even consider the request.⁵³⁸ He explained to the Molo Farmers' Association that forest squatters needed their stock, and ridding the forests of stock risked also ridding the department of its squatters. If the squatters departed, Rammell explained:

... what could not be replaced would be his cultivation, and to us unlike the farmer this is more than half his value. A Kikuyu without his goats I feel is a contradiction in terms, and I am sure that you will agree, that without being unsympathetic, it would not be in the interest of the country were this Department to interfere so drastically with its planting programme.⁵³⁹

Rammell was highlighting a key difference between the settler and Forest Department attitudes to their respective squatters. Throughout the interwar years, settlers were further skewing the power relations between themselves and their squatters, with measures such as the Resident Native Labourers Ordinances, and livestock and cultivation limitations setting the squatters on a path that

⁵³⁵ The only notable time when the department displayed concern about cattle damage to plantations was E.B. Battiscombe, Conservator of Forests, to Forester, Karura, 16 November 1921.

⁵³⁶ H.M. Gardner (Conservator of Forests) to J.C. Rammell (Snr. Asst. Conservator, Londiani), 11 April 1930, FOR/1/210, KNA.

⁵³⁷ J.C. Rammell (Snr. Asst. Conservator of Forests, Londiani) to Secretary of the Molo Farmers' Association, 10 March 1930.

⁵³⁸ J.C. Rammell (Snr. Asst. Conservator of Forests, Londiani) to H.M. Gardner (Conservator of Forests), 7 April 1930, FOR/1/210, KNA.

⁵³⁹ J.C. Rammell (Snr. Asst. Conservator of Forests, Londiani) to Secretary of the Molo Farmers' Association, 10 March 1930.

would, the settlers hoped, end in them becoming pure wage labourers.⁵⁴⁰ The settlers saw the cultivation and stock rearing of their squatters as increasingly competing with their own, a result of government initiatives to increase African-produced exports through the 1930s, despite the protection of the control boards from which settler production benefitted by the time of the Second World War. Concurrently, the settlers sought to expand mixed farming and therefore their stock numbers, partly because it was a condition of the Land Bank loans that were available in the 1930s.⁵⁴¹ Conversely, the Forest Department saw extensive cultivation by its own forest squatters in advantageous terms, even aiding the growth of young trees.⁵⁴² As the Forest Department saw it, the larger the area able to be cultivated by the forest squatters the better, as it meant a larger area that could later be used to grow trees.

Less than a year and a half after this firm stand the department was conducting an audit of forest-squatter owned sheep and goat numbers in Londiani Division. The results of this audit are not comprehensive, but there were, for example, 4,090 goats belonging to 176 squatters in the forest district of Maji Mazuri in October 1931.⁵⁴³ By May 1934 all of these goats had gone (Table 2-3). The reduction of goats seems to have begun in late 1931 or early 1932, as Archibald Cooper, the forester for Elburgon district within Londiani Division, reported to his superior in February 1932 that:

For some time now, when engaging new squatters, I have stipulated on the agreements that sheep only are allowed, and should we subsequently find the squatter with goats he will be discharged. ... [And as squatters] become due for new agreements, they will be told to get rid of their goats before they can be taken on by the Forest Department.⁵⁴⁴

The Forest Department did not retain any documents that shed light on this change in policy as regards goats. It is possible that pressure on the department from the settlers increased as they

⁵⁴⁰ Frank Furedi, 'The Kikuyu Squatters in the Rift Valley: 1918-1929', in *Economic and Social History of East Africa*, ed. Bethwell A. Ogot (Nairobi: Kenya Literature Bureau, 1976), 190-91; Kanogo, *Squatters and the Roots of Mau Mau, 1905-63*, 35-68.

⁵⁴¹ Kitching, *Class and Economic Change in Kenya: The Making of an African Petite Bourgeoisie 1905-1970*, 60; Anderson and Throup, 'Africans and Agricultural Production in Colonial Kenya'; Youé, 'A Delicate Balance', 215; Zwanenberg and King, *An Economic History of Kenya and Uganda 1800-1970*, 161. The control boards, most notably the Maize Control Board (or Maize Controller) established in 1942 (but built on a system of licenced buyers that existed from 1935), were established as the sole purchasers of goods. The guaranteed African price of maize was set at 4.90 shillings per bag whereas the price offered to settlers was 8.50 shillings per bag. Settlers often bought the produce of their squatters at a low price and sold it on as their own maize at a higher price. These boards were, as described by Mosley, the key extra-market mechanism used by the government to support European settlement. See Mosley, *The Settler Economies*, 64, 97-100; Paul Mosley, *Maize Control in Kenya, 1920-1970* (Centre for Development Studies, University of Bath, 1975), 6, 15-21.

⁵⁴² Squatter cultivation was argued to improve drainage on forest soils that had not previously been planted up. Crops also reduced weeds, and weeding that took place to aid crop growth also benefitted tree establishment. Forest Department, 'Plantation Management: Costs and Practical Hints (Bulletin No. 34)' (Nairobi: Forest Department of Kenya, 28 September 1939). Although the Forest Department did not apparently conduct any empirical research into this matter, recent research into agroforestry in present-day Kenya supports the general statement that food crop cultivation within a tree plantation aids tree growth. Moses Imo, 'Interactions amongst Trees and Crops in Taungya Systems of Western Kenya', *Agroforestry Systems* 76, no. 2 (1 June 2009): 265-73.

⁵⁴³ W. Munro (Forester, Londiani) and H. McIntyre (Forester, Maji Mazuri) to J.C. Rammell (Snr. Asst. Conservator), October 1931, FOR/1/210, KNA.

⁵⁴⁴ A.M. Cooper (Forester, Elburgon) to R.M. Graham (Asst. Conservator, Londiani), 9 February 1932, FOR/1/210, KNA.

themselves had removed their squatters' stock by the beginning of 1932.⁵⁴⁵ However, the timing of the introduction of this policy is perhaps most revealing of its motivation. In 1930 Gardner was determined that rather than eliminating more squatter stock, the department should concentrate on establishing a "rigid limit" to the number of goats and sheep and ensure that there was a "strict observance of boundaries". Although this was a policy, he admitted, that may need a larger staff.⁵⁴⁶ The issue of staff would indeed determine actual policy on the ground. In 1931, the year after Gardner made his statement, the effects of the depression began to take effect and the revenue of the Forest Department dropped 26 per cent and its expenditure decreased by 7 per cent. Revenue continued to drop until 1934 (Figure 2-6) and expenditure decreased annually until 1936. The increased staff that would be needed to police the limit and boundary policy was simply not available. The forest guard force was in fact facing reduction, from 132 guards in 1930 to 116 in 1932.⁵⁴⁷ It was a force, moreover, that was spread over a vast area of forest. Divisional guard strengths are not available for the 1930s, but in the early 1940s the department was only able to allocate an average of 13 forest guards to the Londiani division.⁵⁴⁸ When it is considered that this minute guard force was responsible for the general policing of the forests and not just overseeing squatter livestock it becomes clear that the policy of just limiting stock numbers was impractical. Only by banning goats altogether could the department realistically hope to maintain a livestock policy.

Following the introduction of the goat reduction programme in Londiani it began to be expanded to all the forest divisions. By 1934, all forest-squatter owned goats had been removed from Londiani, Eldoret, and all but 39 from Kikuyu (Table 2-3). In Nyeri Division 7,116 goats remained in 1934 and 4,557 in Laikipia, but all of these were removed by the end of 1935.⁵⁴⁹ It is from Nyeri that evidence comes for the department's own motivations for removing goats, since there is no evidence of settler pressure on the department over the issue in this division. Charles Elliot, Assistant Conservator in charge of the division, identified goats as giving "rise to a tremendous lot of trouble and damage."⁵⁵⁰ It was a reference to the reputation of the goat, a browser, as an indiscriminate destroyer of crops and young trees. This view was common among forest officers; in the same year the former Kenya Forest Department officer Richard St. Barbe Baker wrote of the goat as "the bête noir [sic] of the forest."⁵⁵¹ R.S. Troup, professor of forestry at Oxford University and extremely influential within forestry discourse, wrote in 1940, "In forests, continuous goat browsing will entirely prevent natural regeneration, and lead to the ultimate

⁵⁴⁵ R.M. Graham (Asst. Conservator, Londiani) to H.M. Gardner (Conservator of Forests), 27 January 1932, FOR/1/210, KNA.

⁵⁴⁶ H.M. Gardner (Conservator of Forests) to J.C. Rammell (Snr. Asst. Conservator, Londiani), 11 April 1930.

⁵⁴⁷ Forest Department Annual Reports, 1930 to 1932.

⁵⁴⁸ Forest Department Annual Reports, 1940 to 1944.

⁵⁴⁹ Kenya Forest Department, *Annual Report 1935*.

⁵⁵⁰ C.W. Elliot (Assistant Conservator of Forests, Nyeri) to Conservator of Forests, 1 March 1932, KNA.

⁵⁵¹ Baker, *Men of the Trees*, 20. Surprisingly, it was apparently also commonly thought among foresters that the teeth of goats were actually poisonous to trees. W.B. Turrill, 'Damage to Trees by Goats', *Empire Forestry Journal* 4, no. 1 (1925): 114-114.

extermination of the forest.”⁵⁵² Troup also argued that sheep, primarily grazers of grass, could be allowed to remain in limited numbers and the Forest Department indeed did allow them to remain in all of its forest divisions (Table 2-3).⁵⁵³ In January 1934 Gardner stated his view that, “I think Government should do all they can to encourage any policy which will tend to reduce the goat population.”⁵⁵⁴ The general disdain for goats held within the forestry profession combined with its staffing issues explain the rapid extension of the policy to those areas where no settler pressure apparently existed and explains why, in those areas where settlers did demand stock reductions, it was goats that were targeted and sheep allowed to remain. While the goat reductions were a result of concerns over damage to trees and, partly, a concession to settler farming, the continuation of sheep ownership was a concession to the reality that the forest squatters needed stock.

The relationship with the settlers remained tense, however. E.H. Wright, the chairman of the Njoro Settlers Association and an elected member of the Legislative Council was grateful to the department for its stock policy and supported it against criticism from other settlers in the Thomson’s Falls District Association, yet he finished a letter to Gardner with what amounted as a warning. “The case”, of the forest-squatter stock in Thomson’s Falls, he wrote, “is an unassailable one.”⁵⁵⁵ Essentially, Wright was telling Gardner he had no choice but to obey the demands of the settlers. The Thomson’s Falls Association was less subtle. After Gardner visited the district but did not meet with the association the settlers were incensed, feeling he was dragging out the issue:

*He has been and gone without even having the courtesy to write to anyone!! ... the amenities and general welfare of the local farmers in a matter like this ... should not be torpedoed by the easy-going habits of the Forestry Department.*⁵⁵⁶

The Thomson’s Falls District Association believed that Gardner’s insistence on not completing stock reductions until the settlers had done likewise was really a tactic to poach the best labour from their farms, as the squatters would be attracted by the Forest Department’s more lenient stock policy. They threatened to take the issue to the Colonial Secretary or Attorney General, arguing that if the settlers:

*... abolish native owned stock voluntarily because they consider it in the best interests of their sadly harassed industry, cannot the local Forests conform and *be told so?* ... is it the intention of Government to allow the Forest Department to wreck local endeavours?*⁵⁵⁷

This strong response can partly be explained by the wider political and economic conditions of 1934-35. In the wake of the Carter Commission, the government was finally beginning the process

⁵⁵² Troup, *Colonial Forest Administration*, 150.

⁵⁵³ Troup, *Colonial Forest Administration*.

⁵⁵⁴ H.M. Gardner (Conservator of Forests) to District Commissioner (Kiambu), 5 January 1934, FOR/1/210, KNA.

⁵⁵⁵ E.H. Wright (Chairman of Njoro Settlers Association) to H.M. Gardner (Conservator), 25 January 1935, FOR/1/210, KNA. H.M. Gardner (Conservator of Forests) to Secretary of the Thomson’s Falls District Association, 24 January 1935, FOR/1/210, KNA.

⁵⁵⁶ Extract from a letter from the Thomson’s Falls District Association, 22 January 1935, FOR/1/210, KNA. (Emphasis original).

⁵⁵⁷ *Ibid.*

of a clear delineation of the white highlands with a concurrent expansion of the native reserves. This process was done without, so the settlers felt, adequate consultation, worsening the general relationship between the settlers and government.⁵⁵⁸ As Harragin, the Attorney General, stated 1st August 1935, “the feeling between the settlers and Government is at such a low ebb at the present moment.”⁵⁵⁹ On the back of this issue and the continued economic grievances of the settlers, Major F.W. Cavendish-Bentinck, later Duke of Portland, became the unofficial leader of the settlers and it was Cavendish-Bentinck who led an assault on the Forest Department budget in November 1935, in the wake of a further downturn in global prices that hit the settlers hard.⁵⁶⁰ In the context of this, the proposed budget for the department in 1936 of £30,217 made Cavendish-Bentinck declare in the Legislative Council, “Frankly I do not believe it, and I think our sense of proportion is perhaps a little warped.”⁵⁶¹ His points of comparison were the forestry budgets in Tanganyika, Uganda, and Southern Rhodesia, all of which were considerably lower than that proposed for Kenya. In a lengthy rejoinder to the claims that covered the hydraulic, timber, and fuel utility of the forests and therefore their important place in Kenya’s economy, Gardner pointed out that the area of forests and forestry operations in all of the territories mentioned by Cavendish-Bentinck were on a substantially smaller scale than Kenya.⁵⁶² As Figure 2-6 illustrates, the arguments put forward by Gardner prevailed, with the expenditure of the department only dropping 1 per cent in 1936 and then increasing in 1937 and 1938, although the services of forest surveyors were lost (see section 2.2.3).

2.4 The Forest Squatters

Through the 1920s and 1930s, the Forest Department put in place an increasingly strict policy concerning the livestock owned by the forest squatters within its *shamba* agroforestry system. By the end of the 1930s these squatters owned no cattle or goats in the forests, being allowed a limited number of sheep only. Concurrently, the number of forest squatters engaged by the Forest Department increased overall throughout these two decades and into the 1940s. As livestock can be argued as central to the livelihoods and culture of the African peoples inhabiting the highlands of Kenya, it is pertinent to investigate how the system was able to expand when it placed limits on this livestock. This supposed contradiction will be examined alongside the concurrent change and formalisation of the operation of the *shamba* system in the 1920s and 1930s, which represent the key decades for the development of the system.

⁵⁵⁸ Bennett, *Kenya, a Political History*, 1:84–85.

⁵⁵⁹ W. Harragin, Attorney General, in Colony and Protectorate of Kenya, ‘Legislative Council Debates, 1935’ (Vol. 1. Hansard, Nairobi, 1 August 1935), 524.

⁵⁶⁰ Tignor, *The Colonial Transformation of Kenya*, 188.

⁵⁶¹ Major F.W. Cavendish-Bentinck in Colony and Protectorate of Kenya, ‘Legislative Council Debates, 1935’ (Vol. 2. Hansard, Nairobi, 27 November 1935), 727.

⁵⁶² H.M. Gardner (Conservator of Forests) in *ibid.*, 810–12.

2.4.1 Ethnicity

The vast majority of the squatters employed within the *shamba* system came from the Kikuyu ethnic group. Statistics pertaining to the ethnicity of the squatters were not regularly collected by the government, although they do exist for 1945 after a specific census of squatter ethnicity was conducted. As is clear from Table 2-4, by 1945 the Kikuyu dominated the system, with 99 per cent of forest squatters being identified as Kikuyu in that year. Kikuyu were also the largest ethnic group that had taken to squatting on European farms, representing 56 per cent of these squatters in 1945. The difference between these two figures, however, is telling. Nearly 17,000 Nandi resided on European farms in Uasin Gishu, yet the Forest Department had no Nandi squatters at all despite also operating *shamba* in Uasin Gishu. Similarly, 18,620 Kamba squatted on settler farms around Nairobi, but only eight were engaged as forest squatters for the Forest Department.⁵⁶³

Although Kikuyu comprised the majority on settler farms it was a form of settlement that was engaged in by significant numbers of other ethnic groups. Of the total number of squatters on European farms in 1945 (which is given in the squatter census as 181,392), 8 per cent were Luo, Kisii, and Maragoli (combined), 7 per cent were Lumbwa, 13 per cent were Nandi, 10 per cent were Kamba, and unclassified others represented 6 per cent. The answer to these differences in the ethnic makeup of European farm squatters and *shamba* squatters lies in the requirements that the Forest Department had for its squatters. As discussed in the previous section, forestry primarily needed farmers who would clear and cultivate as much land as was available, preparing it for tree plantings. As Gardner argued in 1945:

The most obvious difference [between settler squatters and forest squatters] is that of the amount of land to be cultivated. On the limited area of a farm it must be as small as possible but in the Forest Reserves where large areas of cut-over forest have to be cleared for replanting, the opposite holds.⁵⁶⁴

The Forest Department thus sought Africans who were willing to cultivate on a large scale. Kikuyu, those whom the department had demonised for their largely agrarian, shifting cultivation-based, way of life, were ideally suited. In contrast, Kamba also cultivated, but on a smaller scale as they had a greater reliance on cattle.⁵⁶⁵ With its livestock restrictions becoming increasingly harsh after the mid-1920s, the forest squatting system lacked appeal to those peoples who were closer to the pastoral than the agrarian lifestyle. This was abundantly clear to the Forest Department itself, and it was particularly careful to ensure that prospective forest squatters had the intention to primarily grow crops not graze cattle. The issue surfaced when the department sought squatters for the Kakamega Native Forest Reserve in 1941. After interviewing prospective squatters, Assistant Conservator of Forests Edward Honoré wrote:

⁵⁶³ Zwanenberg, *Colonial Capitalism and Labour in Kenya 1919-1939*, 219.

⁵⁶⁴ H.M. Gardner, 'Response to a Kenya Weekly News Article of 30 March 1945'.

⁵⁶⁵ Tignor, *The Colonial Transformation of Kenya*, 12-13.

<i>Ethnic group</i>	<i>Number of forest squatters</i>
Luo, Kisii, Maragoli	66
Lumbwa	52
Nandi	0
Kikuyu	21,143
Kamba	8
Other	114
Total	21,383

Table 2-4. Ethnic breakdown of squatters employed in the *shamba* system in 1945. Source: R. van Zwanenberg, *Colonial Capitalism and Labour in Kenya 1919-1939* (East African Literature Bureau, Nairobi, 1975), 219.

It is obvious however that these men were principally in search of grazing land. Cultivation was a secondary consideration. ... I do not feel inclined to take on squatters... whose ideas are principally centred on stock grazing.⁵⁶⁶

Farmers almost solely intent on grazing and expanding their stock within the forests did not meet the needs of the *shamba* system. The Forest Department required its squatters to clear land, cultivate, and then plant and tend trees. All of these activities were of low importance to the pastoralist. Three years after Honorè had rejected the requests of pastoralists to reside in Kakamega forest, the local forest officer sought Kikuyu squatters who did clearing work “for the right to plant crops on the land cleared for two years; in the third year they were required to plant up trees and thereafter vacate.”⁵⁶⁷

The mixed agrarian and pastoral farming practice of Kikuyu farmers made them ideal forest squatters, especially so as it was an agricultural mode that required expansion onto forested land once land shortages were experienced. The importance of Kikuyu to the system is highlighted by the considerable trouble the Forest Department had in obtaining squatters for the forests in Uasin Gishu. This was a district inhabited before the arrival of colonialism by pastoral Masai and Nandi and became a large area of cattle ranching for white settlers. As has been seen, it was a district where settlers took great issue with cattle grazed within the forests as early as 1918. These were not, however, Forest Department squatter cattle, as the department reported that it was unable to attract squatters in the district when it was expanding plantation operations in 1925.⁵⁶⁸ The

⁵⁶⁶ E.J. Honorè (asst. conservator, Eldoret) to District Commissioner (North Kavirondo), 16 October 1941, DC/KMGA/1/5/2, KNA. Forest Department documents do not explicitly state the ethnic origins of those who applied to work as squatters in Kakamega. As the area in question falls within North Kavirondo, they may have been Luo or Terik.

⁵⁶⁷ Minute from Local Native Council meeting recounting request of Forest Officer, quoted by District Commissioner (North Kavirondo) to Forest Officer (Kakamega), 8 August 1944, DC/KMGA/1/5/2, KNA. The period of time that squatters were allowed to plant crops after tree seedlings have been planted was dependent on the tree species being planted. The fast growth rate of eucalyptus trees meant that squatters could only grow their crops for a single year before they were moved on; that is, the squatters had to move their *shambas* once the trees reached sufficient height to outcompete grasses and other plants. The slower growth rates of cypress and cedar meant that crops could be maintained for two years in the case of cypress and three years in the case of cedar (Forest Department, ‘Plantation Management: Costs and Practical Hints (Bulletin No. 34)’, 9.)

⁵⁶⁸ Kenya Forest Department, *Annual Report 1925*, 22.

department maintained the official line that local Africans were “deterred” by the hard work they would be expected to perform, but it seems more likely that the prospect of clearing and cultivating land held little appeal to peoples whose economy was dependent on cattle. The department alluded to this situation itself, when it stated that in some areas of Kenya the “increasing wealth” of Africans had made it more difficult to recruit them into the *shamba* system.⁵⁶⁹ Wealth in the form of livestock allowed Africans to prosper without having to resort to working for the colonial regime.⁵⁷⁰ The cattle reduction programme can only have decreased the appeal of forest squatting to those whose chief ambition lay with cattle accumulation. By 1928, however, the Forest Department was reporting that the squatter shortage in Uasin Gishu was over and, as shown in Table 2-3, by 1934 there were 150 forest squatters working in the area (Eldoret, which encompassed Uasin Gishu) although the continued presence of a low number of cattle there indicates that some concessions to attract recruitment were made.⁵⁷¹

The cattle allowed in Eldoret could indicate that the department had been successful in recruiting a low number of Uasin Gishu pastoralists into the *shamba* system. However, the extremely low number of cattle casts doubt on this. Within Kaptagat forest 131 squatters held a total of only 25 cattle, hardly a sufficient number to satisfy pastoralists who chiefly valued cattle over sheep and goats. The answer lies in a 1926 Forest Department statement that in some districts “unlimited” numbers of squatters could be procured, so many that the department could not provide supplementary labour to all of them and instead allowed them to work for the Public Works Department and District Administration.⁵⁷² It was this surplus of willing recruits that allowed the Forest Department to meet its labour needs in Uasin Gishu and also to plug shortages in Nyeri and West Kenya Districts; the department was moving willing Kikuyu labour around highland Kenya to compensate for its inability to recruit local ethnic groups. This was the case in the forests that clad Mount Elgon. There, a small number of Kikuyu squatters were introduced in 1932 since the department had had no success in recruiting local peoples. As Mount Elgon lies far from the central highland areas inhabited by Kikuyu peoples prior to the arrival of the British, the *shamba* system should be seen as allowing the spatial expansion of Kikuyu cultivation precisely because this suited the needs of the Forest Department, which was unable to use waged labour because of its financial difficulties. In contrast to urban migration, whereby Kikuyu males left their families to travel to urban centres as wage labour, *shamba* required families to remain together.⁵⁷³ In this regard, there is no evidence for the feminisation of labour within *shamba* that Sunseri has argued occurred in the

⁵⁶⁹ Ibid., 22, 26.

⁵⁷⁰ Mosley, *The Settler Economies*, 89.

⁵⁷¹ Kenya Forest Department, *Annual Report 1928*, 18.

⁵⁷² Kenya Forest Department, *Annual Report 1926*.

⁵⁷³ For example, Janmohamed discusses labour migration to Mombasa, where Kikuyu made up the fourth largest ethnic group there in 1925. Karim K. Janmohamed, ‘African Labourers in Mombasa, c.1895-1940’, in *Economic and Social History of East Africa*, ed. Bethwell A. Ogot (Nairobi, 1976). Berman states that there were 213,743 urban African wage labourers in Kenya in 1936, increasing to 379,286 by 1945. Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, 301–6. See also Kitching, *Class and Economic Change in Kenya: The Making of an African Petite Bourgeoisie 1905-1970*; Tignor, *The Colonial Transformation of Kenya*.

similar *taungya* system in Tanganyika.⁵⁷⁴ As Neumann, Conte, and Sunseri have argued, however, the case of *taungya* in Tanganyika was further evidence of Kikuyu using the system to migrate to and cultivate new areas. After 1928 the Tanganyikan Forest Department brought in Kikuyu to its *taungya* system in Kilimanjaro Forest Reserve because local people were unwilling to work in the system.⁵⁷⁵

The major motivations for the movement of Kikuyu to settler farms also lay behind their movement to the forests under the *shamba* scheme, although this was complicated by the Forest Department's livestock policy. The centrality of Kikuyu settlement in Kenya, close to much of the so-called 'white highlands' geographically made them ideal for work on settler farms and in the key forestry areas. The movement of Kikuyu to the settler farms began soon after colonialism began and for forestry specifically in 1910. The depredations of the 1890s to approximately 1910, described in the first chapter, pushed Kikuyu who owned no land of their own into squatting. These landless, known as *ahoi*, were, however, joined by Kikuyu who sought grazing for their expanding stocks of sheep and goats. This movement of Kikuyu with considerable livestock wealth occurred largely, Zwenenberg argues, in the 1920s following an increase of movement during the First World War as people fled recruitment for the Carrier Corps. Taxation, imposed in the native reserves but not the white highlands, vassal obligations to the often corrupt African agents of colonial rule, the chiefs, and the consolidation and expansion of landholding by these chiefs that were beginning to cause land scarcity in this period further increased the motivation of Kikuyu to move to settler farms.⁵⁷⁶ There is no reason to believe these factors were not also behind the willingness of Kikuyu to join the Forest Department's *shamba* system.

2.4.2 *Ahoi within shamba*

In 1956 L.S.B. Leakey estimated that "possibly" 90 per cent of the squatters on European farms were *ahoi*, the tenant class of Kikuyu who owned no land but instead procured the right to farm on the land of other Kikuyu or, as in the case of the squatters, on the land of settler farmers.⁵⁷⁷ As the squatter census of 1945 had shown, this was probably unlikely as *ahoi* were Kikuyu and Kikuyu

⁵⁷⁴ Sunseri, *Wielding the Ax*, 95. Sunseri argues that *taungya* as practiced in Tanganyika was feminised as male labour left the system to pursue waged employment in urban centres. Further investigation on this topic is needed for Kenya's *shamba* system, but certainly the colonial document record does not indicate this occurred in Kenya, as documents consistently refer to male heads of household and families, including documents written by *shamba* workers themselves. See below and chapter 3 for discussion of Forest Department recruitment of males who had worked within the *shamba* system. If men did remain in *shamba* rather than going to urban centres it is significant as it would go against the general trend of the use of African woman in government projects while men seasonally migrated for urban wage work; possibly *shamba* was an escape from such projects. Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, 303.

⁵⁷⁵ Roderick P. Neumann, *Imposing Wilderness: Struggles Over Livelihood and Nature Preservation in Africa* (University of California Press, 1998), 72–73; Conte, *Highland Sanctuary*; Sunseri, *Wielding the Ax*, 94.

⁵⁷⁶ Zwanenberg, *Colonial Capitalism and Labour in Kenya 1919-1939*, 219–35; Wambaa and King, 'A Squatter Perspective'; Furedi, 'Kikuyu Squatters'.

⁵⁷⁷ L.S.B. Leakey, 'The Economics of Tribal Life', *The East African Economic Review* 3, no. 1 (July 1956).

only represented 56 per cent of squatters in 1945. Yet analysis of Forest Department records of its own squatters indicates that Leakey's statement could be applied to them, albeit only after the livestock reduction programmes had run their course, as these were highly significant in shaping the socio-economic demographics of the forest squatters. To understand this significance it is first necessary to explain the importance and role of livestock – cattle, sheep, and goats – within Kikuyu society. Livestock, of which cattle were considered the most valuable over sheep and goats, were the means by which a Kikuyu man would expand his wealth, prestige, and power.⁵⁷⁸ Key to this was the conversion of cattle wealth to bridewealth, the means by which a Kikuyu man attained wives and thus expanded his family. As the primary cultivators on Kikuyu farms were women, livestock wealth and polygamy were a means for the husband to create a larger labour force and so increase the land that was able to be cultivated.⁵⁷⁹ It was through this process that power within Kikuyu society was secured: large landowners were those with sufficient livestock wealth to marry multiple times. In the early years of the squatter system on settler farms, before the late 1920s, a labour shortage created favourable conditions for the squatters, which allowed many to increase their wealth in this traditional manner.⁵⁸⁰ This had ramifications for the Forest Department's *shamba* system, as the statement concerning the increasing wealth of Africans making recruitment in 1925 more difficult testifies to. It was also from this time in the mid-1920s that the department's cattle reduction policy began to affect recruitment.

If those engaged as forest squatters obeyed the rules of the Forest Department concerning cattle, and later goats, it would have effectively acted as a cap on their ability to accrue wealth and prestige in the traditional Kikuyu manner. As has been seen, however, not all of the forest squatters followed departmental regulations and continued to own and graze cattle in the forests, periodically transferring them to native reserves. It was not simply the department's policies that dictated the behaviour of its squatters in regard to stock, as the relationships between squatters and those Kikuyu who remained in their natives reserves complicated matters. These relationships significantly affected forest squatters in Ngong Forest Reserve in 1934. The Ngong squatters were told to remove their cattle and goats by their forester in 1933. As Ngong forest offered poor grazing, the squatters agreed to do this without protest and moved the stock out of the forest to an unspecified location that must surely have been a native reserve. "Trouble", which can be interpreted as competition for grazing land, in the native reserve in 1934 forced the squatters to request permission to return their livestock to the forest, which the Forest Department adamantly denied; those who insisted on retaining their livestock ended their contracts and left *shamba*. As the Assistant Forester at Ngong stated "the squatters at Ngong nearly all are of a very poor class

⁵⁷⁸ Jomo Kenyatta, *Facing Mount Kenya: The Tribal Life of the Gikuyu* (London: Secker & Warburg, 1938), 32–38; Ambler, *Kenyan Communities in the Age of Imperialism: The Central Region in the Late Nineteenth Century*, 25–29.

⁵⁷⁹ Bert N. Adams and Edward Mburugu, 'Kikuyu Bridewealth and Polygyny Today', *Journal of Comparative Family Studies* 25, no. 2 (1 July 1994): 159–66.

⁵⁸⁰ Furedi, 'Kikuyu Squatters', 180–97.

among the wakikuyu”⁵⁸¹ it can be assumed that these squatters were *ahoi*. Moreover, these were *ahoi* who strove to increase their wealth and social position via the accumulation of cattle and goats, but were prevented from doing so in the native reserves and in the forest reserves. Here, both colonial forces and Africans within the reserves who exploited the economic changes that colonialism brought to expand their livestock and land holdings combined to lock the squatters of Ngong forest into the social status of *ahoi*. The *shamba* system gave no security in landholding to its squatters. Indeed, the department was adamant that it be made clear to forest squatters that their cultivation and habitation of the forests gave them no claim of ownership to the land they worked, even when squatters resided and worked within the same forest for more than a decade the department could choose to dispose of them when they no longer served the needs of forestry.⁵⁸² With no land of their own and no cattle or goats, the only legal avenues of social advancement for the *ahoi* lay in departing the *shamba* system and using the cash earnings they had accrued from working for the Forest Department to attempt to buy into the native reserves or to attempt to find employment with the Forest Department itself.

The livestock policy had the general effect across the forest reserves of discouraging wealthier Kikuyu who wanted to keep cattle or large numbers of goats from signing forest squatting contracts. In Elburgon, within Londiani forest division and a major site of plantation operations, Forester Archibald Cooper predicted in 1932: “I expect some [forest squatters] will prefer to leave rather than lose their goats, but there should be sufficient goatless Kikuyu about to fill their places.”⁵⁸³ The reference to ‘goatless’ Kikuyu was a clear indication that there were ample *ahoi* in the area willing to sacrifice the advantages of goat and cattle ownership for the chance to cultivate in the forests. Indeed, Cooper continued that the squatters he had recently engaged “agree quite readily to the ban on goats.”⁵⁸⁴ By 1934 this demographic transition was complete in Elburgon, as all goats and cattle were removed.

⁵⁸¹ Assistant Forester, Ngong Forest Station, to Assistant Conservator of Forests, Nairobi, 20 July 1934, KNA, FOR/1/210.

⁵⁸² Forest Department, ‘Memorandum of Agreement (Forest Department Resident Labourers) under the Resident Labourers Ordinance, 1937’ 1941, DC/KMGA/1/5/2, KNA. The reluctance of the Forest Department to allow ownership of land within the forests was, of course, rooted in the philosophy of state forest ownership. Belief in this philosophy was reinforced within the department by agitation from African political pressure groups which sought to reduce government control. In 1939, for example, a memorandum from the Kavirondo Tax Payers Welfare Association to the secretary of state highlighted the case of Kiarie wa Githakwa, who was evicted from his farm within Kerita forest. Presented by the Association as a case of Forest Department land grabbing, the case was one in reality that illustrated the forest squatters’ lack of labour rights as the department countered that Githakwa had first entered the forest when he was engaged as a forest squatter in 1922 and had remained on contract there until 1935, whereupon his services were no longer needed and he was given six months to vacate the forest. Githakwa’s insistence that he could stay was the physical manifestation of Forest Department fears that squatter residency in the forests would be equated by Africans with land rights. From the department’s viewpoint, the success of the *shamba* system depended on a mobile and disposable labour force that precluded security in land tenure. For details of the case, see correspondence within FOR/1/243.

⁵⁸³ A.M. Cooper (Forester, Elburgon) to R.M. Graham (Asst. Conservator, Londiani), 9 February 1932.

⁵⁸⁴ Ibid.

In most forests areas those engaged in the *shamba* system who wished to retain their livestock appear to have protested in the same manner as those in Elburgon and Ngong: by simply leaving the system. This was not the case in every area, as forest squatters within Kikuyu forest district in 1933 attempted to petition the Forest Department via the district commissioner. Kikuyu district is notable for being one of the areas where the department permitted cattle to be grazed until the late 1930s, which appears to have affected the demographic composition of the squatters there, as the 1934 statistics (Table 2-3) indicate that the 138 forest squatters engaged there owned a total of 89 cattle. A small minority no doubt owned many of these cattle, with many other squatters owning a single animal each and others owning none. The socio-economic status of the forest squatters in Kikuyu therefore probably ranged from the poorest of the *ahoi* to those just beginning to accumulate more livestock. Unfortunately, figures for the number of goats before 1934 (after this there were none), which would clarify this demographic range, do not exist. The presence of 'wealthier' Kikuyu within this forest district, absent from most forest areas, could correlate with this being a site of protest. The forest squatters of Kikuyu appear to have been more politicised than other forest squatters and keenly aware of the timing of their protest, coming as it did during the Kenya Land Commission's enquiries into Kikuyu land grievances. The petition to the district commissioner, written by the Mbari ya Mwenda Achera Clan, played on this point by claiming that the forest plantation they grazed their animals in was part of their *githaka* (clan landholding), a claim that Conservator of Forests Gardner considered "nonsense".⁵⁸⁵ The protest highlighted the hardship that the goat eradication policy would cause:

We people of Muguga Forest are in great distress as it is a big hardship which the Forest Lari [i.e. the Forester in Lari] is causing us, to order us to move our goats Now sir, we would like to ask that if our goats are removed from us what our children will be helped with?⁵⁸⁶

The protest failed and the elimination of goats within Kikuyu forest division continued. Elimination also occurred in Nyeri, a division where the role of goats had greater significance. Within Nyeri forest division it was the attraction of grazing, not cultivation, within the forests that acted as the main pull factor for squatters coming from bordering native reserves in which land shortages for cultivation were not being as acutely felt. The forest officer in charge of Nyeri was running a policy by March 1932 whereby only squatters with "few or no goats" would be engaged on contracts. In contrast to almost all other forest areas, by 1934 the continued presence of some 7,000 goats in the division clearly showed that the availability of grazing of goats was a primary motivation for the engagement of squatters there. Just a year later, however, all the goats were removed from Nyeri just as they were in the other forest divisions of Kikuyu, Laikipia, Londiani, and Eldoret. The squatters were, of course, allowed to retain sheep. It is possible that those in Nyeri transferred to

⁵⁸⁵ Samuel Ngichu (Mbari ya Mwenda Achera Clan) to District Commissioner (Kiambu) care of the Kikuyu Land Hoard Association (translated), 25 December 1933, FOR/1/210, KNA. H.M. Gardner (Conservator of Forests) to District Commissioner (Kiambu), 5 January 1934. Gardner maintained that the area in question was a Forest Department plantation that had been sited on land previously cut out for railway fuel.

⁵⁸⁶ Samuel Ngichu (Mbari ya Mwenda Achera Clan) to District Commissioner (Kiambu) care of the Kikuyu Land Hoard Association (translated), 25 December 1933. Ngichu's reference to the forester in Lari, despite Ngichu being in Kikuyu district not Lari (Uplands) district, is due to the forester having oversight for more than one district.

sheep rather than goat grazing, assuming that adequate grazing for sheep was available in the division. Within Londiani division, Africans protested that sheep, even in greater numbers, were hardly a replacement for goats as sheep mortality was greater than that of goats in years of heavy rains and in years of drought and locust. Furthermore, the division lacked adequate grazing for sheep, while there was sufficient browsing material available for goats.⁵⁸⁷ Within Londiani at least, the value of goats was not only derived from their traditional importance in bridewealth and religious activities; rather their importance was linked to their greater survivability in the volatile environmental conditions of highland Eastern Africa.⁵⁸⁸

The livestock eradication programme run by the Forest Department thus saw protest that was motivated by concern over its impact on wealth accumulation and intensified by the strong narratives of Kikuyu land discrimination that were evident in the early 1930s, but it was protest also linked to the utility of goats in a region prone to environmental fluctuations such as drought. The programme therefore had strong socio-economic and basic welfare effects on the forest squatters, the perceived negativity of which compelled many to leave the *shamba* system. While some forest squatters may have adjusted to sheep rearing, it is equally possible that the approach explicitly taken in Nyeri and Kikuyu of recruiting *ahoi* willing to go without goats was finally successful by the closing years of the 1930s; the forest reserves had been cleared of cattle, goats, and the more prosperous Kikuyu who owned them.

Throughout this period the Forest Department had an ample supply of Africans willing to sign on as forest squatters. By 1939, the department was reporting that in almost all of its forest areas the supply “exceeds the demand”, placing the Forest Department in the fortunate position of being able “to select as far as possible those likely to make good cultivators and generally to adapt themselves to forest work.”⁵⁸⁹ This position of being able to pick and choose allowed the department to easily not sign on or rid itself of men considered to be “nuisance” makers who would be “a source of annoyance both to the Department and to its neighbours [i.e. settlers].”⁵⁹⁰ The selective nature of squatter recruitment was one reason for the relative ease with which the Forest Department was able to implement its livestock reduction programme. The negative effects of livestock reduction were also offset by the productivity of farming within the forests. Cultivation on fresh soil in sheltered conditions seems to have afforded an advantage to forest squatter crops, especially in times of drought.

Normally, on the fresh forest soil they obtain better crops than they would elsewhere and though during the year locust damage was serious in many districts, the squatters were certainly as well or better off than they would have been anywhere else.⁵⁹¹

⁵⁸⁷ R.M. Graham (Asst. Conservator, Londiani) to H.M. Gardner (Conservator of Forests), 27 January 1932.

⁵⁸⁸ For accounts of the role of goats in Kikuyu religious offerings see, Leakey, *Southern Kikuyu*, 1977.

⁵⁸⁹ ‘Squatter and Shamba Management (Bulletin No. 33)’, 1.

⁵⁹⁰ *Ibid.*, 2.

⁵⁹¹ Kenya Forest Department, *Annual Report 1932*, 20.

The Forest Department appears to have been unconcerned with recording this aspect of its *shamba* system; sporadic data do, however, support the department's statement that the forest squatters were "better off". After the Second World War, the department reported its squatters were producing approximately 150,000 bags of maize and 80,000 bags of potatoes annually.⁵⁹² It was in the Forest Department's interest to assist its forest squatters in their cultivation, as the department argued in the face of criticism of *shamba*, "the greater the area of such efficient cultivation the greater the plantation development."⁵⁹³ The department applied the same scientific approach it utilised in forestry to its forest squatters, mandating that farm plots be set out in straight, orderly lines that would later assist in the planting of trees. Plots had to be kept tidy in order to reduce the risk of forest fires, grasses and weeds rooted out as they would impede tree growth, and communal fences erected as early as possible to both protect both crops and trees from wildlife damage and allow close supervision of any livestock. Perhaps surprising in a period when the government became so concerned about soil erosion on African farms, the Forest Department considered it of low importance within the forest environment of its squatters. The planting of trees made the system more resilient to erosion and the forest squatters would be moved to a new area before heavy erosion and soil nutrient exhaustion would take place.⁵⁹⁴ The forest squatters, and particularly the wives of registered squatters, were therefore spared the unpopular and tiring anti-erosion measures that the Agricultural Department forced upon Africans in the native reserves.⁵⁹⁵

2.4.3 Supervision and employment

To fulfil these strict cultivation requirements the department used close supervision of its forest squatters. In keeping with the general policy of indirect rule and because the Forest Department simply had very few European officers, this supervision was carried out by Africans: forest guards, spearmen, headmen, and 'old men'.⁵⁹⁶ As before 1925, the forest guards continued to be recruited

⁵⁹² Kenya Forest Department, *Departmental Report 1945-1947*, 34. By contrast, in 1939-40 Kenya's settlers' entire output of maize was 618,000 bags (Spencer, 'Settler Dominance, Agricultural Production and the Second World War in Kenya', 502.). If we conservatively estimate that forest squatter production in 1939-40 was half that of the post-war figure, this still suggests that the Forest Department's 2,500 squatters were capable of equalling 12 per cent of the settler output. In the early 1960s the system was considered very productive, with the forest squatters producing between 6 and 10 per cent of the total African maize grown in the country. Kenya Forest Department, 'Taungya in Kenya: the "Shamba System"' (World Symposium on Man-Made Forests and their Industrial Importance, Canberra: Food and Agriculture Organization of the United Nations, 1967), 4.

⁵⁹³ Kenya Forest Department, *Departmental Report 1945-1947*, 33.

⁵⁹⁴ 'Squatter and Shamba Management (Bulletin No. 33)', 5-9.

⁵⁹⁵ Mackenzie, *Land, Ecology and Resistance*, 155-67; David Anderson, 'Depression, Dust Bowl, Demography, and Drought: The Colonial State and Soil Conservation in East Africa during the 1930s', *African Affairs* 83, no. 332 (1 July 1984): 321-43; Mackenzie, 'Contested Ground'.

⁵⁹⁶ The Forest Department did not retain any records on spearmen. Their duties were to assist forest guards in general policing work, and were "generally local natives with a thorough knowledge of the district, and are often keener and more efficient than the guards themselves." (Kenya Forest Department, *Annual Report 1928*, 3.) Data on the number of spearmen retained is patchy, however between 1938 and 1944 the number rose from 127 to 231; even the lower number is higher than the number of forest guards employed in 1938 (111 guards), the number of forest guards only rose very slightly (to 124) during the war compared to spearmen. The rates of pay for spearmen, however, are not recorded. Despite their apparent abilities, there appears to have been no initiative to train or recruit spearmen into higher positions until the change in forest guard recruitment policy in 1937 (see below).

from the King's African Rifles (KAR) or police force and, as before, were therefore most likely not Kikuyu.⁵⁹⁷ By 1930 less than 1.5 per cent of the recruits to the KAR were Kikuyu, a rate which would fall through the 1930s, while the police force's African ranks were dominated by Luo, Luhya, and Kamba, who along with Somali, Sudanese, and other foreign-born 'martial peoples' also accounted for the majority of Africans in the Rifles.⁵⁹⁸ The Forest Department needed literate men able to perform the many clerical duties of forestry (for example, the issuing of permits); in contrast, the Rifles and police preferred illiterate Africans as it made the task of clothing them in the mindset of colonialism and 'civilisation' as well as the uniform itself all the easier.⁵⁹⁹ The potential pool of forest guard recruits was therefore reduced by this requirement, yet the department had little trouble finding the 10-20 forest guard recruits it needed every year. Despite the steady stream of applicants, the poor quality of some of the forest guards employed motivated the department to actively change its recruitment policy to seek guards from within its forest squatter force by 1937, when Acting Conservator of Forests James Rammell began a system to recruit forest guards from among "our own men", that is forest squatters who had proved their worth as spearmen or headmen.⁶⁰⁰ A new preference was established for Kikuyu forest guards, especially the sons of guards who had given good service and who had thus "been brought up in the Department."⁶⁰¹ After the late 1930s the forest guard force thus gradually shifted to one that was drawn from the loyalist and most dedicated of the forest squatters, making the system self-sustaining.

As the rate of pay for forest guards started at 30 Kenyan shillings per month, just two shillings higher than the average pay in the army, the appeal of the position of forest guard most likely stemmed from the benefits it brought.⁶⁰² If posted to a *shamba* area, forest guards received a hut and a small garden to supply their own needs, although the department was careful to ensure that their plots were kept small to reduce "slackness in the guard's proper work."⁶⁰³ Despite this, some guards were able to advance to much higher wage levels, establish large families, and afford

⁵⁹⁷ J.C. Rammell (Acting Conservator of Forests) to Director of Education (Nairobi), 17 December 1931, FOR/1/166, KNA.

⁵⁹⁸ Parsons, *The African Rank-and-File*, 69; James B. Wolf, 'Asian and African Recruitment in the Kenya Police, 1920-1950', *The International Journal of African Historical Studies* 6, no. 3 (1 January 1973): 410.

⁵⁹⁹ Wolf, 'Asian and African Recruitment in the Kenya Police, 1920-1950', 410. It should be emphasised that not all KAR soldiers and police were illiterate. For example, Lovering's study of KAR recruitment in Nyasaland shows how Christian mission-educated Tonga were recruited to form an ethnic check against the dominance of Muslim Yao in the army there during the interwar period. However, despite Nyasaland's KAR units often being posted to other territories in the interwar period, they notably did not serve in Kenya (instead being stationed in Tanganyika and Somaliland), reducing the possibility that educated soldiers from this force would seek employment in Kenya after leaving the army. Timothy J. Lovering, 'Authority and Identity: Malawian Soldiers in Britain's Colonial Army, 1891-1964' (PhD Thesis, University of Stirling, 2002), 64, 67, 32, <http://hdl.handle.net/1893/1966>.

⁶⁰⁰ J.C. Rammell (for Conservator of Forests) to Asst. Conservators (Londiani, Eldoret, Nyeri), 10 April 1937, FOR/1/131, KNA.

⁶⁰¹ D.G.B. Leakey (Asst. Conservator, Nyeri) to H.M. Gardner (Conservator), 17 August 1940, FOR/1/131, KNA. In 1940, for example, Mathenge, son of Macharia (see footnote 604) who was also a forest guard, was appointed as a forest guard after serving as a spearman. Macharia was clearly successful as a guard as he could afford to send Mathenge to school. Incidentally, the assistant conservator calling for the appointment of Mathenge, Douglas Gray Bazett Leakey, was the younger brother of L.S.B. Leakey.

⁶⁰² J.C. Rammell (Acting Conservator of Forests) to Director of Education (Nairobi), 17 December 1931.

⁶⁰³ 'Squatter and Shamba Management (Bulletin No. 33)', 11.

education for their sons.⁶⁰⁴ This highlights how the creation of patron-client relationships between the department and its African staff could be mutually beneficial, which was of course essential if *shamba* was to be successful in the long term.⁶⁰⁵ The shift to recruiting guards from the squatters indicates that these benefits were keenly pursued by a minority of forest squatters, people who could have become believers in the doctrines of forestry or just those who realised the potential of the system for personal progression.

Indoctrination into the principles of forestry in Kenya was an important element of the *shamba* system. Only those forest squatters who followed the department's rules of cultivation would remain in the system, with those who proved consistently unreliable being discharged. However, it was not the department's aim to simply punish its squatters for rule violation. The departmental guidelines specified: "Petty punishment should be kept to a minimum."⁶⁰⁶ Reform and education, not punishment was the goal. It did the work of plantation establishment no good to routinely evict or punish forest squatters, instead the department preferred to retain and train able men and woman who could continue to serve the department for at least the three to four years that it took to establish a plantation. This policy was not novel and had been employed when *shamba*, in its *taungya* form, had been used in colonial Burma as early as the 1860s. Within Burma, the punishment of resident forest labourers from the Karen ethnic group was minimized in order to convert the Karen from potential enemies of forestry into key allies and "loyal servants", a process that was clearly at work in Kenya also.⁶⁰⁷ Conversely, this element of indoctrination was tempered within Kenya by the required continuation of shifting cultivation and the traditional Kikuyu practice of expansion into the forests.

The redirection of African traditional practice was also reflected in the recruitment of headmen (referred to as *neaparas*⁶⁰⁸) from among the ranks of the forest squatters. "Almost invariably"⁶⁰⁹ headmen were chosen from "smart men"⁶¹⁰ in the squatter force, perhaps indicating that authority and status could be obtained within *shamba* by virtue of ability not prior political position. With wages of up to 35 Kenyan shillings per month and a larger allocation of cropland

⁶⁰⁴ Competent forest guards could stay in the service for a long period of time and progress to a higher pay level. By 1936, for example, Muchera wa Murayo had served as a forest guard for 18 years and was paid 60 shillings per month. Murayo was retired by the department in 1936 because his family of "6 or 7 Kikuyu wives" meant he was more involved with "his own tribe" than with forestry. H. McIntyre (Forester, Kinobop) to J.C. Rammell (Snr. Asst. Conservator), 21 May 1936, FOR/1/131, KNA.

⁶⁰⁵ The concept of mutual benefit within patron-client relationships, as distinct from the more simple indirect rule idea, and its existence within British Africa is discussed by, C. W. Newbury, 'Patrons, Clients, and Empire: The Subordination of Indigenous Hierarchies in Asia and Africa', *Journal of World History* 11, no. 2 (2000): 227–63.

⁶⁰⁶ 'Squatter and Shamba Management (Bulletin No. 33)', 13.

⁶⁰⁷ Raymond L. Bryant, 'Shifting the Cultivator: The Politics of Teak Regeneration in Colonial Burma', *Modern Asian Studies*, 1994, 241.

⁶⁰⁸ The etymology of the word 'neapara' is unclear. Contemporary works use the word to refer to, typically, a headman or specifically a Swahili caravan headman but it does not appear in modern Swahili dictionaries. See, for example, Frederic A. Sharf, *Expedition from Uganda to Abyssinia (1898): The Diary of Lieutenant R.G.T. Bright with Annotations and Introductory Text* (Tsehai Publishers, 2005).

⁶⁰⁹ J.C. Rammell (Acting Conservator of Forests) to Director of Education (Nairobi), 17 December 1931.

⁶¹⁰ 'Squatter and Shamba Management (Bulletin No. 33)', 13.

within the forest than other forest squatters, the position of headman could be lucrative, although their continued employment relied on their ability to strictly administer the rules of the *shamba* system.⁶¹¹ If the efforts of a workgroup were considered consistently below standard by the local forest officer, the headman of the group would be blamed and possibly “reduced to the ranks.”⁶¹² Headmen were responsible for the majority of the daily running and supervision of the forest squatters, which meant supervision of communal land clearing and preparation, fencing, and the planting and tending of trees. The decreasing cost of plantation establishment and the increasing acreage of plantations created (Table 2-1 and Figure 2-5) suggest that overall the headmen were very successful in their jobs and that by the end of the 1930s the Forest Department had developed an effective system for gaining the maximum output from its squatters.

While headmen were responsible for the technical aspects of *shamba* management, the Forest Department relied on “old-men” for the social management of its forest squatters. The “old-men” the department utilised were men who had been rewarded for past service to the government by being given a permit to reside and farm within the *shamba* system and therefore were not expected to work as forest squatters except in emergency cases such as firefighting.⁶¹³ The use of elders was again indicative of the strong patron-client relationships that permeated the *shamba* system. These elders could solve small disputes within and between families engaged as forest squatters, and had responsibility for preventing illicit drinking, although every decision they made had to be approved by the forest officer. The department, no doubt aware of the history of problems that African agents of colonial rule had created within the native reserves, argued the oversight of the forest officer was necessary “to prevent exploitation of the less influential members”⁶¹⁴ of the forest squatter force. Conversely, the department displayed no qualms about redirecting this powerful level of elder influence to encourage forest squatters to cultivate larger acreages of land in areas where it was “difficult to get enough land under cultivation to allow of a reasonable planting programme.”⁶¹⁵

⁶¹¹ J.C. Rammell (Acting Conservator of Forests) to Director of Education (Nairobi), 17 December 1931.

⁶¹² ‘Squatter and Shamba Management (Bulletin No. 33)’, 13.

⁶¹³ *Ibid.*, 3. Bulletin no. 33 is the only Forest Department document to discuss the “old-men” and they are similarly absent from Forest Department correspondence. As such, even approximate estimates of the number of these elders within the *shamba* system cannot be made.

⁶¹⁴ *Ibid.*, 4. One of the pillars of the colonial state in Kenya was the chiefs: Africans leaders elevated to their positions by the government who acted as agents of colonial rule, particularly before the Second World War but also very actively in the post-war agricultural schemes. Notoriously, the government often turned a blind eye as some chiefs used their positions for personal gain and fulfilled government orders to collect tax or recruit labour through the use of violence against Africans. In 1922, for example, this policy led to violent protests in Nairobi which caused the government to reduce the role of chiefs in labour recruitment and led to the creation of Local Native Councils of African chiefs and elders in order to disperse power and so forestall political agitation. Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*; Ambler, *Kenyan Communities in the Age of Imperialism: The Central Region in the Late Nineteenth Century*; Thomas Spear, ‘Neo-Traditionalism and the Limits of Invention in British Colonial Africa’, *The Journal of African History* 44, no. 1 (1 January 2003): 3–27; Mackenzie, *Land, Ecology and Resistance*; Tignor, *The Colonial Transformation of Kenya*; Robert L. Tignor, ‘Colonial Chiefs in Chiefless Societies’, *The Journal of Modern African Studies* 9, no. 3 (1 October 1971): 339–59; Donald G. Schilling, ‘Local Native Councils and the Politics of Education in Kenya, 1925-1939’, *The International Journal of African Historical Studies* 9, no. 2 (1 January 1976): 218–47, doi:10.2307/217565.

⁶¹⁵ ‘Squatter and Shamba Management (Bulletin No. 33)’, 4.

Headmen, elders, and forest guards, all of whom could be drawn from the forest squatter force, were essential for the management and considerable success of the *shamba* system during this period. Superior to all of these positions, however, was that of assistant forester (2nd grade), the highest position that an African could hold within the Forest Department before changes to the staff structure were rushed through on the verge of independence.⁶¹⁶ Forest squatters might be recruited into the position of assistant forester, and upon retirement assistant foresters were allowed to retire into forest squatting, which served as partial compensation for their lack of pension provision.⁶¹⁷ The position was potentially comparatively lucrative, as salaries started at 60 shillings per month (twice that of forest guards and four times higher than headmen), rising in yearly increments of 5 or 10 shillings to a maximum of 150 shillings per month. Lodgings and outbuildings were also provided, presumably along with a garden for crops. However, the prospect of being engaged in the role of assistant forester was slim. In 1931, the department informed the director of the Education Department that there was “no immediate prospect of any vacancies” for African assistant foresters, and this proved true for the following decade and much of the Second World War.⁶¹⁸

The position of assistant forester, both for the Asian 1st grade and African 2nd grade, carried the responsibility of supervising headmen and forest guards, within and out of the *shamba* system, and assuming the duties of the European forester when he was on safari or leave. Candidates for assistant forester positions were thus required to have knowledge of clerical or forestry work.⁶¹⁹ Despite this, the Forest Department showed little interest in educating or training Africans for the position itself, an attitude no doubt hardened by the budgetary constraints of the 1930s. As early as 1928 the department had identified the need for a forest guards school, the ablest pupils of which might progress to assistant forester positions, as it had found few educated and able Africans willing to take up employment with the department. Literacy, the department considered, had acquired a “fictitious value” that prompted Africans to seek employment in higher paid urban positions.⁶²⁰ By 1945 the department was using the education argument to defend itself against accusations that too few Africans were employed in positions above that of labourer. The reason,

⁶¹⁶ See chapter 3, section 3.3.4.

⁶¹⁷ Percy Anderson was one such African assistant forester. Actually from Mozambique and of Portuguese and Tanganyikan (Morogoro) ancestry, Anderson served as an African assistant forester between 1913 and 1935 and worked primarily overseeing the plantation work at Karura forest near Nairobi. Anderson’s case illustrates the frustration that African foresters could experience. In 1926 he expressed his disappointment about the lack of career prospects for him within the department and in 1928 the department rejected his application to become an assistant forester 1st grade, believing him to have neither the intelligence or ability for the post. In 1935, at the age of 39 and having served the department for 22 years (without pension), Anderson was forced to retire because of the department’s need for economy. Anderson was then allowed to become a forest squatter, with some supervisory responsibilities. See personnel files and correspondence within FOR/1/394, KNA.

⁶¹⁸ J.C. Rammell (Acting Conservator of Forests) to Director of Education (Nairobi), 17 December 1931. Throughout the 1930s only three Africans held the post of assistant forester (2nd grade); in comparison, 10 assistant forester (1st grade) posts were held by Asians in the same decade. The number of Africans employed only rose slightly, to a peak of eight for one year only, 1944. Data comes from Forest Department Annual Reports, 1928-1945.

⁶¹⁹ Ibid.

⁶²⁰ Kenya Forest Department, *Annual Report 1928*, 3.

the department maintained, was the “comparatively low general standard of education” among Africans.⁶²¹ The obvious answer to the problem was for the Forest Department to train Africans itself, which it indeed did commence doing after the Second World War. Prior to 1945, however, the department showed little interest in the schooling of its forest squatters, its primary candidate pool. From 1938 onwards, the department did liaise with the Education Department and Church of Scotland Mission in the provision of in the provision of sub-elementary, elementary, and adult night schools for its squatters. This was a development that was particularly prominent in Nakura District, acting as an incentive for forest squatter recruitment from settler farms where educational facilities were typically lacking.⁶²² Across the colony as a whole, however, the department set out its rather less supportive attitude to education in 1939: “If local education facilities are lacking and a demand for a school exists, it should be satisfied. Generally, however, schools should be kept to a minimum.”⁶²³

The Forest Department’s rather ambivalent take on African education could be seen as a deliberate limiting of the educational opportunities of the forest squatters, the majority of which did not need to be literate to perform their labouring and land clearing roles for the department. Limiting education would have thus encouraged the forest squatters to stay within the system and increased the likelihood of men born into the system staying in the system. However, this view is undermined by the continuous rise in squatter numbers, illustrating that the department rarely had problems finding new Kikuyu *ahoi*, and by evidence that shows that educated Kikuyu born into the system sought employment within it. Willis K. Kicheru was one such educated African. Having received five years education at the Kikuyu Church of Scotland Mission, in 1938 Kicheru sought work in the Forest Department’s nurseries, doing surveying, or any position above that of labourer. Kicheru was born into the *shamba* system: his father had been a forest squatter from 1926 until his death in 1934 and his brother became a squatter and remained one at the time of the job application.⁶²⁴ Clearly the appeal of forest squatting and Forest Department employment was great enough to retain personnel and turn the system into one that served several generations.

The general deficiencies in education for forest squatters were in keeping with the government’s disinterest in developing state education for Africans in the interwar years, despite a significant eagerness from Africans to develop and access education themselves.⁶²⁵ Without a proper system of education and training, however, the Forest Department was prone to the recruitment of unsuitable individuals. In the late 1930s and early 1940s the department only

⁶²¹ Kenya Forest Department, *Departmental Report 1945-1947*, 33.

⁶²² Kanogo, *Squatters and the Roots of Mau Mau, 1905-63*, 81-89.

⁶²³ ‘Squatter and Shamba Management (Bulletin No. 33)’, 5.

⁶²⁴ Willis K. Kicheru to Forest Department, 26 July 1938, FOR/1/166, KNA.

⁶²⁵ The 1930s saw an explosion of *Harambee* (self-help) initiatives launched by Africans. This was epitomised by independent African schools funded by African Local Native Councils, with some 1,802 elementary schools of this type by 1938. Anderson, *The Struggle for the School*, 136-38; Wambaa and King, ‘A Squatter Perspective’, 208; Schilling, ‘Local Native Councils and the Politics of Education in Kenya, 1925-1939’.

employed between three and five Africans as assistant foresters, yet of these two were clearly unsuitable for their positions. Esrom Kamande, who was appointed a trainee assistant forester 2nd grade in 1935 and became permanent in 1938 appeared perfect for the job, having been educated at the Church of Scotland Mission school in Kikuyu. Rapidly, however, it became clear that forestry work was not for him. He admitted to stealing money from the famine relief fund and his contract was finally terminated for bad behaviour and drunkenness in 1942.⁶²⁶ Similarly, E.K. Alfred, assistant forester 2nd grade, was appointed in 1936 but resigned in 1943 after being reprimanded for missing work and being drunk.⁶²⁷ Such individuals may have contributed to a negative impression of educated Africans within the Forest Department, further deterring it from actively pushing for the education of its squatters.

Even when presented with qualified candidates, the Forest Department's pessimistic view of the capability of African employees meant that it maintained a policy that Africans must first work as forest squatters, proving their worth and, perhaps most significantly their character, to the satisfaction of the local forester before they would be considered for higher positions. Such was the fate of Kicheru and many other applicants; the Forest Department response was to state that, after working as a forest squatter, "if you prove yourself efficient [you] will have an opportunity of filling any vacancies that may occur."⁶²⁸ This was a policy that was applied to even the most qualified job seekers. It was, in part, a reflection of the general attitude toward employment of forest officers within the field of forestry. Africans had to prove their mettle to qualify, while for white officers their suitability was decided on their love of the outdoors life. The priorities of the Forest Department before the Second World War did not include the education of its forest squatter workforce, and neither did they include the training or establishment of a large number of Africans within more senior positions in the department, or of training its Asian assistant foresters to higher positions.⁶²⁹ Those Africans who did succeed in becoming assistant foresters, headmen, or forest guards (especially after the recruitment policy change in 1937) did so largely without the assistance of the Forest Department. These were people who excelled at exploiting the opportunities that the *shamba* system represented and were willing to accept the new relationship with the forest that

⁶²⁶ Personnel file for Esrom Kamande, FOR/1/406, KNA.

⁶²⁷ Personnel file for E.K. Alfred, FOR/1/396, KNA. The primary duties of Kamande and Alfred appear to have been clerical; the department expressed that their performance in this respect as poor.

⁶²⁸ R.M. Graham (for Acting Conservator of Forests) to Paul K. Ngugi, 11 February 1939, FOR/1/166, KNA. The department also seems to have been reluctant to open up new positions for assistant foresters 2nd grade. In 1939, for example, it rejected the application of H.M. Kanja despite his specific training in the measuring of wood and trees, transplanting, seed-growing, pruning, thinning, animal and insect protection, and the calculation of the cubic content of timber, as well as general book keeping and typing. Kanja further expressed a wish to study for a forestry diploma overseas. In 1939, however, there was to be no increase in the number of African assistant foresters, yet the number of Asian foresters (assistant foresters 1st grade) increased by three to 13. H.M. Kanja (Nanyuki) to Forest Department (South Nyeri), 22 May 1939, FOR/1/166, KNA.

⁶²⁹ Despite the continued employment of a small number of Asians within the Forest Department (typically as assistant foresters), details of these individuals are absent from the department's records. No documents have been found that reveal any information on the background, education, or recruitment of these men so it cannot be stated whether, for example, they had received forestry training in India.

departmental employment represented. As the presence of several generations within the system shows, the *shamba* system served such people well.

2.4.4 'Criminal' opportunities

Between 1925 and 1945 the Forest Department witnessed a dramatic rise in the number of offences recorded within its forest reserves. Across this period as a whole, the number of crimes recorded by the department rose 454 per cent; even excluding the years of the Second World War, when a huge increase in the number of people operating in the forests occurred, the number of crimes increased 260 per cent between 1925 and 1939. The department recorded the offences that occurred in the forests under four primary headings, theft of forest produce, illicit grazing of livestock in the forest, damage to trees, and, grouped together, illicit honey hunting and the careless use of fire.⁶³⁰ The department also categorised offences as 'other', although the types of forest offences included within this were never elaborated on. The majority of activities relating to the exploitation of the forest or the utilisation of grazing or honey resources within forests were classified as forest offences after the 1902 Forest Ordinance, unless they were subject to licenced exploitation. The Forest Ordinance, 1911, which stood as the primary piece of legislation relating to forests until replaced in 1941, was extremely significant in clarifying the definitions of offences and specified that the committing of a forest offence could be punished with up to six months imprisonment. Furthermore, the 1911 ordinance established the principle of the compounding of offences. It defined compounding as a process in which:

... the Conservator of Forests may, in any case he deems proper, accept on behalf of the Crown, from any person a sum of money as compensation for any offence committed by him, such compensation may extend to five times the value of the estimated damage done, or, where the value cannot be estimated to Rs. 100 for each offence.⁶³¹

Essentially, compounding amounted to an 'on-the-spot' fine meted out to anyone who was considered by the forest officer to be in violation of the Forest Ordinance.

The compounding of offences was the Forest Department's primary means of punishing forest offenders, with over 90 per cent of offences typically being compounded in this period. Although the practice did therefore bring in revenue directly to the department, the level of this revenue was

⁶³⁰ 'Forest produce' as defined by the Forest Ordinance, 1911, included "earth, trees, timber, wattles, plants, grass, reeds, rushes, peat, creepers, fibres, leaves, moss, fruit, seeds, galls, spices, bark, rubber, gum, resin, sap, charcoal, honey, wax." 'Timber' was taken to mean standing trees or parts thereof, fallen or felled wood, and any wood that had been worked (such as sawn or split) or not. 'Tree' included all trees, whether they produced timber or not, shrubs, bushes, seedlings, saplings, shoots of any age, and any parts of trees. The Forest Ordinance, 1911, described all livestock as "cattle" and considered that cattle actually constituted "bulls, cows, oxen, horses, mares, geldings, asses, pigs, ostriches, sheep, ewes, and goats."

⁶³¹ Forest Ordinance, 1911.

<i>Year</i>	<i>Total number of forest offences</i>	<i>Percentage compounded</i>	<i>Compounding revenue (shillings)</i>	<i>Percentage of Forest Department revenue</i>
1924	727	87%	5,927	0.3%
1925	771	92%	6,640	0.3%
1926	808	87%	7,984	0.2%
1927	1,019	92%	11,525	0.3%
1928	1,297	92%	727	0.0%
1929	1,576	87%	17,848	0.4%
1930	1,031	90%	11,996	0.3%
1931	1,295	90%	13,689	0.5%
1932	1,356	86%	12,524	0.5%
1933	1,605	85%	14,146	0.6%
1934	2,036	84%	15,663	0.6%
1935	1,654	90%	10,912	0.4%
1936	1,779	91%	10,957	0.3%
1937	2,045	90%	13,452	0.4%
1938	2,792	?	16,206	0.4%
1939	2,778	?	19,647	0.4%
~				
1944	4,235	92%	40,131	0.3%
1945	4,279	93%	43,023	0.3%

Table 2-5. Forest offences and their compounding, 1924-1945. Nb. The extremely low figure for revenue from compounding in 1928 would appear to be an error in the departmental records. Source: Forest Department Annual Reports.

low, never surpassing 1 per cent of the department's total revenue for any given year. Efficiency, not revenue was the attraction of the compounding system to the Forest Department. Compounding was quick and reduced the workload of district officers and the courts by keeping cases out of them, thereby reducing the costs of administration.⁶³²

Of all the acts the government considered a forest offence, the Forest Department itself considered honey hunting to be the greatest danger to the forest estate because honey collectors would set fires to smoke bee hives suspended in trees, and thus could also involve a "great deal of labour and anxiety to officers and staff and expense to Government."⁶³³ The seriousness of the offence, however, appeared in the eyes of the department to be unrecognised by the government. In a memorandum on the matter in 1935, Rammell complained of the "entirely inadequate

⁶³² This was illustrated when, in 1935, Rammell, in his capacity as Acting Conservator of Forests while Gardner was on leave, stated that "for many years District Officers have asked us not to waste their time with compoundable cases... ." He went on to describe a case that demonstrates both this desire for administrative efficiency and the low importance forest law violation carried within the judicial arm of government. In this incident, when a local forester decided to pursue a case to the courts, the magistrate simply told him to settle the matter out of court. See J.C. Rammell (Acting Conservator of Forests) to Provincial Commissioner (Rift Valley), 15 February 1935, FOR/1/243, KNA.

⁶³³ J.C. Rammell (Acting Conservator of Forests) to Asst. Conservators of Forest (Londiani, Laikipia, Nyeri), 'Memorandum on Honey Hunting Cases', 11 April 1935, FOR/1/243, KNA.

sentences”⁶³⁴ imposed on honey hunters by magistrates and was further frustrated that statements he had made on the matter in the department’s annual reports for 1932 and 1933 had been censored before publication. Rammell clearly felt that the concerns of the Forest Department were being suppressed, that the government was demoting the needs of forestry once again. Amid the rising crime rate in the 1930s, the Forest Department felt it was fighting the battle without support. In the same year as Rammell’s effort to raise awareness of the problem of honey hunting, Reginald Porter, the assistant conservator in charge of Nyeri forest division, was in conflict with the provincial commissioner and district commissioner over the issue of Africans cutting down trees for fuelwood. Both the PC Nyeri and DC North Nyeri argued that the Africans were guilty only of misinterpreting the vague instructions of the Europeans, upon whose farms they squatted. Porter disagreed. Blame, he considered, lay with the Africans who preferred to take the risk of illegally cutting down a tree nearby rather than travelling some distance to collect deadwood; a matter that was worsened by what he considered the small fine imposed if they were caught. Porter thus declared that he would pursue the next case of such an incident, prosecuting and fining the offenders a suitable amount, in opposition to the PC and DC.⁶³⁵

Conversely, the earnestness with which forest officers pursued forest offence cases and the large fines they summarily imposed through the compounding of offences were criticised by others within the colonial government.⁶³⁶ In 1935, the same year the Forest Department was taking a stricter stance against the rising levels of forest crime, Captain Fey, Justice of the Peace for Naivasha and a farmer, wrote to the Provincial Commissioner of the Rift Valley Province complaining of the “excessive fines inflicted upon the natives in this District for stealing wood from the Forest Reserve.”⁶³⁷ The JP claimed to have the sympathy of the Native Affairs Department in the matter. He considered the fines used, of 5 shillings, to be entirely disproportionate to the crimes, and as the offenders only had a typical monthly income of 8 shillings he conjectured that “this looks like [the Forest Department is] trying to starve them out.”⁶³⁸ Although there is insufficient evidence to directly link the crime rate and the hard line the Forest Department appears to have taken in 1935, the lower number of theft of forest produce offences in 1935 compared to 1934 and 1936 could suggest that the department’s tough stance was having a preventative effect in that year, and that the subsequent rise in produce theft could be a result of a softening of the policy under criticism from other branches of government (Figure 2.7).

⁶³⁴ Ibid. Rammell highlighted that the highest penalty that could be imposed on a person found honey hunting without a licence was £15 or two months in prison, or both, yet the highest penalty that had been meted out was £5, with the majority of cases resulting in fines of less than £1.

⁶³⁵ R.V. Porter (Asst. Conservator of Forests, Nyeri) to H.M. Gardner (Conservator), 29 November 1935, FOR/1/243, KNA. Records do not reveal whether Porter made good on his threat.

⁶³⁶ The Forest Department in Tanganyika faced similar disinterest from the colonial administration toward forest offences. Sunseri, *Wielding the Ax*, 75.

⁶³⁷ Captain E. Fey (Justice of the Peace, Naivasha) to Provincial Commissioner (Rift Valley Province), 23 December 1935, FOR/1/243, KNA.

⁶³⁸ Ibid.

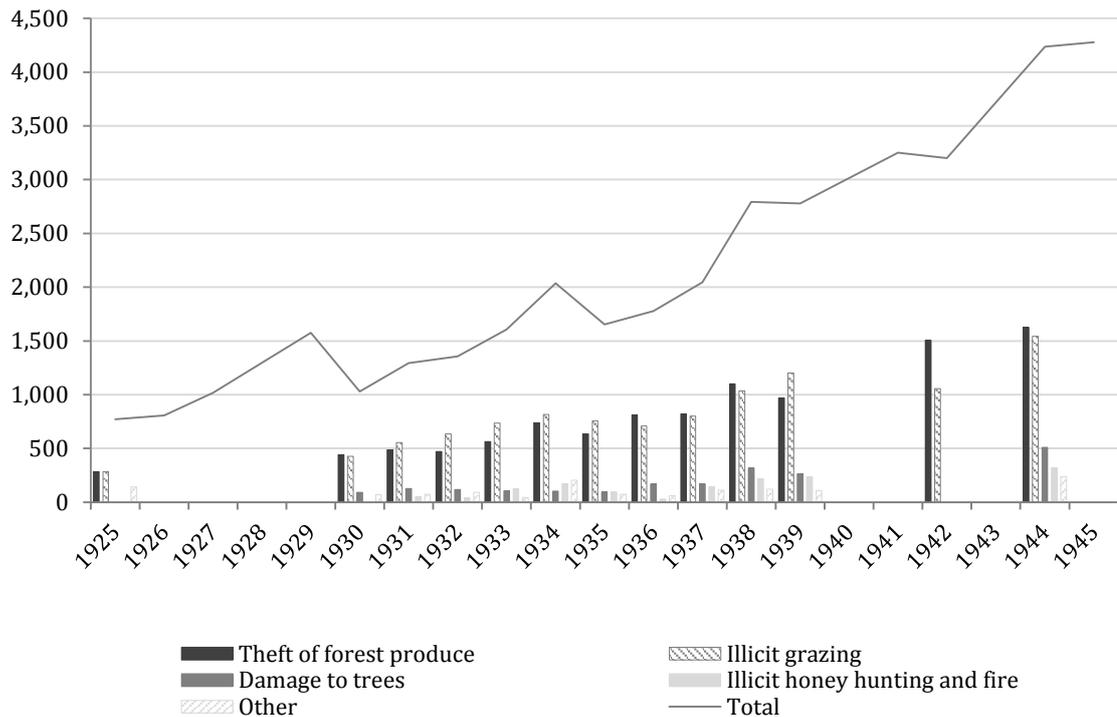


Figure 2-7. Recorded forest offences between 1925 and 1945 and yearly breakdown per offence type. Source: Forest Department Annual Reports.

Gardner believed that Fey was motivated by self-interest in his complaints about fines. The Africans in question were, Gardner argued, squatters on Fey's farm and as that farm also encompassed forest the complaints were an attempt to hide Fey's reluctance to issue his own fuelwood to his farmers.⁶³⁹ Once again, the Forest Department's mistrust of settler farmers and belief that they did not support forestry appears to have coloured its interactions with those farmers. The stance of the Forest Department was that a 5 shilling fine was lenient and that the continuation of crime illustrated that it was in fact too low. The 2 shilling monthly cost of a fuelwood permit, which permitted the collecting of a headload of wood each day, was considered reasonable by the department. The department did, in fact, also issue forest produce for free to those it deemed most needy, a criterion left to the discretion of local forest officers. The rising cost of this during the economically bad and drought-frequent 1930s, from £344 in 1933 to £886⁶⁴⁰ in 1935, however, no doubt firmed the department's view that those who could afford to pay, should pay.⁶⁴¹ The level of

⁶³⁹ H.M. Gardner (Conseravor of Forests) to Provincial Commissioner (Rift Valley Province), 3 January 1936, FOR/1/243, KNA.

⁶⁴⁰ The Forest Department did not state how it calculated the value of the forest produce given away free. If we assume that this was done based on the 2 shilling-a-month licence fee, the total number of families that £886 would supply was 5,537 (if it is conservatively estimated that they would need the equivalent of eight months fuel to last 12 months), clearly only a tiny fraction of the population of Kenya. As fuel and building materials were also sporadically given away free to settlers on farms with minimal or no tree cover, this calculation would require further reduction. The department rarely kept records providing details of the free issue of forest produce, however there is evidence that in 1931 the department agreed with the provincial administration to allow Africans in Meru free fuel for 12 months because they "are really so hardup that they cannot afford the small sums needed for royalties on fuel..." H.M. Gardner (Conservator) to Provincial Commissioner (Nyeri), 9 February 1931, FOR/1/227, KNA.

⁶⁴¹ Kenya Forest Department, *Annual Report 1935*, 12.

finer thus remained unchanged. In 1935 these stood at between 4 and 6 shillings for fuel theft, 1 shilling per head of livestock for illicit grazing, and up to 20 shillings for damage to trees. Illicit squatting, residing, or cultivating in a forest carried a fine of 10-20 shillings.⁶⁴² This was at a time when the average wages of Africans were falling, indeed the Forest Department cut the wages of its own forest squatters in 1935. By 1933, the average African casual labourer was earning 6-10 shillings per month, and the average squatter 6 shillings.⁶⁴³ For such people, the temptation to forego the 2 shilling per month fee and collect fuelwood illegally must have been great.

The Forest Department's dogged pursuit of fines also attracted the attention of the Chief Native Commissioner, Provincial Commissioner (Rift Valley) and Labour Inspector into the matter of the punishment of Forest Department squatters by the department. The Forest Department's usual practice was to compound the offences its forest squatters were accused of, yet it became clear during investigations in 1935 that the department was acting illegally by compounding offences that did not fall under the Forest Ordinance.⁶⁴⁴ Common offences such as the brewing of *tembo*, failure to obey an order, and harbouring strangers were all dealt with on the contracts of forest squatters but were not legally crimes; the offence was of breaking the rules of the contract, not colonial law. The department was further in error by allowing its assistant foresters to impose fines, when only forest officers of the rank of forester and above were legally allowed to compound any offence.⁶⁴⁵ The Forest Department did not face any consequences for the misuse of the instrument of compounding, which may have been occurring since compounding was established in 1911. Neither is there documentary evidence of protest by forest squatters about this misuse of power, perhaps indicating that the squatters were not aware of the precise nature of compounding; indeed, after the department's illicit compounding activities became clear, the Native Affairs Department ordered it to ensure that when an offence was being compounded it was made clear to the accused that they had the right to defend themselves against the allegation in court rather than pay a summary fine.⁶⁴⁶ After March 1935, the Forest Department was therefore compelled to send any violation of forest squatter contract terms to the courts.⁶⁴⁷ Nevertheless, the percentage of forest offences compounded did not decrease in 1935, rather it increased by 6 per cent (Table 2-5)

⁶⁴² C.F. Elliot (for Acting Conservator of Forests) to F. Nye Chart (Manager, Statimma Farm, Gilgil), 30 March 1935. Based on Forest Department revenues from the compounding of offences, the average fine between 1924 and 1945 was approximately 9 shillings.

⁶⁴³ Native Affairs Department, *Annual Report of the Native Affairs Department, 1933*, 123.

⁶⁴⁴ The Chief Native Commissioner had, in fact, been pursuing the matter of the overzealous application of forest rules and compounding since at least 1933, when he asked Gardner his opinion on the withdrawal of the power to compound an offence. Gardner responded that it was a most efficient system and one that was in use by almost all Forest Department's across the empire (Chief Native Commissioner to H.M. Gardner, 18 August 1933, FOR/1/243, KNA; H.M. Gardner to Chief Native Commissioner, 18 October 1933, FOR/1/243, KNA.)

⁶⁴⁵ That is, the positions open to Europeans of (in increasing seniority) forester, assistant conservator of forests, senior assistant conservator of forests, and conservator of forests.

⁶⁴⁶ J.C. Rammell (Acting Conservator of Forests) to all Asst. Conservators of Forest, 6 March 1935, FOR/1/243, KNA.

⁶⁴⁷ J.C. Rammell (Acting Conservator of Forests) to Foresters (Lari, Kerita, Karura, and Machakos), and Asst. Foresters (Kikuyu, Ngong, and Kinobop), 11 March 1935, FOR/1/243, KNA.

and the number of cases prosecuted in court actually fell 46 per cent.⁶⁴⁸ The decision to (legally) pursue the violation of forest squatter contract terms in the courts rather than (illegally) compounding can hardly have been popular with forest officers. In 1934 an assistant conservator had complained to Gardner that when cases were taken to court the magistrate was liable to impose a lower fine than if the case had been compounded.⁶⁴⁹ Reginald Graham, Assistant Conservator in charge of Londiani division, wrote to Gardner in 1937 with an account of the considerable time he considered he had wasted – several days – in attending a court hearing for a forest squatter who was accused of “petty beer drinking.”⁶⁵⁰ This was an extra administrative burden that added to the requirement established in 1933 that the Forest Department file monthly returns detailing offences compounded to relevant district commissioners; essentially a signal of the lack of trust that the administration had in the Forest Department in relation to the fair handling of crime and surely a measure that must have irritated forest officers.⁶⁵¹

While there were clear concerns within government about the Forest Department’s heavy handedness in matters of forest crime, there was also attention drawn to the fact that the department’s forest squatters themselves were responsible for a good deal of that crime. Concurrent to the provincial commissioner’s (Rift Valley) investigation into compounding was his accusation that forest squatters in Elburgon district of Londiani forest division were “out of control”⁶⁵² in 1934. Rammell attempted to play down the extent of the forest offences for which the forest squatters were responsible, yet, if the figures he provided are accurate, the situation did seem serious.⁶⁵³ Of the 125 forest offences compounded in Elburgon in 1934, 63 per cent appear to have been committed by the department’s forest squatters. Furthermore, the average fine meted out was

⁶⁴⁸ The number of cases prosecuted in the courts by the Forest Department was 318 in 1934, which fell to 169 in 1935 and did not rise again until 1937. 1934 was in fact a particularly high year for prosecutions, however even if we take the preceding five years before 1934, when the average prosecution rate was 171 cases per year, it can be seen that the number of prosecutions did not increase immediately after the introduction of an actual legal policy for dealing with forest squatter contract violations (Forest Department Annual Reports, 1929-1937). The dip in the total number of forest offences recorded in 1935 (figure 2-6) could indicate that some contract violations were no longer being classified as forest offences, however the continued inclusion of the ‘offence’ of dirty *shambas* in the forest statistics (under the heading of ‘injuring trees or forest produce’, presented in figure 2-6 as ‘damage to trees’) (Ibid.), which was a forest squatter contract violation not an offence under the Forest Ordinance goes some way to disproving this. The dip in the number of forest offences in 1935 is just as likely to have been a consequence of increased caution in the wake of criticism of the department’s overzealous compounding policy.

⁶⁴⁹ Asst. Conservator of Forests to H.M. Gardner (Conservator), 4 July 1934, FOR/1/243, KNA.

⁶⁵⁰ R.M. Graham (Asst. Conservator, Londiani) to H.M. Gardner (Conservator of Forests), 10 September 1937, FOR/1/243, KNA.

⁶⁵¹ J.C. Rammell (Acting Conservator of Forests) to Provincial Commissioner (Rift Valley), 15 February 1935. Unfortunately, these records of monthly returns have not survived.

⁶⁵² Ibid.

⁶⁵³ Within his letter to the PC (Rift Valley) of 15 February 1935, Rammell states that there were 250 families of Kikuyu forest squatters in Elburgon in 1934, however the previous assessment of the forest squatter workforce, completed in May 1934, states there were 202 forest squatter families in Elburgon (table 2-4). It is possible that a further 48 families were recruited in the eight months between the squatter census and Rammell’s letter, however this would go against the colony-wide trend of a reduction in squatter families by 121 between 1934 and 1935. It is possible, then, that Rammell was inflating the number of forest squatters in Elburgon in order to lessen the impact of the recorded 79 forest offences committed by the forest squatters.

16 shillings, significantly higher than the average compounded fine of 9 shillings.⁶⁵⁴ Thus, not only were the squatters of Elburgon engaged in activities the Forest Department considered illegal, but a significant proportion of these offences must have carried fines large enough to force the average to such a level.

The detailed statistics on forest squatter involvement in forest offences from Elburgon in 1934 are, unfortunately, unique. The department did not retain statistics on the level of forest squatter crime for other areas or in other years. However, the forest squatters were ideally situated to be involved in forest offences. In particular, the previously mentioned April 1935 conviction of Kamuru Kiarie, a forest squatter in Ngong forest,⁶⁵⁵ for the illicit movement of cattle between forest reserve and native reserve could indicate involvement in the growing business of organised stock thefts.⁶⁵⁶ Anderson has argued that the taking of cattle from African and European farms became an increasingly sophisticated and large-scale illicit activity, particularly in the Western Highlands.⁶⁵⁷ As forest squatters were located in forests across the highlands, they were in a position to considerably aid in the concealment of stolen stock while it was still in transit to the native reserves. The Forest Department policy of moving its forest squatters from area to area, after the tree crop had reached a stage where it competed with food crops, may have also aided this process as it would have given squatters the opportunity to establish communication with Africans in reserves and on settler farms over a wide area.

In terms of policing, the forests themselves fell under the jurisdiction of the Forest Department, not the colonial police force. The department's forest guard force, however, was reduced in number throughout this period, from 132 in 1930 to 102 in 1939, and only rising in 1944 in response to the escalation in forest produce thefts and cases of illicit grazing. Writing to his superior in 1940, Holyoak, the forester at Lari forest station, argued that no more forest guards should be recruited because it was more important to keep down expenses.⁶⁵⁸ Greater emphasis therefore seems to have been placed on the use of spearmen, whose employment was, presumably, considerably cheaper. The number of spearmen rose from 127 in 1938 to 231 in 1944.⁶⁵⁹ The Forest Department publically argued as early as 1929 that the increasing number of forest offences identified was a result of the greater vigilance of its forest guards, an argument it repeated in 1937 and 1938 after sharp rises in the crime rate.⁶⁶⁰ If greater vigilance was the cause of the increase it certainly did not have a preventative effect. Compounding was, perhaps, seen by Africans residing within and using the forests as a cost that could be absorbed if the forest offence in question was

⁶⁵⁴ J.C. Rammell (Acting Conservator of Forests) to Provincial Commissioner (Rift Valley), 15 February 1935.

⁶⁵⁵ P.H. Poolman (Stock Inspector) to Deputy Director (Animal Industry)/Chief Veterinary Officer, 2 May 1935.

⁶⁵⁶ Anderson, 'Stock Theft and Moral Economy in Colonial Kenya', 407.

⁶⁵⁷ Anderson, 'Stock Theft and Moral Economy in Colonial Kenya'.

⁶⁵⁸ E.A. Holyoak (Forester, Lari) to J.C. Rammell (Snr. Asst. Conservator), 2 April 1940, FOR/1/244, KNA.

⁶⁵⁹ Forest Department Annual Reports, 1930-1944.

⁶⁶⁰ Kenya Forest Department, *Annual Report 1929*, 1929, 13; Kenya Forest Department, *Annual Report 1937*, 14; Kenya Forest Department, *Annual Report 1938*, 13.

being carried out by a large network or clan. Such networks were clearly in operation by the time of the Second World War, when illegal felling and pitsawing was occurring on a large scale. The apparently large potential profits from such operations meant that the department's forest guards were subjected to "very great temptation."⁶⁶¹ During the war, at least two forest guards in Nyeri forest division were found guilty of accepting large bribes from pitsawing gangs operating in the Aberdares.⁶⁶² The problem of bribery within the forest guards stretched back further in this period and was not isolated to a single area. In 1934 Gardner complained to the district commissioner of Kiambu, the region immediately north of Nairobi, that "attempted bribery" of forest guards was endemic in the area.⁶⁶³ Bribery also occurred within the *shamba* system, as the department's 1939 guidelines on management specifically warned foresters to ensure that when headmen recruited new farmers into the system that this was done in public, with other headmen and squatters present, to guard against "the habit of accepting a bribe."⁶⁶⁴

The *shamba* system also aided those from outside the system who wished to engage in activities the colonial government considered criminal by acting as a support network within the forests. Cattle rustlers or others committing forest offences could easily hide in plain sight in the forests, as Africans were permitted to stay within a forest for 48 hours, hosted by a forest squatter. Intended to ease the movement of Africans in search of work or visiting family or friends within the *shamba* system, the effect was that the Forest Department could never be sure of exactly how many Africans were, legally, staying within its forests. Describing the situation in Londiani in 1940, the assistant conservator R.M. Graham stated that, "I do not wish to stop our people from having friends to stay with them, but I do want to have a check on these friends."⁶⁶⁵ The specific reason for checks on this movement cited by Graham was to empower the department to pursue Africans who were attempting to evade the police by hiding in a forest. Wright, the local assistant inspector of police, agreed.⁶⁶⁶ Against the backdrop of escalating forest crime, the 1941 Forest Ordinance plugged this legislative hole by forbidding any person from remaining in any forest area between 9 p.m. and 6 a.m. the following morning unless the conservator of forest had provided permission to do so. The erection of any building or, significantly, cattle enclosure without the conservator's permission was also expressly forbidden. Making these acts offences under the forest ordinance not only gave the Forest Department jurisdiction but allowed it to compound the offence of 'trespass', thereby expediting forest 'justice'.

⁶⁶¹ D.G.B. Leakey (Asst. Conservator, Nyeri) to H.M. Gardner (Conservator), 2 January 1941, FOR/1/243, KNA.

⁶⁶² Ibid.

⁶⁶³ H.M. Gardner (Conservator of Forests) to District Commissioner (Kiambu), 8 September 1934, FOR/1/243, KNA; H.M. Gardner (Conservator of Forests) to District Commissioner (Kiambu), 10 September 1934, FOR/1/243, KNA.

⁶⁶⁴ 'Squatter and Shamba Management (Bulletin No. 33)', 1-2.

⁶⁶⁵ R.M. Graham, Assistant Conservator of Forests, to Conservator of Forests, 25 November 1940, KNA, FOR/1/244.

⁶⁶⁶ D.K. Wright (Asst. Inspector of Police, Molo) to Asst. Superintendent of Police (Nakura), 23 November 1940, FOR/1/244, KNA.

The above account has made clear that what the Forest Department considered to be forest offences were common and increasing from the mid-1920s until the close of the Second World War. These were offences, moreover, in which the department's forest squatter workforce appears to have involved. To properly understand this involvement it is necessary to look at forest offences within the wider environmental conditions of this period, specifically with regard to drought, and the destocking programme run by the Forest Department. These factors were also at play during the Second World War, however the factors behind the massive increase in crime during the war years are muddied by the huge influx of people into the forests, and the lack of records dealing with this. Africans, Indians, and large numbers of soldiers and prisoners of war were at work in the forests during the war, and the increase in forest offences during that time can largely be attributed to the presence of these often unregulated people.⁶⁶⁷

Drought was a significant factor in influencing the formation of colonial policies toward Kenyans in this period, and there is evidence to support a hypothesis that drought and the rate of forest offences were linked.⁶⁶⁸ That is, in drought years the number of forest offences increased, while in years of good rains the number of forest offences dipped. The Forest Department's own annual reports can provide information on the average rainfall across the colony, as the department made note of years when late, small, or non-existent rains affected its afforestation operations (as more plantings would fail in such years) and fire prevention measures (as forest fires were dramatically more prevalent in drought years). Between 1924 and 1939 the Forest Department reported that the years of 1924-1925, 1927-1929, 1931-1934, 1939, 1943 and the first half of 1944 were notably dry. Only the years 1926, 1930, and 1935-1936 were remarked upon as having good rains.⁶⁶⁹ As shown in Figure 2-7, it was in the years 1926 to 1929 and 1931 to 1934, that is to say, drought years, when dramatic increases were recorded in the number of forest offences. In the good rainfall years of 1930 and 1935 there was a noticeable drop in recorded instances of forest offences. It is further notable that between 1931 and 1934 the largest proportion of offences were classified as illicit grazing. The Forest Department stated that the large proportion of illicit grazing offences in 1929 (the department did not provide a detailed breakdown of forest offence types in the late

⁶⁶⁷ Kenya Forest Department, *Annual Report 1941*, 2. For accounts of the many problems the Forest Department faced in attempting to control wartime exploitation see file FOR/1/244, KNA. In particular, the presence of British soldiers in or in proximity to the forests led to a large amount of unregulated felling and accidental fires. The military bureaucracy hindered Forest Department attempts to exert control over these soldiers. Large thefts of forest produce were also common during the war.

⁶⁶⁸ Anderson, 'Depression, Dust Bowl, Demography, and Drought'.

⁶⁶⁹ Forest Department Annual Reports, 1924-1939. As the Forest Department primarily operated within the central highlands of Kenya, these assessments of rainfall are confined to that region. These reports of rainfall broadly concur with other rainfall data from the period, for example presented in L. J. Ogallo, 'The Spatial and Temporal Patterns of the East African Seasonal Rainfall Derived from Principal Component Analysis', *International Journal of Climatology* 9, no. 2 (1989): 145-67. The highest rainfall levels in Kenya are recorded in the forested, mountainous areas of the central highlands and in proximity to Lake Victoria (Department for International Development (DFID), 'Economic Impacts of Climate Change: Kenya, Rwanda, Burundi: Climate Report Kenya' (DFID, ICPAC, Kenya and SEI Oxford Office, September 2009).), therefore if rainfall was low in the forests, as reported by the Forest Department, the rainfall level outside of those forests can, broadly, be assumed to have been lower; that is to say, drought outside of the forests was more severe than that recorded in the forests.

1920s aside from this notable number of grazing offences in 1929) was linked to the wider drought: poor grazing outside of the forests was forcing Africans to seek better grazing for their animals within the forest.⁶⁷⁰ Although the department did not comment on this relationship between 1931 and 1934, it is reasonable to assume that drought in those years also pushed livestock grazing into the forests. These were also the years when the department was fully pursuing its African livestock reduction programme, indeed as were settlers and the government. Traditional practices of livestock movement as a drought response were therefore criminalised and conflated with the growth of stock theft. In 1939, another drought year, cases of illicit grazing again outnumbered produce theft. And although complicated by the influx of workers and lower supervision of the war years, 1944, which was recorded as a partially dry year, saw a record high level of illicit grazing and produce theft. The rise in the proportion of illicit grazing and overall increase in forest offences should therefore also be seen as a response to colonial policy. For Africans, the forests acted as a refuge for their livestock from both drought and the destocking initiative.

The escalation of forest offences in the late 1920s and 1930s further contributed to what the Forest Department saw as a lack of recognition by Africans of departmental authority. In 1933, for example, Edward. Honorè, Assistant Conservator of Forests, complained of numerous forest offence cases in which those accused argued the department and its forest officers had no authority to stop them utilising the forest as they wished.⁶⁷¹ The growth of offences within the forests throughout the 1930s may therefore be seen as symptomatic of both the need for Africans to access and exploit the forests in the face of environmental stresses and oppressive colonial policies, and a gradual decline in the perceived authority of the Forest Department to rule over the forests; a situation worsened by the presence of corruption within the forest guard force and headmen overseeing the forest squatters. As the case of the forest squatter convicted of illicit cattle movement illustrates, the Forest Department's policy of maintaining pockets of forest squatters within the forests allowed the forests to continue to act as a lifeline in times of environmental stress and provided a support network for the escalating and increasingly organized occurrences of forest offences, particularly stock theft. Essentially, while being integral to the colonial reforestation mission, the forest squatters acted to undermine the colonial goal of disconnecting Africans from their traditional relationship with the forest.⁶⁷²

The forest crime statistics may also suggest that the department's resident labour force was politically aware and protested against colonial authority by damaging trees, setting fires, and participating in wider criminal networks. Direct evidence of political awareness among the forest squatters is, however, lacking. The major incident recorded by the Forest Department occurred in

⁶⁷⁰ Kenya Forest Department, *Annual Report 1929*, 1929, 13.

⁶⁷¹ E.J. Honorè (asst. conservator, Nyeri) to District Commissioner (Embu), 13 February 1933, FOR/1/243, KNA.

⁶⁷² J.C. Rammell (Acting Conservator of Forests) to Provincial Commissioner (Rift Valley), 15 February 1935.

1929 and was related to wider protests by squatters on settler farms concerning the signing of oppressive squatting contracts.⁶⁷³ The Forest Department reported that:

... considerable trouble occurred among the [forest] squatters due to mischief-makers, for some obscure reason, persuading them that it was dangerous to sign the squatter's agreements as required by law. The result was that in nearly all districts the squatters, on the termination of their agreements, refused to sign new ones...⁶⁷⁴

The “mischief-makers” in question were probably those within the forest squatter workforce or on neighbouring settler farms who were well connected to the nascent politicisation of the Kikuyu and wished to protest about the increasingly heavy hand taken by settlers toward their squatters. The protest of the forest squatters was one of solidarity with the settler squatters, although it was no doubt also influenced by the cattle elimination policy that the department had enacted. The forest squatters returned to the native reserves after this incident, although “by the end of the year either the old squatters had returned and signed agreements or new men had taken their places.”⁶⁷⁵ The statement that “new men” had replaced some of those who protested is key in signalling the method the Forest Department would adopt and refine in order to counter the rising political awareness among Kikuyu squatters.

As already argued, the management of the *shamba* system contained strong elements of social engineering in that only hardworking, loyal workers were permitted to remain within it. Remembering the 1929 protests, by 1939 the department was instructing its officers to sign on squatters in batches staggered across a three-year period so that if trouble brewed over the signing of contracts again the entire *shamba* system would not be crippled. It was a precaution the department instituted because of the presence of what it considered “agitators”. *Shamba* guidelines specified that, “Once a man is known as an agitator, or as a witch doctor who continually causes trouble among other squatters, he should be got rid of at once.”⁶⁷⁶ The goal of the department was to create an apolitical workforce, isolated from the “mischief-makers” in the reserves and on European farms. It was a workable policy because the *shamba* system offered to Kikuyu *ahoi* attractive agricultural opportunities in comparison to life in the reserves. These opportunities, handicapped as they were by the increasing strictness of the department’s livestock policy through the late 1920s and 1930s, meant a steady stream of applications for squatting from which the department could choose ideal recruits. However, as the preceding accounts of bribery and theft of forest produce and cattle attest, this recruitment process was never totally effective. The Forest Department may have condescendingly described its squatters as “contented” in the drought years

⁶⁷³ Furedi, ‘Kikuyu Squatters’, 191. Furedi argues that squatters on settler farms protested, principally by strike action, to response to rumours of 30-year squatting contracts; rumours which had been stoked by the Kikuyu Central Association, one of the earliest Kikuyu political organisations that focused on the disparity of land rights within the colony.

⁶⁷⁴ Kenya Forest Department, *Annual Report 1929*, 1929, 20.

⁶⁷⁵ Ibid.

⁶⁷⁶ ‘Squatter and Shamba Management (Bulletin No. 33)’, 3.

of 1933 and 1934,⁶⁷⁷ and it may have been successful in keeping political organisations out of its *shamba* system, but this did not mean that the forest squatters were all loyal, politically neutral workers.

As argued by Van Onselen in the Southern Rhodesian context, the absence of political organisations among workers does not necessarily indicate they lack a political consciousness.⁶⁷⁸ Rather, such a political awareness was expressed through everyday forms of protest that sought to deny colonial authorities either the fruits of labour or material resources themselves. Within the context of forestry, Bryant has shown that such action, typically expressed through the destruction of young teak trees, was very much a part of the Burmese *taungya* system, the progenitor of Kenya's *shamba* system.⁶⁷⁹ In contrast to Burma, where entire communities sometimes participated in joint protest, incidents recorded by the Kenyan Forest Department as crime that could be construed as protest seem to have been small in scale. Indeed, as the department did not record any crimes or other activities as protest, apart from the 1929 incident, the disentangling of the department's records can only ever partially reveal evidence of protest. Aside from their participation and engagement with the growing criminal networks of stock theft, a key indicator of the forest squatters' indifference and hostility toward the colonial government was their involvement in 'damage to trees' and forest fires.

Recorded as 'damage to trees' in Figure 2-7, the Forest Department included within this category the injuring of trees or forest produce as well as, after 1935, the contract offence of failing to maintain a clean *shamba* (farm plot). Lack of *shamba* maintenance could be construed as a 'go-slow' tactic that allowed the forest squatter to express his disquiet at his overseer, the Forest Department generally, or the colonial government. Such an action, however, caused little harm to forestry operations and could obviously be directly linked to the *shamba* owner, who would invariably be reprimanded or punished. By contrast, the setting of forest fires is a recognised form of rural protest, evident in Bryant's research into *taungya* in Burma and, more widely, in the several case studies by Kuhlken.⁶⁸⁰ In the years during this period when the Forest Department reported the causes of forest fires, 1931 to 1939 and 1944 to 1945, the forest squatters employed by the

⁶⁷⁷ Kenya Forest Department, *Annual Report 1933*, 27; *Annual Report 1934*, 26.

⁶⁷⁸ Charles Van Onselen, 'Worker Consciousness in Black Miners: Southern Rhodesia, 1900–1920', *The Journal of African History* 14, no. 2 (April 1973): 237–255.

⁶⁷⁹ Bryant, 'Shifting the Cultivator', 1994, 236. As indicated by Bryant, the prominent Indian and empire forester, E.P. Stebbing, argued the *taungya* system was characterised by its harmonious relationship with the labourers employed (*ibid.*, 226).

⁶⁸⁰ Robert Kuhlken, 'Settin' the Woods on Fire: Rural Incendiarism as Protest', *Geographical Review* 89, no. 3 (1 July 1999): 343–63, doi:10.2307/216155. In her assessment of British colonial forestry in Cyprus, Sarah Harris urges caution in the labelling of incendiarism as 'resistance' against colonial rule without proper understanding of subaltern motivations (Sarah Elizabeth Harris, 'Colonial Forestry and Environmental History: British Policies in Cyprus, 1878–1960' (PhD Thesis, University of Texas, 2007), 295–96.) The case presented here for Kenya is not one that can be conceptualised as 'resistance' as the policies of the Forest Department prevented the politicisation of the *shamba* workers, rather it is more appropriate to term cases as incidents of protest, perhaps on an individual or family level, against forestry practices that reduced the ability of the *shamba* farmers to tolerate harsh environmental conditions.

department were responsible on average for the starting of 11 per cent of fires.⁶⁸¹ Although low, this carries significance even though other causes of fire were greater, most notably 'honey hunters' who were responsible for an average of 24 per cent of fires across the period.

Surprisingly, of the peoples living in or in proximity to the forests, it was the forest squatters who had the most to gain through the use of fire. The *shamba* system relied on fire for the clearing of unproductive or economically depleted forests before cultivation and the planting of economically productive trees could commence. The primary benefits the forest squatters gained were through the process of this clearing and the growing of their crops: they received no share of the profits accrued from the exploitation of the trees that they tended. Thus, there was a disconnection between the worker and the final product of the system. Sanctioned forest clearances that burnt out of control, the burning of forest not yet slated for conversion to plantation, or the burning tree plantations themselves, all increased the amount of labour (in fighting the fire, preparing land, and tending trees) that was needed and the area that would be required to be cultivated, thus benefitting the squatters. Forest squatters were thus well versed in the uses and potential abuses of fire. Moreover, it was a method of protest that could yield dramatic results yet be carried out by a single person with minimal physical effort and no cost.⁶⁸²

Drought conditions created ideal conditions for forest fires and while many of those attributed to forest squatters were no doubt cases of "carelessly starting fires"⁶⁸³ the department had to defend its squatters from settler accusations that they were responsible for starting a great many fires.⁶⁸⁴ In 1929, the year of recorded squatter protest and also when three months were recorded as being extremely dry, 13 per cent of fires were attributed to forest squatters. In 1931, a year with good rains the number dropped to 8 per cent. Drought and forest fires were clearly linked, but so too of course were drought and economic hardship. 1933, another drought year, saw the highest percentage of fires attributed to forest squatters, which was concurrent to the department's reduction of both the total number of forest squatters it employed and the amount of labour it

⁶⁸¹ Figures are calculated from statistics given in the Forest Department Annual Reports. The department found it extremely difficult to identify the causes of many forest fires and even the total number of fires; it would attribute approximately 15 per cent of fires to unknown causes each year. The actual number of fires that occurred is likely to have been higher. The number of fires also does not indicate the extent of the fires; a single large fire may have caused significantly more damage than several small fires, even more so when it affected forests of high economic value.

⁶⁸² Kuhlken, 'Settin' the Woods on Fire', 344.

⁶⁸³ Kenya Forest Department, *Annual Report 1929*, 1929, 13. The Forest Department retained only a small amount of documentation on forest fires during this period. Surviving evidence indicates that as the squatters were typically situated in proximity to lucrative forests, the damage done by fires started by them could be financially extremely costly, illustrated by the destruction of a fuel crop worth £1,750 in March 1926 owing to a fire started by forest squatters. Shaply and Schwartze (Advocates and Solicitors) to H.M. Gardner (Conservator), 12 March 1926, QB/1/286, KNA.

⁶⁸⁴ Kenya Forest Department, *Annual Report 1929*, 1929, 13. Forest squatters were fined for starting fires on their *shambas* during dry seasons, so certainly there were instances of squatters doing so. However, as R.M. Graham, asst. conservator, argued typically there were no witnesses to the starting of fires on *shambas* or in forests and therefore securing convictions was virtually impossible. R.M. Graham (Asst. Conservator, Londiani) to H.M. Gardner (Conservator of Forests), 12 April 1934, FOR/1/243, KNA.

required of them. There is the very real possibility that forest fires begun by forest squatters in such years of drought and deprivation were far more than simple accidents; they were protests both against the policies of government and a means of ensuring the Forest Department provided more work.

Protest was therefore likely to have occurred in the forests and was committed by the Forest Department's own "contented" workforce in the form of acts defined by the government as criminal. Although crime has generally been shown to have increased dramatically between 1925 and 1945, caution must be taken in assessing the incidence of protest. The highest recorded number of forest fires caused by forest squatters was 18 fires in 1933, yet there were 2,184 families employed as squatters by the department in that year. Clearly, the majority of forest squatters were not engaging in activities that could be interpreted as protest. Partly this was because the *shamba* system did indeed offer opportunities to access land and even employment. Equally, it was because the Forest Department was developing and succeeding in creating a system in which protest or political agitation above the individual level was extremely difficult.

3

Scientific Ascendancy

c.1945-1963

3.1 Introduction

This chapter will explore the post-war period when it is argued scientific forestry truly arrived in Kenya. Before 1945 the Forest Department's policies may have been founded on global networks of silvicultural knowledge, particularly in relation to the introduction of exotic tree species to the colony, but it largely lacked the research programmes, surveys, and working plans that underpin sustainable forest exploitation and management. This would change after the Second World War, as a systematic programme of scientific research was put in place to support a massively expanded planting programme that was laid out in the colony's first official forestry policy. The Forest Department also successfully reframed forestry as not just a vehicle for economic development but also the social progression of its forest squatters.

The use of scientific research by the department both in terms of its benefit to planting and its use as a political tool to support forestry will be discussed first in this chapter. Following this, the economic role of forestry in the colonial state will be explored and the relationship between the Forest Department and private enterprise will be highlighted. The development of forest squatting in the context of the increased economic importance given to forestry in the post-war period, particularly in relation to social and economic development and the department's reaction to and use of Mau Mau, will be examined. Finally, the chapter will consider how the department attempted to weather the transition to Kenya's independence in relation to staffing and policy.

3.2 The Roots of Development

3.2.1 Wartime growth

The Forest Department emerged from the Second World War in a stronger financial position than it had ever occupied before. The forest fund that the department had created in 1941 contained £523,150 upon its closure in 1947. The significance of this figure is revealed when it is realised that it almost equalled the department's entire cumulative expenditure between 1930 and 1944.⁶⁸⁵ Tanganyika and Uganda also produced surpluses from wartime exploitation of their forests, yet

⁶⁸⁵ Kenya Forest Department, *Departmental Report 1945-1947*, 41. The department's total expenditure for the period 1930 to 1944 was £524,952. Kenya Forest Department Annual Reports, 1930-1944.

without the protective mechanism of a sinking fund these revenues were absorbed into the general revenues of the territories and so did not contribute to forestry.⁶⁸⁶ Indeed, the innovation of the forest fund in Kenya was unique in the empire, drawing praise from the organ of empire forestry, the *Empire Forestry Journal*, and lament that it had not been adopted in other colonial territories or India. Although the Colonial Forest Service provided important connections between foresters across the empire, this communication was only as efficient as the nodes from which information emanated. In this case, the journal only wrote of the Kenyan innovation in 1944, three years after its initiation because the department had neglected to send its annual reports during the war, and surely too late for the innovation to be taken up in other colonies.⁶⁸⁷

While communication gaps existed on some practical matters, by the end of the Second World War the empire forestry community did share a sense of optimism for the future role of forestry in economies across the empire. At its annual general meeting of 1944, the Empire Forestry Association, publishers of the *Empire Forest Journal*, summarised what it felt was a change in attitudes among those who yielded power in the empire toward afforestation policies in Europe and the empire:

The war has brought home to most Governments the great importance of ensuring supplies of home-grown timber and other forest produce, and has led to a number of proposals for post-war forest policy in many parts of the Empire.⁶⁸⁸

Kenya was no exception to this statement. The government's forestry sub-committee of its Development Committee, which operated under the auspices of the Colonial Development and Welfare Act 1945 and published its report in 1946, was considered by the Forest Department to have:

... raised the whole importance of forestry in Kenya to a far higher level than it had ever been before ... It recognized that the forest estate in fact is a great productive asset and with its resulting ancillary industries is capable of playing a major part in the economic development of the Colony.⁶⁸⁹

Considering Kenya's impressive record of plantation establishment and the great frugality that the use of the forest squatter workforce represented, the committee decreed that the establishment of plantations of exotic softwoods should be accelerated. This would meet the expected surge in local demand for wood that would go hand-in-hand with the planned development of the colony. The

⁶⁸⁶ W. MacF. Robertson, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission: A Review', *Empire Forestry Journal* 29, no. 3 (1950): 228.

⁶⁸⁷ H.R. Blanford, 'Review of 1942 Kenya Forest Department Annual Report', *Empire Forestry Journal* 23, no. 1 (1944): 88. Further symptomatic of this communication inefficiency is the presence in the same issue of the *Empire Forest Journal* of an article discussing a similar forest saving fund that was in operation in Switzerland during the Second World War that makes no mention of the existence of the Kenya fund.

⁶⁸⁸ George Villiers, 6th Earl of Clarendon (Chairman, Empire Forestry Association), '22nd Annual General Meeting of the Empire Forestry Association', *Empire Forestry Journal* 23, no. 2 (1944): 136.

⁶⁸⁹ Kenya Forest Department, *Departmental Report 1945-1947*, 3. Of course, this committee was not solely dedicated to forest development; indeed, forestry was a minor part of its mandate compared to its main focus on agricultural and industrial development.

bulk of the department's forest fund, £400,000, was allocated to capital investments; most particularly roads and buildings that would accompany an expansion in planting to 6,000 acres per year and an increase in staff from 16 to 40. The department's annual expenditure was permitted to rise to £150,000, more than double the £74,360 the department spent in 1945 and dramatically more than the highest expenditure of the 1930s (£38,751 in 1930).⁶⁹⁰ The emphasis was not just on production, as the Development Committee also recognised the necessity of maintaining forests as an essential component of the hydrological cycle upon which all agriculture in Kenya relied.⁶⁹¹ The department was further buoyed when H.A. Marquand, UK Paymaster-General, submitted his own report on forestry after visiting Kenya in 1948 in which he called for the planting target to double to 12,000 acres per annum.⁶⁹²

Marquand's report was also the genesis of a proposal by Rammell for the transformation of the Forest Department into a Forest Commission. Such a commission would be run like a private corporation, generating a profit and investing its own revenues back into its forestry programme. In this way, forestry would isolate itself from the inconsistencies of government funding that Conservator of Forests James Rammell poetically described as "the nightmare of the annual budget."⁶⁹³ Rammell argued in November 1948 that such a revolutionary alteration of forestry in Kenya was the "one way and one way only to ensure stable finance for the long-term [planting] project"⁶⁹⁴ suggested by Marquand. Rammell was due for retirement in 1950. His call for a forest commission was either being made by a man keen to secure a legacy or, perhaps more likely, the kind of radical proposal (that took advantage of post-war recognition of forestry's worth) that would only be made by a forester that could afford to have little regard for his future career. The proposal was considered serious enough to warrant an official investigation, which Governor Mitchell called for in July 1949. The investigation was carried out with considerable pace; the survey commonly referred to as the Hiley Report being published in March 1950.⁶⁹⁵

Wilfred Hiley was perhaps the leading forest economist of the empire, having lectured on the subject at the Imperial Forestry Institute, Oxford in the 1920s.⁶⁹⁶ Essentially the creation of a forest

⁶⁹⁰ Ibid., 2; Kenya Forest Department, *Annual Report 1930*.

⁶⁹¹ Kenya Forest Department, *Departmental Report 1945-1947*, 2.

⁶⁹² W.E. Hiley, P.J. Gill, and A.K. Constantine, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission' (Nairobi: The English Press, Ltd., 21 March 1950), 10.

⁶⁹³ J.C. Rammell, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission: A Note', *Empire Forestry Journal* 30, no. 1 (March 1951): 55.

⁶⁹⁴ J.C. Rammell (Conservator of Forests), 8 November 1948, quoted in Hiley, Gill, and Constantine, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission', 10.

⁶⁹⁵ Hiley, Gill, and Constantine, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission'.

⁶⁹⁶ N.D.G. James, 'A History of Forestry and Monographic Forestry Literature in Germany, France, and the United Kingdom', in *The Literature of Forestry and Agroforestry*, ed. Peter McDonald and J. P. Lassoie (Ithaca: Cornell University Press, 1996), 43. Hiley is described in a recent global history of forest management as perhaps the leading proponent of reforming forestry into a market-oriented enterprise in the world in the interwar period. His focus on the direct economic benefits of forestry above any other goal are clearly seen in the following discussion of the Hiley Report. Brett M. Bennett, *Plantations and Protected Areas: A Global History of Forest Management* (MIT Press, 2015), 74.

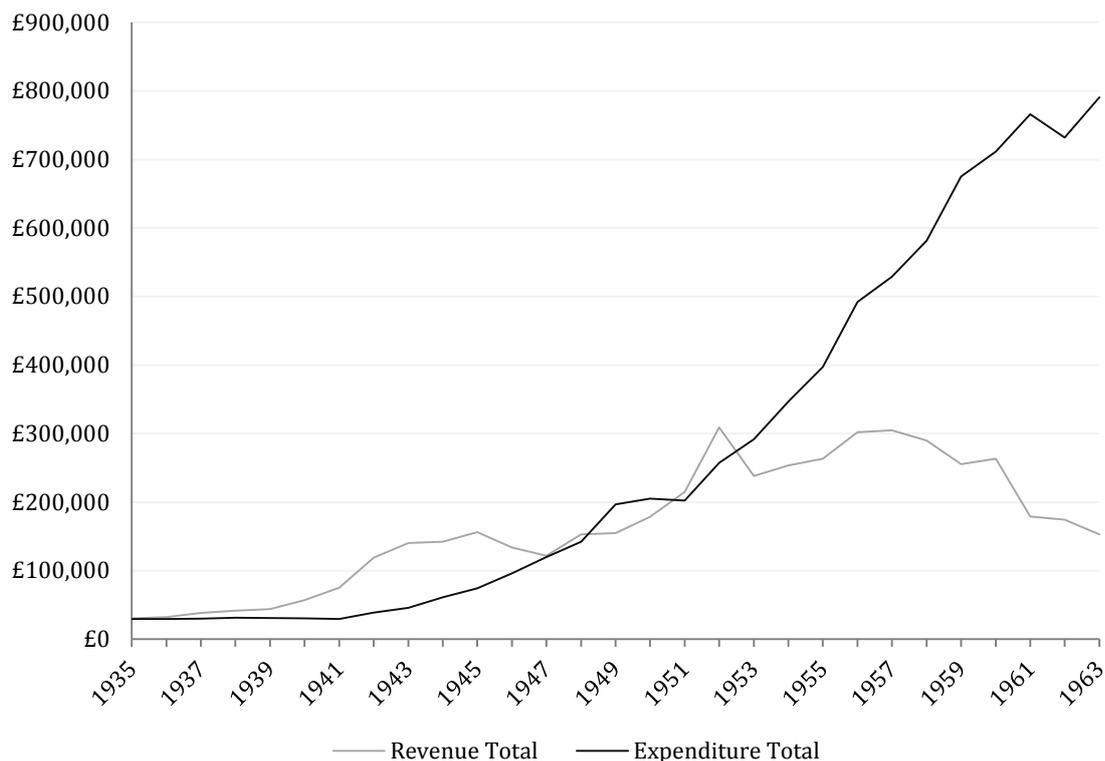


Figure 3-1. Forest Department revenues and expenditure between 1935 and 1963. Sources: Forest Department Annual Reports, 1935-1963.

commission had two objectives: “security of finance” and “the introduction of business management.”⁶⁹⁷ The first of these goals was no doubt sympathised with by foresters working to tight budgets across the empire. To achieve financial independence, Hiley calculated that £1 million in capital would have to be raised via increasing exploitation, doubling royalties imposed on sawmillers, and government loan. The whole proposal was built on optimism stemming from the surpluses the Forest Department had run in its accounts since 1935.⁶⁹⁸ Significantly, the department’s revenues plateaued in the 1950s and even if the department had doubled its revenue this would not have covered its expenses (Figure 3-1). Indeed, revenues per hoppus ton of timber and firewood did not change dramatically in the post-war period and only came close to the doubling that Hiley determined was needed for financial independence in a single year, 1952 (Table 3-1). Final decision on Hiley’s recommendations were delayed by the wish to wait for the arrival of the department’s new Conservator of Forests, R.R. Waterer, in 1951, and outbreak of the Mau Mau revolt in 1952. When the Legislative Council did debate the issue in December 1953 the proposal to form a forest commission was rejected, with its financial impracticality highlighted.⁶⁹⁹

⁶⁹⁷ Hiley, Gill, and Constantine, ‘An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission’, 6.

⁶⁹⁸ In 1935, revenue exceeded expenditure by £661, which rose to a high of £94,790 by 1943. Due to the size of the planting programme in the 1950s the department unsurprisingly ran a deficit for most of the decade.

⁶⁹⁹ W. MacF. Robertson, ‘Editorial on the Hiley Report’, *Empire Forestry Review* 33, no. 1 (1954): 11–12. The Forestry Advisor to the Secretary of State for the Colonies, F.S. Collier (formerly Chief Conservator of Forests in Nigeria) was also critical of Hiley’s proposals. His publication on this, *Forest Advisor’s Note on the “Economic Survey of Forestry in Kenya and Recommendations regarding a Forest Commission”*, however, was published in 1954 after the decision

	<i>Royalty revenue in £ per hoppus ton</i>	
	<i>Timber</i>	<i>Fuelwood</i>
1944	1.000	0.067
1945	0.874	0.069
1946	0.952	0.075
1947	0.934	0.080
1948	0.926	0.078
1949	0.944	0.070
1950	1.050	0.089
1951	1.238	0.080
1952	1.770	0.094
1953	1.175	0.104
1954	1.073	0.139
1955	1.149	0.134
1956	1.452	0.105
1957	1.667	0.091
1958		
1959		
1960	1.304	0.100
1961	1.480	0.104
1962		
1963	1.131	0.092

Table 3-1. Revenues accrued by the Forest Department from royalties on timber and fuelwood (per hoppus ton). Source: Forest Department Annual Reports, 1944-1963.

It was not the goal of financial independence that attracted the most attention to Hiley's proposals among the colonial forestry community, but rather the means of achieving this through business management. This revealed sharp divisions, with, for example, the department's Acting Conservator, Reginald Graham, "strongly dissenting" from the outset.⁷⁰⁰ This division was laid out in the correspondence column of the *Empire Forestry Review* and aroused such passions that letters between the commission's chief supporter, Hiley, and its main (public) opponent, Norman Brasnett, degenerated into personal attacks.⁷⁰¹ Brasnett, a lecturer in forestry at Oxford University, former

was taken to reject the proposal. It is certainly a possibility that the Legislative Council had access to a draft of this publication and it was a further factor in persuading them against the idea of a forest commission. Unfortunately, Collier's report now appears to be unavailable. Later correspondence by Collier indicates his opposition was based around concern that such a heavy focus on the economics of forestry would jeopardise the other aspects of forestry in the country. Very limited information concerning Collier's report is contained in a book seller's catalogue: *Eastern Africa. A Catalogue of Books Concerning the Countries of Kenya, Uganda, Tanzania, Rwanda, Burundi, and Malawi.*, vol. Catalogue 97 (Michael Graves-Johnston, 2007), 10. Correspondence by Collier: F.S. Collier, 'Comment on "Scheme for Reabsorption of Kikuyu, Embu and Meru Displaced as a Result of the Emergency"', 7 June 1955, CO 822/797, TNA.

⁷⁰⁰ Robertson, 'Editorial on the Hiley Report'. Reginald Moray Graham was the acting conservator of the department after Rammell left in July 1950 until Waterer arrived in March 1951. Graham's opposition was probably linked to his belief that the forests of Kenya were being vastly overexploited (see discussion in section 3.3.1), which he expressed (without departmental sanction) in a 1945 paper: R.M. Graham, 'Forestry in Kenya', *Empire Forestry Journal* 24, no. 1 (1945): 186-205.

⁷⁰¹ In particular, Hiley criticised the veracity of Brasnett's publications and considered his attitude (of hostility to forest exploitation) so outdated that "by imparting it to Oxford [Nb. where Brasnett taught] students he might

conservator of forests for Uganda and assistant conservator in Kenya, considered the report almost completely blind to the multiple aspects of a forest policy because of its singular focus on production forestry, specifically the softwood planting scheme, and was therefore going against the forest policies that had recently been enshrined in Uganda and Tanganyika that placed the protective, productive, and supportive (that is, supplying immediate local needs, such as firewood) roles of forests almost equally.⁷⁰² His greatest concern was that “dominance of the industrial aspect over all other forestry should not be enshrined in a new organization.”⁷⁰³ Brasnett was not alone in his views. Rammell admitted there was “practically unanimous condemnation of the whole document emanating from foresters of high and low degree.”⁷⁰⁴

This was the old, arguably innate, fear within the forestry community surfacing once again: the long-term stewardship and sustainable exploitation that forestry espoused could be undermined by private enterprise. Rammell identified this fear directly, writing that foresters feared a “business-minded board” of commissioners dominated by sawmillers that would “flog the forests for present profit...”.⁷⁰⁵ For Hiley and Rammell, this fear was a barrier to effective forestry because by distancing itself from direct exposure to capitalism forestry was allowing the vagaries of economics to dictate its policies indirectly, via the annual budget. Hiley and Rammell were motivated by the empire’s post-war need for timber with their emphasis on productive forestry; within this, they considered Kenya to have unique potential to become a significant producer of softwoods for the East African region. The potential stemmed partly from the favourable climate for rapid softwood growth in Kenya, but largely from the cheapness with which plantations could be established because of the *shamba* system.⁷⁰⁶ The fear of the private sphere represented, Hiley wrote, a “creed outworn”; he explained:

Are we not so imbued with a sense of forestry as a service [that is, the protective and local utility aspects], and have we not neglected economics and business management to such an extent that we are unfitted to undertake these new responsibilities?⁷⁰⁷

This, then, was why Rammell had suggested and Hiley had supported the idea of the private sphere taking a direct role in the running of the forest commission and this was why their vision never materialised. The rejection of the Hiley Report in 1953 passed almost without mention in the

seriously jeopardise the future timber supplies of the Commonwealth.” Correspondence re: Kenya Forestry by W.E. Hiley, *Empire Forestry Review* 32, no. 4 (December 1953): 364–65.

⁷⁰² F.C.H., ‘N. V. Brasnett’, *The Commonwealth Forestry Review* 54, no. 1 (159) (1975): 1–3; William Julius Eggeling and R. G. Sangster, *Elementary Forestry: A First Textbook for Forest Rangers*, 2d ed. (London: Baillière, Tindall & Cox, 1949), 10–13; Correspondence re: Forestry in Kenya by N.V. Brasnett, *Empire Forestry Review* 32, no. 2 (June 1953): 172.

⁷⁰³ Correspondence re: Forestry in Kenya by N.V. Brasnett.

⁷⁰⁴ Correspondence re: Forestry in Kenya by J.C. Rammell, *Empire Forestry Review* 30, no. 1 (September 1952): 228.

⁷⁰⁵ Ibid. Rammell also raised another interesting aspect of this fear that he believed foresters would not admit: the involvement of businessmen in forestry might mean a more critical examination of what he considered the often lax accounting methods of forestry departments.

⁷⁰⁶ Correspondence re: Forestry in Kenya by W.E. Hiley, *Empire Forestry Review* 32, no. 1 (March 1953): 63–64.

⁷⁰⁷ Ibid.

department's annual reports, save for the fact that it had delayed the publication of a forest policy; probably indicating Waterer's (the Conservator of Forests from 1951) views on the matter.⁷⁰⁸ Similarly, the department's own official history produced in 1962 omits all mention of the proposal.⁷⁰⁹ When Kenya's forest policy was finally produced in 1957 the protective aspects of forestry figured as largely as the productive.⁷¹⁰ In contrast to the welcome that was given to the arrival of the scientific forestry experts within the colonies, whose research promised to strengthen the hand of forestry against its natural and human enemies, the economic expert was turned away.

3.2.2 *Of mice and mycology*

The new attention given to forestry in Kenya was part of the massive expansion of the Colonial Service and metropolitan investment in the colonies that occurred in the wake of the Second World War and which included within it closer focus on the technical fields and conservation.⁷¹¹ As argued by Kent, the new emphasis on technical development and its allied increase in technical co-operation between officers in British and French colonies, absent before the war, was part of the attempt by the old imperial powers to exert influence against the emergence of American power and American-dominated international bodies, notably the United Nations.⁷¹² Metropolitan interest in increasing technical development and co-operation was very much at play in East Africa, as evidenced by the 1944 wish of Edward Cavendish, Under Secretary of State for the Colonies, to further co-ordination of research between the three British territories in that region.⁷¹³ This wish was built on a preceding decade of consolidation in which, as Hodge has argued, "the stage was finally set" for the application of science to the imperial project.⁷¹⁴ At a 1946 conference of the governors of the three East African territories alarm was clear at the perceived rate of soil erosion in East Africa, further heightening the importance of forestry by considering that it, along with veterinary science and agricultural research, were "inseparable components of a whole" needed to combat the problem.⁷¹⁵

⁷⁰⁸ Kenya Forest Department, 'Annual Report of the Forest Department for 1951, 1952, 1953' (Nairobi Government Printer, 1953), 1, CO 544/78, TNA.

⁷⁰⁹ Logie and Dyson, *Forestry in Kenya*.

⁷¹⁰ 'White Paper No. 85 of 1957. "A Forest Policy For Kenya"', in *Forestry in Kenya: A Historical Account of the Development of Forest Management in the Colony*, by J.P. Logie and W.G. Dyson (Nairobi: Colony and Protectorate of Kenya, 1962).

⁷¹¹ Hodge, *Triumph of the Expert*, 207–53; Kirk-Greene, *On Crown Service*, 43–53; Neumann, 'The Postwar Conservation Boom in British Colonial Africa'.

⁷¹² John Kent, *The Internationalization of Colonialism: Britain, France and Black Africa 1939-1956* (Oxford University Press, 1992), 263–85.

⁷¹³ Max Nurock (for Chief Secretary, Uganda) to Chief Secretary (Governors' Conference, Nairobi), 15 August 1944, VF/2/5, KNA.

⁷¹⁴ Hodge, *Triumph of the Expert*, 206, 179–206.

⁷¹⁵ East African Governors' Conference, 'East African Research: Agriculture, Animal Health and Forestry, Proceedings of a Conference Held in Nairobi, 21-22 March, 1946' (Government Printer, Nairobi, 1946), 17.

The wartime forest fund in Kenya, an example of the importance of local agency to development meant that regardless of the strengthening of science as an element of empire the Forest Department would have been able to expand its operations after 1945. The greater importance of the heightened metropolitan and international focus on forestry in the post-war period was in armouring forestry against accusations of its irrelevance in the colonial state. Full metropolitan commitment to technical development meant the Forest Department's position within the state was secure, and with that security came the ability to pursue fundamental scientific forestry research that was so lacking.

So, the Forest Department was enabled to begin a recruitment drive between 1945 and 1947 for the new posts of entomologist (an expert on the insect pests of trees), mycologist (an expert in the fungal afflictions of trees), and soil chemist, and dedicated posts for utilisation officer and silviculturist, which had previously been combined.⁷¹⁶ The need for such specialists was recognised within the wider forestry community, with one anonymous writer remarking that scientific work in forestry across all the colonies prior to the 1940s was tantamount to "blind gropings in the dark"⁷¹⁷ and that the days when all that forest officers needed were bush craft skills and a rudimentary grounding in forestry were over. By the late 1940s, officers increasingly needed "brain and brawn."⁷¹⁸ Experts, not generalists, were about to have their day.

Attention to forestry research in Kenya was concentrated by embarrassing revelations during the war concerning the condition of timber exported from the colony. The poor quality of timber produced in Kenya was an old problem, and one that continued to dog the development of the timber industry through the post-war period.⁷¹⁹ The military seems to have been rather lenient in accepting unseasoned timber, however, in 1944 a consignment of railway sleepers was rendered useless by wood-boring insects. Potentially dangerous if it had gone undetected, the military demanded an investigation. Yet the Forest Department had no one with entomological training to conduct such an investigation, forcing it to turn for assistance to the entomologist of the East African Agricultural Research Institute, based in Amani, Tanganyika. The subsequent bulletin was the first published account of insects that threatened to disrupt timber production in Kenya.⁷²⁰ The fact that it was an agricultural, not forestry, researcher that published this work was highlighted in a review

⁷¹⁶ Kenya Forest Department, *Departmental Report 1945-1947*, 12.

⁷¹⁷ *Rubus Rosaefolius* [Roseleaf Bramble], 'Organization for Scientific Forestry', *Empire Forestry Journal* 23, no. 1 (July 1944): 29. *Rubus rosaefolius* (more usually now spelled *Rubus rosifolius*), the botanical name for the roseleaf bramble plant, is used here by the writer as a rather witty alias to conceal their true identity. The writer's concern for his anonymity in making statements about the need for new experts to replace the old generalists hints at his fears about how the 'old guard' would accept them, while his use of the bramble as a penname suggests the sort of prickly reaction he might receive.

⁷¹⁸ *Ibid.*, 28.

⁷¹⁹ See chapter 2, section 2.2.2. for discussion of the problems of poor timber quality in the interwar period, and section 3.3 of this chapter for discussion on attempts to modernise the sawmill industry within Kenya.

⁷²⁰ T.W. Kirkpatrick (Entomologist, East African Agricultural Research Institute), *Notes on Insect Damage to East African Timbers* (Nairobi: East African War Supplies Board, Timber Control, 1944); B.A. Keen, *The East African Agriculture and Forestry Research Organisation: Its Origins and Organisation* (Nairobi: East African Standard Ltd., 1951), 3.

of the bulletin in the *Empire Forestry Journal*, which saw it as symptomatic of the very poor state of entomological research across the whole Colonial Forest Service.⁷²¹ The situation was mirrored with mycological research. While Samuel Wimbush, Utilisation and Silvicultural Officer, first drew attention to a fungal infection blighting Kenya's economically important cypress plantations, the work on identifying and tackling the problem could only go forward with the aid of Dr R.M. Nattrass, the mycologist of the Agricultural Department in 1944.⁷²² Continued problems with finding its own mycologist meant Nattrass led research on this potentially very serious infection and concurrently expanded his research into a fungal infection afflicting eucalyptus in Kenya.⁷²³

These informal networks of experts working in related technical departments were the main means of accessing scientific knowledge for the Forest Department during the 1940s. Men like Nattrass had provided the department with extremely valuable assistance, yet they were not foresters and could not devote the majority of their energies to forestry research. This was clearly recognised within the Forest Department and steps to correct this deficiency were begun in 1945 when a conference of the conservators of Uganda, Tanganyika, and Kenya met to discuss their shared problems. J.C. Rammell, the Conservator of Forests for Kenya, was keenly aware of the need for scientific expertise within East Africa. However, he did not push for an expansion of this knowledge within the confines of his department, but rather for the reformation of the East African Agricultural Research Institute into a centralised organisation for agricultural and forestry research.⁷²⁴ This push for a formal, centralised research organisation was not just a reflection of the reality that the three territories shared many problems when it came to forestry, but also a manner of correct direction and economy. It is no surprise that centralising research would bring clear financial savings. It reduced the risk of replication of work and meant the territories could pool resources for the construction and maintenance of a suitably equipped laboratory. More revealing is Rammell's admission that scientists would receive better direction in their research at a central, specialist, organisation as "the average Conservator is not qualified to ensure that such scientists are working on the right lines...."⁷²⁵ This is not a surprising statement coming from a man

⁷²¹ R.C. Fraser, 'Review of "Notes on Insect Damage to East African Timbers"', *Empire Forestry Journal* 24, no. 1 (1945): 74.

⁷²² S.E. Wimbush, 'Canker on Monterey Cypress in Kenya', *Empire Forestry Journal* 23, no. 1 (1944): 74.

⁷²³ R. M. Nattrass and Ciccarone, 'Monochaetia Canker of Cupressus in Kenya', *Empire Forestry Review* 26, no. 2 (1947): 289–90; R. M. Nattrass, 'A Botrytis Disease of Eucalyptus in Kenya', *Empire Forestry Review* 28, no. 1 (1949): 60–61. Nattrass expertise in the cypress canker led him to publish on it once again in R. M. Nattrass, C. Booth, and B. C. Sutton, 'Rhynchosphaeria Cupressi Sp.nov., the Causal Organism of Cupressus Canker in Kenya', *Transactions of the British Mycological Society* 46, no. 1 (March 1963): 102–8. Note that Nattrass was fortuitous in having the assistance of A. Ciccarone in Kenya, as Ciccarone was apparently an Italian prisoner of war in the colony at the time. A. Graniti, 'Seiridium Cardinale and Other Cypress Cankers', *EPPO Bulletin* 16, no. 3 (1 September 1986): 479–86, doi:10.1111/j.1365-2338.1986.tb00309.x.

⁷²⁴ For the wider context surrounding the reform of the East African Agricultural Research Institute into the East Africa Agricultural and Forestry Research Organisation see Hodge, *Triumph of the Expert*, 203.

⁷²⁵ J.C. Rammell (Conservator of Forests) to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 6 June 1950, VF/2/5, KNA.

who had of course also believed foresters were ill-suited to the financial management of forestry. Rammell was welcoming of the arrival of experts of all types within forestry.

Men such as Rammell, who had worked in the Kenya Forest Department for 30 years – all his career – were the generalists of which the anonymous *Rubus Rosaefolius* wrote.⁷²⁶ The generation of foresters that held senior positions by the late 1940s were no longer at the forefront of the rapidly expanding field of forest knowledge. More research was necessitated by the realities of the planting programmes that had occurred, in Kenya's case, for the majority of the prior 50 years. The creation of plantations of exotic timbers meant the "maintenance of an unnatural ecological unit, in which one age group only is represented, [and as such] provides an ideal environment for the epidemic spread of parasites."⁷²⁷

Rammell and his counterparts in Uganda and Tanganyika pushed for the creation of a centralised East African forestry research organisation because of their realisation that it was essential to forest development. Their resolution was passed to and accepted by the 1946 Conference of East African Governors.⁷²⁸ Forestry was thus accepted as part of the reform The East African Agriculture Research Institute, which became the East African Agriculture and Forestry Research Organisation (EAAFRO) in 1947 with assistance from funding provided by the Colonial Development and Welfare Acts.⁷²⁹ Under British control, since 1928 this institute had concentrated on improving plantation crops.⁷³⁰ Its reformation into EAAFRO in 1947 represented heightened receptiveness to post-war forest development, no doubt increased by Kenya's significant level of

⁷²⁶ *Rubus Rosaefolius* [Roseleaf Bramble], 'Organization for Scientific Forestry', 28.

⁷²⁷ D. Rudd Jones, 'Report on Priorities for Research in Forest Pathology and the State of Present Investigation', in *Proceedings of the Specialist Committee on Forestry Research* (Nairobi: East African Agriculture and Forestry Research Organisation, 1950), 28.

⁷²⁸ J.C. Rammell (Conservator of Forests) to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 6 June 1950.

⁷²⁹ Keen, *The East African Agriculture and Forestry Research Organisation: Its Origins and Organisation*, 3.

⁷³⁰ H.H. Storey, *Basic Research in Agriculture: A Brief History of Research at Amani 1928-1947* (Nairobi: East African Standard Ltd., 1951). Storey, the deputy director of EAAFRO, outlined the East African Agriculture Research Institute's former research as concentrating on: soils, plant collection and survey, plant physiology, the improvement of plantation crops, the production of quinine, the improvement of native food crops, plant diseases, insect pests of crops, and insecticidal plants. EAARI, based at Amani, Tanganyika, evolved from the preceding German research institute that served a similar purpose and was an example of the earlier recognition of the importance of science within development by the German Empire in comparison to the British. The Amani institute was one of only two (along with the East African Meteorological Department) research bodies which took a regional approach to their work before the Second World War although tsetse research in Tanganyika and veterinary vaccine work in Kenya were also utilised in the other territories. E.B. Worthington, 'A Survey of Research and Scientific Services in East Africa, 1947-1956' (Unpublished first draft, 10 May 1951), 4, CO 927/124/2, TNA. For discussion of EAARI, see Hodge, *Triumph of the Expert*. For information on the German Amani research station see Christopher A. Conte, 'Imperial Science, Tropical Ecology, and Indigenous History: Tropical Research Stations in Northeastern German East Africa, 1896 to Present', in *Colonialism and the Modern World: Selected Studies*, ed. Gregory Blue, Martin P. Bunton, and Ralph C. Croizier (ME Sharpe, 2002), 246-61.

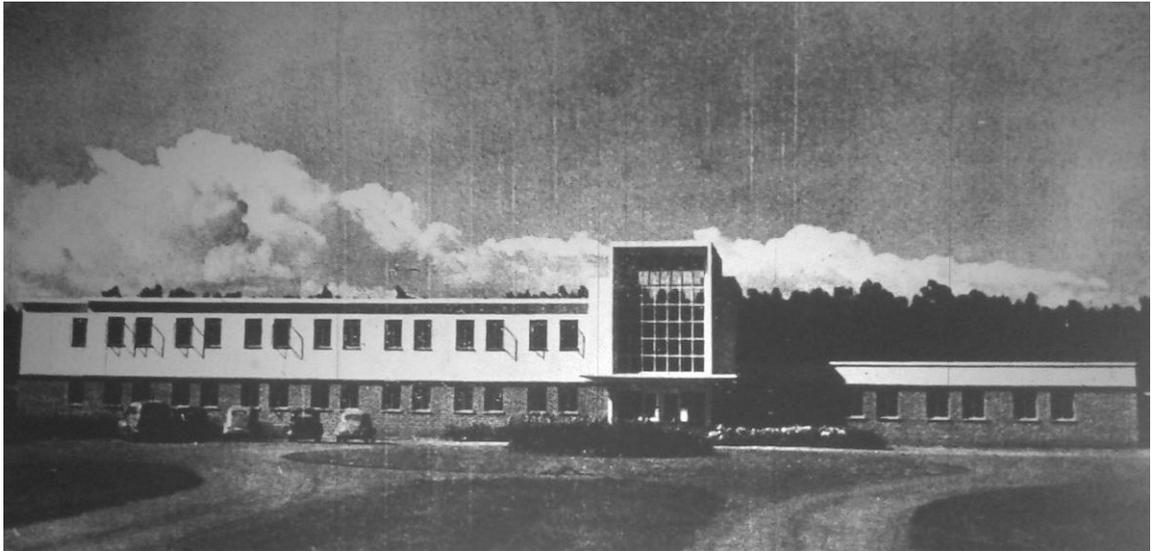


Figure 3-2. Combined headquarters of EAAFRO and EAVRO at Muguga, 1951. *Source:* 'East African Agriculture and Forestry Research Organization: Annual Report 1951' (East Africa High Commission, 31 December 1951).

wartime timber production, from government and the metropole within the wider economic development of Britain's colonial territories. However, the new realisation of this worth did not immediately extend to practical progress.

The centralisation of research in EAAFRO also meant the literal centralisation of the research centre itself, moving from Amani in Tanganyika to Muguga forest reserve, close to Nairobi, although practicalities of infrastructure delayed its effective operational beginning until 1951.⁷³¹ Given the organisation's prior focus and the importance of agricultural development within East Africa, it was inevitable that forestry initially occupied comparatively little space in its list of research priorities. EAAFRO's research programme in 1951 discussed forestry only to the extent that, "Forest entomology problems must also receive attention because of their economic importance."⁷³² Resources during the post-war period were on a hitherto unknown scale, yet this did not mean they were inexhaustible.

Individual scientific programmes and the continued existence of EAAFRO needed the financial assistance of the often very reluctant governments of Kenya, Uganda, and Tanganyika.⁷³³ A 1951 confidential note by J.G. Hibbert, Secretary of the Colonial Research Council, speaks of unofficial members of Kenya's legislative council voicing "very strong" opposition to further funding of

⁷³¹ The move from Amani to Muguga required the establishment of extensive shared research facilities for EAAFRO and the East African Veterinary Organisation (EAVRO) and accompanying transport links where previously there had been none. Relocation costs also overran with a subsequent curtailment on the organisation's ability to expand its staff to meet its anticipated research needs. EAAFRO only had funding left after its relocation to recruit two thirds of the specialists it ideally needed. Keen, *The East African Agriculture and Forestry Research Organisation: Its Origins and Organisation*, 3–6.

⁷³² *Ibid.*, 11.

⁷³³ Worthington, 'A Survey of Research and Scientific Services in East Africa, 1947-1956', 2.

scientific research in East Africa.⁷³⁴ With EAAFRO's research into agriculture and forestry being of benefit to the settler community in Kenya, however, the organisation was spared the full force of opposition, and this despite having the joint third highest recurrent expenditure of any of the East African research programmes in 1951.⁷³⁵ Hibbert alludes to opposition about increased science spending and stalling the building of the joint EAAFRO/EAVRO headquarters in Kenya coming in particular from three men: Brigadier W.E.H. Scupham, unofficial Member of the Kenya Legislative Council, railway committee member, and by 1953 first unofficial Speaker of the Tanganyika Legislative Council; Alfred Vincent, Member of the Development and Reconstruction Authority, prominent Nairobi businessman, Member of the Legislative Council, and a leader of Kenya's white settlers in the post-war period; and W.A.C. Bouwer, a Justice of the Peace, unofficial Member of the Legislative Council in 1948, and member of the Uasin Gishu District Production and Manpower Committee in 1951.⁷³⁶ Significantly, Hibbert does not cite Cavendish-Bentinck, the unofficial but effective leader of Kenya's settlers and the Member for Agriculture and Natural Resources, as amongst those who opposed research funding. Although Cavendish-Bentinck had been sceptical of Forest Department spending in the 1930s, he was also a founder of Timsales and so had a vested interest in furthering research in forest development.⁷³⁷ With such powerful support and association with agricultural development in EAAFRO that assisted settler farming, forestry may have been buffered from the lingering suspicion cast toward state forestry by some elements of the settlers.

⁷³⁴ J.G. Hibbert (Secretary of the Colonial Research Council, Colonial Office), Note of Conversation with Mr J.C. Mundy, Finance Member, East Africa Central Legislative Assembly, 15 June 1951, CO 927/124/2, TNA.

⁷³⁵ Ibid. The East African Inland Fisheries Research Organisation, EAAFRO, EAVRO, and East African Tsetse and Trypanosomiasis Research and Reclamation Organisation were highlighted by Hibbert and Mundy as "showing signs of paying dividends" and continued to receive funding. Less support was forthcoming for medical research, with the Filariasis Research Institute being singled out. The negative atmosphere surrounding scientific research was also strong enough to worry employees of EAAFRO about their own future prospects. Dr D. Rudd Jones, plant pathologist and one of the officers who worked on the cypress canker disease issue, threatened to resign in 1952 unless his position was put on a more secure footing, see J.G. Hibbert (Secretary of the Colonial Research Council, Colonial Office) to Robert Scott (Administrator, East African High Commission), 13 March 1952, CO 927/124/2, TNA. In regards to expenditure, 13 per cent of the East Africa High Commission's 1951 research budget of £662,400 was devoted to EAAFRO, the same as the Desert Locust Survey. The highest expenditure originated with tsetse fly and trypanosomiasis research, which accounted for 17 per cent of the budget, followed by meteorology at 15 per cent, health and medicine (9 per cent), fisheries (7 per cent), statistics (7 per cent), insecticides (6 per cent), EAVRO (5 per cent), industrial research (4 per cent), sociology (3 per cent), and the scientific secretary's office (1 per cent). Worthington, 'A Survey of Research and Scientific Services in East Africa, 1947-1956', 8.

⁷³⁶ J.G. Hibbert (Secretary of the Colonial Research Council, Colonial Office) to Robert Scott (Administrator, East African High Commission), 10 April 1952, CO 927/124/2, TNA. In this letter, marked 'private and personal', Hibbert provides surnames only: Bouwer, Fraser, Scupham, Vincent, and Killick. Scupham, Bouwer, and Vincent are relatively easy to identify, but Fraser and Killick are more elusive. Killick is possibly Alfred Frederick Wabon Killick, Acting Principal Registrar in 1951 and formerly of the King's African Rifles. *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 52, 64 (Nairobi, 1950), 1108; James Clagett Taylor, *The Political Development of Tanganyika* (Stanford University Press, 1963), 91. *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 53, 45 (Nairobi, 1951), 880; *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 50, 9 (Nairobi, 1948), 166. Bennett, *Kenya, a Political History*, 1:100; Gerald Horne, *Mau Mau in Harlem?* (Palgrave Macmillan, 2009), 34; Government Notice No. 674 *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 47, 33 (Nairobi, 1945), 330.

⁷³⁷ 'Transcript of Interview with George E. Lavin, Southern African Airways and East African Timbers, Conducted by Dr. William Beaver' (Oxford Development Records Project, 7 August 1980), 20, MSS. Afr. s.1768, Oxford Bodleian Library.

When the Specialist Committee on Forestry Research met in December 1950 to determine forestry's future research agenda, the issue of resources meant minor forest products - including already established products like honey as well as possibly lucrative medicinal products derived from forest plants - were excluded from the East African forestry research agenda.⁷³⁸ Only research of high priority to the development of the colonial state was deemed necessary, meaning the highest priority was understanding the complete ecology of the exotic forest plantations and the regeneration (both natural and artificial) of indigenous East African species.⁷³⁹ It was this committee that set the agenda for forestry research in East Africa until the end of colonial rule. As such, it established guidelines for the transmission of research notes between territories and EAAFRO and the creation of a forestry bureau to collate existing research knowledge.⁷⁴⁰ Seemingly trivial, this was a vitally important mechanism by which officers would collaborate and remain in the loop in regards to ongoing research, as well as ensuring that research was not unnecessarily duplicated. Moreover, this was a key first step in creating a true scientific forestry community within East Africa that went beyond problems and associated research only being shared when an officer was transferred, it was presented at one of the empire-wide forestry conferences, or, rarest of all, it was published in a forestry or other scientific journal. Certainly this was not anything like the mature epistemic communities of forestry that are commonplace today, but it was a beginning.

With EAAFRO becoming fully operational by 1951 and the setting of a joint research agenda by the Specialist Committee on Forestry Research, co-operation between EAAFRO and the Forest Department intensified. Without its own mycologist, the Forest Department relied on Dr Rudd Jones of EAAFRO. From 1950, Jones was working full time on continuing the research of Nattrass into *Monochaetia unicornis*, the fungus causing the canker that was blighting the department's plantations of cypress.⁷⁴¹ Ignorance of ongoing mycological research outside Kenya carried with it repercussions. Between 1927 and 1949 the department established approximately 45,000 acres of exotic softwood plantations, the vast majority of which were *Cupressus macrocarpa* and *Cupressus lusitanica* (cypress), which was by far the most planted species in that time period. Concurrent to this programme, canker disease broke out among the same species in California in 1928, where the

⁷³⁸ East African Agriculture and Forestry Research Organization (EAAFRO), 'Proceedings of the Specialist Committee on Forestry Research, 13-15 December 1950' (EAAFRO, 1950), 5, BN/Kenya/Misc, Oxford Bodleian Library. This committee was chaired by Dr B.A. Keen (Director, EAAFRO) and comprised Dr W.J. Eggeling (Conservator of Forests, Uganda), R.M. Graham (Acting Conservator of Forests, Kenya), L.W.T. Wigg (Acting Conservator of Forests, Tanganyika), Dr A.L. Griffith (Silviculturist, EAAFRO), H.H.C. Pudden (Silviculturist, Kenya), D. Davis (Working Plans Officer, Kenya), J.C.M. Gardner (Forest Entomologist, Kenya), R.A.C. Skipper (Utilisation Officer, Kenya), H.R. Herring (Working Plans Officer, Tanganyika), F. Hughes (Utilisation Officer, Uganda), I.R. Dale (Provincial Forest Officer, Uganda), H.C. Dawkins (Forest Ecologist, Uganda), C.H. Tack (Forest Engineer, Uganda), Dr D. Rudd Jones (Plant Pathologist, EAAFRO), C.G. Trapnell (Ecologist, EAAFRO), and Dr D.W. Duthie (Recorder, EAAFRO).

⁷³⁹ Ibid., 3a.

⁷⁴⁰ Ibid., 5; *East African Agriculture and Forestry Research Organization: Annual Report 1951* (East Africa High Commission, 1951), 18.

⁷⁴¹ H.H. Storey (Acting Director, EAAFRO) to Secretary for Agriculture and Natural Resources, 10 August 1950, VF/2/5, KNA. Note that *Monochaetia unicornis* was reclassified *Seiridium unicorne* in the 1970s. By the 1980s it was discovered that these were likely misidentifications, and the canker in cypress in East Africa was actually caused by *Leptotypha cupressi*. Graniti, 'Seiridium Cardinale and Other Cypress Cankers'.



Figure 3-3. A plantation of *Cupressus macrocarpa* established via the *shamba* system (background) and crops interplanted with *Pinus insignis* (foreground) at Kinangop, southern Aberdare Mountains, c.1952. Image copyright and reproduced with permission of Commonwealth Forestry Association. *Source*: H.M. Glover, 'Soil Conservation In Parts Of Africa And The Middle East: Part I (Continued)', *Empire Forestry Review* 33, no. 1 (1954): 39–44.

tree was indigenous, and New Zealand in 1933.⁷⁴² By 1939, some 11 years after first detection, canker of cypress had reached “major epidemic proportions” in California, where it rendered trees economically valueless.⁷⁴³ In 1944 Wimbush, Kenya’s part-time Silvicultural and Utilisation Officer, made the discovery of a disease that caused cypress planted in the Iveta Hills, 40 miles east of Nairobi, to die from the top down.⁷⁴⁴ It was Nattrass who then identified this as the same disease that was afflicting cypresses in California. The Forest Department was fortunate in being able to call on the assistance of Nattrass as it had no means to investigate the disease itself. His connections, experience, and expertise, all of which the Forest Department lacked, were no doubt essential in the identification of the disease and subsequent enquiries into preventing it.⁷⁴⁵ By 1950 canker had swept across Kenya and was being found in cypress plantations in all three East African territories.⁷⁴⁶

⁷⁴² Nattrass and Ciccarone, 'Monochaetia Canker of Cupressus in Kenya', 289.

⁷⁴³ Wagener, quoted in *ibid*.

⁷⁴⁴ Wimbush, 'Canker on Monterey Cypress in Kenya'.

⁷⁴⁵ Nattrass, who arrived in Kenya in 1938 after serving in the Cyprus agricultural department, had been a member of the British Mycological Society since 1925. *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 46, 40 (Nairobi, 1938), 1204; 'List of Members: Corrected to 30 June 1950', *Transactions of the British Mycological Society* 33, no. 3–4 (1950): 383–97, doi:10.1016/S0007-1536(50)80102-X.

⁷⁴⁶ Jones, 'Report on Priorities for Research in Forest Pathology and the State of Present Investigation', 28.

The Forest Department's response to cypress canker was to fell any infected tree and any tree that it considered particularly susceptible.⁷⁴⁷ Planting of several cypress species continued through the 1940s, with a record-high acreage planted in 1949. The Forest Department's report and counterpart EAAFRO report covering 1948-50 highlighted canker as being most serious in *Cupressus lusitanica* after a survey of plantations was complete, while the report for 1951-53 states that *Cupressus macrocarpa* was the most afflicted and *lusitanica* was relatively resistant.⁷⁴⁸ The apparently conflicting statements perhaps indicate the still nascent stage of knowledge of the disease and its extent, while statements in the 1951-53 report also show a lack of clarity over the precise identification of cypress species, with speculation presented over the hybrid nature of some plantations.⁷⁴⁹ Despite this, by the end of 1953 the seriousness of the disease seems to have been clear to the department: it ceased all planting of *Cupressus macrocarpa* and began thinning or clear-felling old plantations of the species.⁷⁵⁰ When this policy drew criticism in 1956 from a timber industry that saw it as heavy-handed and wasteful the department was forced to publically defend itself in the pages of the *Empire Forestry Review* and announce that it was moving to a selection-felling only policy.⁷⁵¹ The records of the department do not reveal the cost of the response to canker, but it surely must have been significant as cypress had been a plantation mainstay before 1950.

This mycological episode is illustrative of how Kenya forestry began to engage with and usefully employ the wider research community in the early 1950s, but also the mistakes that were made by ignoring this community for so long. Significantly, the *Monochaetia unicornis* canker was identified and a policy to address it formulated before the Forest Department was able to employ its own mycologist, I.A.S. Gibson, who arrived in February 1953. More was published across forestry and biology journals by Nattrass and Jones on the problem of cypress canker in a period of less than ten years than had been published on any other technical problem in the Forest Department's history up to 1945.⁷⁵² It was also with the arrival of Jones that EAAFRO became a member of the

⁷⁴⁷ Trees in the wetter, higher altitude forests east of the Rift Valley suffered the highest infection rates. Wimbush, 'Canker on Monterey Cypress in Kenya'; Kenya Forest Department, *Forest Department Report for the Years 1948, 1949 and 1950* (Nairobi Government Printer, 1950), 11.

⁷⁴⁸ *East African Agriculture and Forestry Research Organization: Annual Report 1949* (East Africa High Commission, 1949), 20-21; Kenya Forest Department, *Departmental Report 1948-1950*, 9.

⁷⁴⁹ Kenya Forest Department, *Report of the Forest Department for the Years, 1951, 1952, 1953* (Nairobi Government Printer, 1953), 18-19. The report also discussed the high resistance of *Cupressus benthami* and *Cupressus torulosa* (although it also admitted these were likely hybrids with *macrocarpa* as well), however these species were not planted further because of their higher susceptibility to the boring insect *Oemida gahani*.

⁷⁵⁰ *Ibid.*, 18.

⁷⁵¹ H.H.C. Pudden, 'Response to Statement on Cupressus Clear Felling', *Empire Forestry Review* 35, no. 1 (March 1956): 91.

⁷⁵² The publications on cypress canker were: D. Rudd Jones, 'Canker Disease of Cypresses Caused by *Monochaetia Unicornis*.', *Rep. E. Afr. Agric. For. Res. Organ.* 1949, 1950, 20-1; D. Rudd Jones, 'Studies on a Canker Disease of Cypresses in East Africa, Caused by *Monochaetia Unicornis* (Cooke & Ellis) Sacc: I. Observations On The Pathology, Spread And Possible Origins Of The Disease', *Annals of Applied Biology* 40, no. 2 (1 June 1953): 323-43; D. Rudd Jones, 'Studies on a Canker Disease of Cypresses in East Africa, Caused by *Monochaetia Unicornis* (Cooke & Ellis) Sacc: II. Variation in the Morphology and Physiology of the Pathogen', *Transactions of the British Mycological Society* 37, no. 3 (1 September 1954): 286-IN6; D. Rudd Jones, 'Studies on a Canker Disease of Cypresses in East Africa, Caused by *Monochaetia Unicornis* (Cooke & Ellis) Sacc: III. Resistance And Susceptibility Of Species Of *Cupressus* And Allied Genera', *Annals of Applied Biology* 41, no. 2 (1 June 1954): 325-35. The department's publications in the

British Mycological Society in 1949, a trend which continued with the appointment of Gibson bringing Forest Department representation in the society. In comparison, Kenya's agricultural department had held membership since 1923, when other members included representatives of forestry in Britain, the United States, and South Africa, to be joined by members from the Indian forest service and Sierra Leone Forest Department in 1927.⁷⁵³ Kenya forestry was not exceptional in its distance from international discourse on mycology, with the general malaise among the colonies toward research and particularly forestry research being a cause for lament by the president of the British Mycological Society in 1929.⁷⁵⁴

By 1960 the department had changed the focus of its mycological research. Its own mycologist, Gibson, operated from and worked closely with EAAFRO from 1954 onwards, while commitment to his research was illustrated by the attachment of two learner foresters to his division as mycological assistants. This trend was mirrored in entomological research, with an early example of Africans being recruited into a technical field. In 1954, 12 Africans joined the department's entomological team as "observers"; in fact, they were responsible for carrying out of the majority of the vital fieldwork involved in identifying, surveying, and controlling insect pests.⁷⁵⁵ Gibson was thus enabled to engage more closely with shared problems across the region, visiting both Uganda and Tanganyika by 1958.⁷⁵⁶ In a reflection of the attitude of proper dissemination of research that was relatively novel to the Kenya Forest Department, Gibson published a slim volume on pathology within Kenya's plantations in 1957 that was followed by a much expanded second volume in 1962 that covered all known tree diseases and fungi in Kenya.⁷⁵⁷ By 1960 this was joined by the unfortunately titled publication *Pest Digest*. Carrying articles on the topics of pathology and

Empire Forestry Journal are indicative of its contribution to forestry knowledge. In the 1920s the department published five articles in this journal, in the 1930s only one, and a further three between 1940 and 1945. Of these the only topic that was addressed more than once was pencil cedar, on which three articles were published, although only one of these (by Wimbush, in 1937) was technical in nature. Indeed, Wimbush's article was one of only two truly technical papers the department published in the interwar years, a situation that reflected the department's deficiency in research staff and funding. Additionally, the Oxford Bodleian catalogue records the publication of one technical pamphlet in 1928 (on seed propagation; now apparently lost), and a further two in the 1940s (on cypress plantation management and technical data on *Podocarpus*). The department's publications were: Gardner, 'Re-Afforestation in Kenya Colony by Means of Shifting Cultivation'; R. S. Troup, 'Forestry in Kenya Colony', *Empire Forestry Journal* 2, no. 1 (1923): 46–60; N. V. Brasnett, 'Fires in the Pencil Cedar Forests of Kenya Colony', *Empire Forestry Journal* 3, no. 1 (1924): 74–77; R. St. Barbe Baker, 'The Men of the Trees (or African Forest Scouts)', *Empire Forestry Journal* 3, no. 1 (1924): 87–92; H. M. Gardner, 'East African Pencil Cedar', *Empire Forestry Journal* 5, no. 1 (1926): 39–53; S. H. Wimbush, 'Natural Succession in the Pencil Cedar Forest of Kenya Colony', *Empire Forestry Journal*, 1937, 49–53; H. M. Gardner, 'Kenya Forests and the War', *Empire Forestry Journal* 21, no. 1 (1 July 1942): 45–47; Wimbush, 'Canker on Monterey Cypress in Kenya'; Graham, 'Forestry in Kenya'; A.C. Sprunt, *Raising of Young Trees from Seeds*, Kenya Forest Department Pamphlets (Nairobi: Government Printer, 1928); Forest Department, 'The Management of Cypress Plantations in Kenya'; J.B. Smart, *Volume Tables for Podocarpus Gracilior*, Kenya Forest Department Pamphlets, 1945.

⁷⁵³ 'List of Members'.

⁷⁵⁴ E. J. Butler, 'Presidential Address: The Development of Economic Mycology in the Empire Overseas', *Transactions of the British Mycological Society* 14, no. 1–2 (11 March 1929): 1–18.

⁷⁵⁵ Kenya Forest Department, *Report of the Forest Department for the Period January 1st 1954 - June 20th 1955* (Nairobi Government Printer, 1955), 18.

⁷⁵⁶ *Ibid.*, 13, 20.

⁷⁵⁷ I.A.S. Gibson, *A Notebook on Pathology in Kenya Forest Plantations*, 2nd ed. (Colony and Protectorate of Kenya, 1962).

entomology by experts working within EAAFRO and Kenya's and Uganda's forest departments, this quarterly news sheet was distributed among East Africa's forest departments and was made available to the public; although what appetite they had for it is unclear.⁷⁵⁸

Gibson's research was predominantly concerned with problems associated with the pine plantations that dominated the planting plan after 1952⁷⁵⁹. The Forest Department announced it would diversify its plantings of exotic species in the late 1940s, with cypress planting planned to account for no more than 50 per cent of all exotic plantations.⁷⁶⁰ The cypress planting policy had been W.A. Robertson's chief criticism of forestry in Kenya. Robertson, the Forest Adviser to the Secretary of State for the Colonies, considered the department was "putting too many eggs in one basket," a cliché that was borne out by the spread of canker among the cypress plantations.⁷⁶¹ This accelerated the new mixed planting policy and by 1952 63 per cent of the exotic softwoods being planted in the colony were pines, with the percentage increasing to 77 by 1960.⁷⁶²

The shift to a mixed-planting policy was a milestone for the Forest Department. The spread of canker disease among the plantations of cypress writ large the dangers of following a limited policy. Equally, the disease taught the department that the planting of pines must run parallel with a research programme to safeguard those trees from disease. Gibson's research, then, was focussed on the problem of *Armillaria* root rot that was afflicting 30 per cent of the new pine plantations by 1959. The solution was to remove the stumps of previously felled trees, from which the disease was spreading, from the site of the new plantations.⁷⁶³ Similarly, the very establishment of pines in the department's plantations was dependent on its new commitment to science and co-operation. The initial post-war period was one of continued experimentation with the growing of pines, and the department had little success in its nurseries prior to the early 1950s.⁷⁶⁴ Partly, success was dependent on simple pest control. Pine seedlings were apparently particularly susceptible to attack by mice; a problem overcome by better protection.⁷⁶⁵ The department's best laid plans for the

⁷⁵⁸ Kenya Forest Department, *Annual Report of the Forest Department, 1960* (Nairobi Government Printer, 1960), 20.

⁷⁵⁹ Note that the discussion of pines here is limited to those tree species within the genus *Pinus*, which is in accordance with the manner the Forest Department discussed pines. Some species within the genus *Podocarpus* and *Afrocarpus* (family Podocarpaceae) have common names that incorporate the word 'pine' (for example, *Afrocarpus falcatus*, which may be conspecific with *Afrocarpus gracilior* – podo – has a common name of African fern pine) but are not true pines and, as far as I am aware, were not referred to as pines by the Kenya Forest Department. All of the pines, species within Podocarpaceae, and *Cupressus*, mentioned within this thesis do of course all belong to the order Pinales, commonly referred to as the conifers.

⁷⁶⁰ Kenya Forest Department, *Departmental Report 1945-1947*, 28.

⁷⁶¹ *Ibid.*, 4.

⁷⁶² Kenya Forest Department, *Annual Report 1960*, 7.

⁷⁶³ I.A.S. Gibson, 'Armillaria Root Rot in Kenya Pine Plantations', *Empire Forestry Review* 39, no. 1 (March 1960): 94–95.

⁷⁶⁴ A Rule, 'East African Timber Production', *Empire Forestry Journal* 24, no. 1 (1945): 51.

⁷⁶⁵ Kenya Forest Department, *Departmental Report 1951-1953*, 20.

propagation of what was to become the most economically important timber grown in Kenya's plantations were initially thwarted by more than mere mice, however.

Further pests were encountered when the larvae of the pine emperor moth attacked pine plantations in the late 1940s. In this entomological case the department was fully informed on the matter, drawing on the experience of South African foresters who had encountered and dealt with the moth by deploying pigs trained to root out the larvae from the ground before it hatched.⁷⁶⁶ However, as with the growing of cypress it was to be mycological problems that had the largest effect on the propagation of pine. With its focus on pine over cypress, the department put its efforts into growing *Pinus radiata* (like *Cupressus macrocarpa*, a Californian native), which proved to grow rapidly and produce high-quality timber. Showing that the department was now aware and responsive to lessons from other forest departments within the commonwealth, and with memories of the failure of cypress, planting of *radiata* ceased between 1955 and 1957 on the advice of South African and Rhodesian foresters who had little success combatting the fungal infection *Diplodia pinea* that was blighting their plantations.⁷⁶⁷ Subsequently, the Mexican pine *Pinus patula* became the department's main plantation choice.

Compared to cypress, the propagation success rate of *P. radiata* and *P. patula* in the department's more than 80 nurseries was low, partly because of the industrious efforts of rodents but more so the soils being used.⁷⁶⁸ The essence of the issue was a mycological one, as both *P. radiata* and *P. patula* have mycorrhizal root systems. That is, they have a symbiotic and mutualistic relationship with fungi that envelop their roots, with the fungi's presence in the soil being essential for successful growth. Research on mycorrhizal fungi within forestry began in the 1920s, with work by S.L. Kessel on their role in pine propagation in Australia appearing in the *Empire Forestry Journal*.⁷⁶⁹ The true pioneer of the field was Mabel Rayner, whose doctoral thesis and subsequent paper of 1915 was on mycorrhizas. She was subsequently employed by the Forestry Commission (UK) to investigate the fungal relationships of forests. Her publications, including a key 1930 article in the *Empire Forestry Journal*, indicate knowledge of her work and the growing awareness of the importance of mycorrhizas within forestry across the empire.⁷⁷⁰ Most significantly, in what appears

⁷⁶⁶ Kenya Forest Department, *Departmental Report 1945-1947*, 12-14.

⁷⁶⁷ Kenya Forest Department, *Report of the Forest Department for the Period 1st July, 1955 to 31st December, 1957* (Nairobi Government Printer, 1957), 16; R. M. Nattrass, 'Host Lists of Kenya Fungi and Bacteria', *Mycological Papers* 81, no. 1 (1961): 46. This common infection of pine trees is commonly known as *Diplodia* tip blight or *Sphaeropsis* blight. The department does not report that this infection affected its pines, making the decision to cease planting an entirely proactive one informed by cases in South Africa and Rhodesia.

⁷⁶⁸ Kenya Forest Department, *Departmental Report 1951-1953*, 20.

⁷⁶⁹ S. L. Kessel, 'Soil Organisms: The Dependence of Certain Pine Species on a Biological Soil Factor', *Empire Forestry Journal* 6, no. 1 (1 January 1927): 70-74.

⁷⁷⁰ M. Cheveley Rayner, 'Obligate Symbiosis in *Calluna Vulgaris*', *Annals of Botany* 29, no. 113 (1915): 97-133; D. W. Young, 'The Importance of the Mycorrhizal Habit: An Appreciation of Dr. Rayner's Work', *Empire Forestry Review* 28, no. 2 (1 June 1949): 162-65; M. C. Rayner, 'Mycorrhiza in Relation to Tree Growth', *Empire Forestry Journal* 9, no. 2 (1 December 1930): 182-89. Rayner represents the rare female voice in early twentieth century forestry. A short biography is provided in: Marilyn Ogilvie and Joy Harvey, *The Biographical Dictionary of Women in Science: Pioneering Lives From Ancient Times to the Mid-20th Century* (Routledge, 2003), 1081.

to have been a novel approach, in 1938 she issued a questionnaire to 47 Forest Departments and research institutions across the empire regarding their research and experience of growing pines. Thirteen questionnaires were not returned, but the rest were. Significantly, Forest Departments in Northern Rhodesia, Tanganyika, and Nyasaland all gave long responses detailing their own research programmes and their successes, or not, with inoculating soil with mycorrhizas, the merit of which Rayner applauded. Tellingly, Kenya is not mentioned as providing details of its research or even responding to the questionnaire.⁷⁷¹

With its monocular focus on cypress, during the inter-war period the Kenya Forest Department therefore remained detached from and possibly even ignorant of the investigations concerning the growing of pines that were occurring across the empire and even within eastern Africa. When it began to take seriously the establishment of its own pine plantations in the early 1950s it was comparatively unprepared and uninformed about the problems it would face. Fortunately for the department, by this point it could turn to EAAFRO for assistance, calling on horticulturist W.B. May in 1951 for advice on the soils it was using in its nurseries.⁷⁷² Certainly May and EAAFRO's silviculturist were fully aware of the deficiency in nursery and mycorrhiza research, describing the nurseries across East Africa as extremely mixed in their quality and "somewhat crude compared with standards elsewhere."⁷⁷³ As such, they experimented with various "mycorrhizal brews" through the 1950s that could be distributed among nurseries.⁷⁷⁴ EAAFRO further disseminated its findings through courses on nursery practice that were open to nursery officers from across East Africa, a practice considered invaluable by foresters within the department.⁷⁷⁵ By the late 1950s the Forest Department's own research on soil inoculation, conducted by its mycologist I.A.S. Gibson, was extensive enough to warrant brief mention in its annual reports.⁷⁷⁶ Progress was gradually being made. A great deal of political impetus was added to this research when the Supplementary Forest Development Scheme was enacted in 1956 in which increased plantation establishment would play an important role in the 'reabsorption' of Kikuyu displaced by Mau Mau into colonial society.⁷⁷⁷

⁷⁷¹ M. C. Rayner, 'The Use of Soil or Humus Inocula in Nurseries and Plantations', *Empire Forestry Journal* 17, no. 2 (1 December 1938): 236–43. Rayner also highlighted South Africa's response, which was that inoculation of soil was found unnecessary as the soils within which they had established pines already contained suitable mycorrhizas.

⁷⁷² Kenya Forest Department, *Departmental Report 1951-1953*, 20; *East African Agriculture and Forestry Research Organization: Annual Report 1951*, 18.

⁷⁷³ *East African Agriculture and Forestry Research Organization: Annual Report 1951*, 47.

⁷⁷⁴ The 'mycorrhizal brew' took the form of a nutrient-rich compost impregnated with the correct mycorrhiza for the growing of *P. radiata* and *P. patula*, to which the latter was less responsive. Research was also conducted into all aspects of plantings, from depth of planting, through the correct weather conditions, to methods of transportation of the propagated seedlings. *Ibid.*, 48.; 'East African Agriculture and Forestry Research Organization: Annual Report 1954' (East Africa High Commission, 31 December 1954), 67

⁷⁷⁵ *East African Agriculture and Forestry Research Organization: Annual Report 1952* (East Africa High Commission, 1952), 56; Personal Communication with Sydney A. Draper, 30 January 2015. 17 nursery officers from across the East African territories (including Zanzibar) attended the first such course in 1952.

⁷⁷⁶ Kenya Forest Department, *Departmental Report 1955-1957*, 17–18, 20.

⁷⁷⁷ See section 3.4.3 for full discussion of the Supplementary Forest Development Scheme.

Despite the joint efforts of Gibson and EAAFRO, propagation rates of *P. patula* continued to be poor. This factor combined with the consideration that *P. patula* was a markedly inferior timber to *P. radiata* and the dangers of relying once again on a single main softwood species to urge the department to continue its search for better softwood plantation trees. This was a search that the department's silviculturist, W.G. Dyson, considered the department to have an "urgent need" for even as late as 1960.⁷⁷⁸ The trialling of exotic species accelerated throughout the 1950s, with 24 new species planted just between 1955 and 1957.⁷⁷⁹ Where species trials had hitherto been haphazard and based more on "individual enterprise" with incomplete records, the arrival of scientific involvement and funding in the 1950s allowed a thorough scientific approach to be taken with this search.⁷⁸⁰ After Kenya won its independence from British rule this search continued and became more centralised. In what was an attempt to keep research on a secure footing within an atmosphere of political uncertainty across Kenya, Uganda, and Tanganyika, EAAFRO took over department-level tree breeding programmes in 1963.⁷⁸¹

The concerted and methodical approach the department was taking by the end of 1950s was further illustrated when Dyson travelled to the United Nations Food and Agricultural Organisation's (FAO) Latin American Conifer Seminar and Study Tour (Mexico, British Honduras, and Cuba) in late 1960. In doing so, he had the specific objective of finding more suitable pine species for Kenya's plantations, and as such he returned with the seeds of 19 candidates.⁷⁸² This, then, was a forest department that was now listening to, co-operating with, and following the direction of scientific experts in East Africa and beyond. It was a department that had learnt to no longer allow its plans and policies to be undermined by mice, moths, and fungi. Just as the department had reacted to opposition from settlers and the government in its early years and then increasingly taken the initiative to defend its work by the 1930s, through the 1950s the department, rather belatedly,

⁷⁷⁸ Kenya Forest Department, *Annual Report 1960*, 14.

⁷⁷⁹ With regard to pines, by 1960 20 pine species were under trial, compared to 8 a decade earlier. Kenya Forest Department, *Departmental Report 1951-1953*, 19; Kenya Forest Department, *Annual Report 1960*, 14.

⁷⁸⁰ East African Agriculture and Forestry Research Organisation (EAAFRO), 'Report of Study Group C: Reproduction and Regeneration', in *Proceedings of the Specialist Committee on Forestry Research* (Nairobi: East African Agriculture and Forestry Research Organisation, 1950), 17.

⁷⁸¹ EAAFRO continued its role in agricultural and forestry after the independence from British rule of the three East African colonies and continued to support each of those countries. Kenya Forest Department, *Annual Report of the Forest Department, 1961* (Nairobi Government Printer, 1961), 7; Kenya Forest Department, *Annual Report of the Forest Department, 1963* (Nairobi Government Printer, 1963), 5; T. Jones and O. Starnes, 'The East African Agriculture and Forestry Research Organization', ed. M. G. C. McDonald Dow, vol. 3 (The Abijan Conference 1968 on Agricultural Research Priorities for Economic Development in Africa, Abidjan: US National Academy of Sciences, FAO, Republic of the Ivory Coast, 1968), 399-420.

⁷⁸² Kenya Forest Department, *Annual Report 1960*, 14. Dyson does not state the 19 species and varieties of seeds he returned with, although he does indicate that *Pinus pseudo-strobus*, *Pinus oocarpa*, *Pinus ayachuhuite* and *Pinus montezumae* were likely to be the most successful candidates. By this point in 1960 the department's trials of various *Pinus* since 1952 had revealed two candidates as being 'good': *Pinus montezumae* and *Pinus pinaster*. 'Promising' trees (grew well if slowly) were: *Pinus canariensis*, *Pinus Khasya*, *Pinus leiophylla*, *Pinus longifolia*, and *Pinus taeda*. Trees classified as 'useless' (with poor growth and poor form) were: *Pinus halepensis*, *Pinus halepensis* var *brutia*, *Pinus clausa*, *Pinus excelsa*, *Pinus ponderosa*, *Pinus palustris*, *Pinus pinea*, *Pinus englemannii*, *Pinus khasya* (from Nyasaland), *Pinus echinata*, *Pinus massoniana*, *Pinus vrigiana*, and *Pinus ayachuhuite* var *brachytera*.

responded to the need for science and, as will be seen, began to use this in defence against its old opponents of forestry who had also taken up science as a weapon.

3.2.3 *Redefining boundaries and invoking science*

The greatly increased involvement of the Forest Department in scientific research within Kenya and beyond its borders illuminated the continued clashes the department experienced in its dealings with the white settler community. This section will show how science became a tool wielded by both that community and the department to support their respective arguments within this conflict. This becomes apparent in the department's preparations for and conclusions drawn from the inter-African conference on forestry held in Abidjan, Ivory Coast, in December 1951. Run by the Commission for Technical Co-operation in Africa South of the Sahara (CCTA), the conference brought together foresters from French, Belgian, Portuguese, and British territories as well as South Africa and Rhodesia.⁷⁸³ While the level of co-operation that the CCTA achieved was novel between imperial powers that largely resisted the exchange of knowledge prior to the Second World War, its attempt at status quo preservation was a failure and its success in fostering international collaboration on forestry matters was rather limited.⁷⁸⁴

Kenya's interim conservators, James Rammell and Reginald Graham, initially had no plans to send a representative to Abidjan. This changed with the transfer of Ralph Ronald Waterer from Cyprus to Kenya as Conservator of Forests in 1951. Waterer espoused the enthusiasm and optimism that marked the immediate post-war years, strongly believing that Kenya's deficiencies in research (particularly pertaining to protection forests) should be addressed by any and all means. As such, his request to send a representative to Abidjan was granted.⁷⁸⁵ Reiterating his point to a perhaps sceptical Cavendish-Bentinck (Member of the Legislative Council for Agriculture and Natural Resources) after the conference had concluded, Waterer argued:

Kenya has been far too complacent in the past in the belief that other territories cannot teach us much. This is quite wrong and has tended to keep our forest staff at home which is not in the interests of Kenya or of the staff.⁷⁸⁶

⁷⁸³ The CCTA itself was essentially a manifestation of the post-war decline of the old empires, which sought co-operation in matters of science and development in order to assert influence across Africa against the threat of interference from the rising international power of America and the United Nations. Isebill V. Gruhn, 'The Commission for Technical Co-Operation in Africa, 1950-65', *The Journal of Modern African Studies* 9, no. 3 (1971): 459-62.

⁷⁸⁴ Frank K. Teng-Zeng, 'Science, Technology and Institutional Co-Operation in Africa: From Pre-Colonial to Colonial Science', *Eastern Africa Social Science Research Review* 22, no. 1 (2006): 17-32; Kent, *The Internationalization of Colonialism: Britain, France and Black Africa 1939-1956*, 284-85. See Teng-Zeng for a summary of pre-Second World War episodes of scientific and technical co-operation between the great powers that were significantly more limited and without institutionalisation in comparison to post-war development.

⁷⁸⁵ R.R. Waterer (Conservator of Forests) to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 2 June 1951, VF/11/1, KNA.

⁷⁸⁶ R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 12 January 1952, VF/11/1, KNA.



Figure 3-4. Hedley Pudden (centre), Kenya Forest Department Silviculturist examines milled mountain ash with O.L. Tobing of East Sumatra and M. Poudou of France while on a forestry tour of Australia with foresters from twenty other countries. Copyright, National Library of Australia. *Source:* Mary Coles, 'Forest Men Are "Gumnuts" to Their Drivers', *Australian Women's Weekly* (1933 - 1982), 22 October 1952.

The department's new silviculturist, Hedley Pudden (Figure 3-4), a conservator formerly of Burma, was duly sent to represent Kenya at Abidjan. His conclusions, as well as what he was not permitted to officially say, reveal the grievances shared by foresters across territories and the particular constraints forestry was facing within Kenya in the early 1950s. The conference resolved that each territory must have its highest administrative level of government publish a forest policy that would legally secure the forest estate from alienation and allow forestry to pursue its twin goals of maintaining protective and productive forests. Like Kenya, several French and Belgian delegates complained of their lack of success in producing an officially accepted forest policy. On the matter of securing the forest estate so that it could not be alienated, Pudden noted that "much emphasis was given to this, there were no two opinions and the difficulty of convincing those other than forestry personnel of the difficulties of carrying out long term silviculture without adequate security and protection was repeatedly stated."⁷⁸⁷ Kenya's struggles over the previous half century to secure its own forests were, then, far from unique. However, the official report on forestry in Kenya that Pudden presented in Abidjan contained no statement on this. Instead, it stated that the department's forest areas were "effectively protected" and that the main danger was physical, that of fire, not political.⁷⁸⁸ By contrast, the draft of this report, tellingly preserved by the department,

⁷⁸⁷ 'Report from the Colony and Protectorate of Kenya' (Inter African Conference of Forestry, Abidjan, Commission for Technical Co-operation in Africa South of the Sahara, 19 December 1951), VF/11/1, KNA.

⁷⁸⁸ *Ibid.*

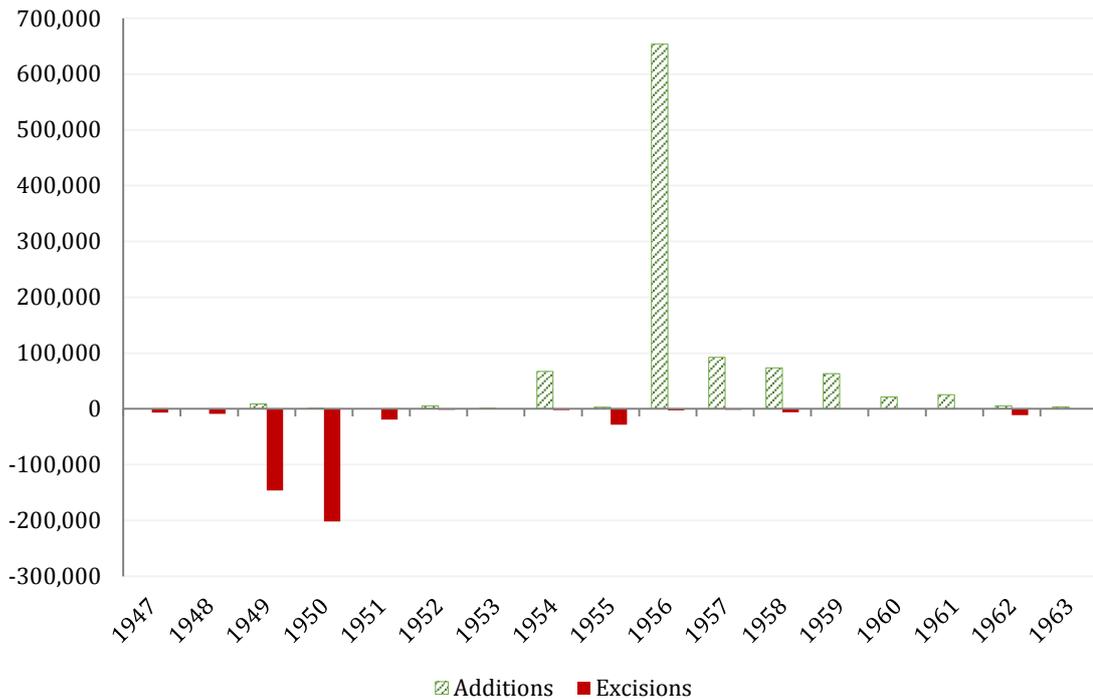


Figure 3-5. Annual additions and excisions (in acres) from Crown forest (excludes forest areas under African administrative control) between 1947 and 1963. *Source:* Forest Department annual reports, 1945-1963.

presented a picture of the disharmony within Kenya over the issue of forest protection. The draft argued:

Owing to the absence of any written statement of Forest Policy and the doubt existing as to the form of future forest administration, it is extremely difficult to defend all classes of forests against alienation or damage.⁷⁸⁹

The draft maintained that between 1946 and late 1951 the forest area under departmental control had been reduced by 11.9 per cent, which the department considered an attack on its authority. This was not pure hyperbole, with the 373,416 acres this represented being the largest combined excision from government forest areas through the entire colonial period, with approximately 200,000 acres being excised in 1950 alone (Figure 3-5).⁷⁹⁰ The period from 1947 to 1954 was one of unparalleled reassessment of the extent of government forest areas.

By 1955 this trend had dramatically reversed, with each year featuring modest increases in Forest Department-controlled land or, as in the case of 1956, extremely large accumulations of land as the department gained control of forests in previously ignored northern territories of the colony.

⁷⁸⁹ 'Report from the Colony and Protectorate of Kenya [Draft]' (Inter African Conference of Forestry, Abidjan, Commission for Technical Co-operation in Africa South of the Sahara, 19 December 1951), VF/11/1, KNA.

⁷⁹⁰ Kenya Forest Department, *Departmental Report 1948-1950*; Kenya Forest Department, *Departmental Report 1951-1953*. The percentage given in the draft Abidjan report differs very slightly (0.4 per cent) from that calculated from the department's tri-annual and annual reports. As the figures provided by the department and also presented in the notifications of additions and excisions from forest areas in the government gazette were only ever approximations (with some areas being added to or excised before a survey was even begun), all figures that refer to the area of land under Forest Department control should be considered estimates only.

It was the Forest Boundary Commission, and the interplay of scientific arguments, that caused both the excisions and the abrupt change in policy.

Appointed by Cavendish-Bentinck in March 1946, the Forest Boundary Commission's (FBC) terms of reference were to investigate the boundaries of existing forest areas and make recommendations for their extension or reduction, and advise on the creation of entirely new forest areas. The accompanying notes to these terms heavily indicate the commission's main role was one of reinforcing state control over forests for "both productive and protective" reasons.⁷⁹¹ This was also the Forest Department's understanding of the purpose of the commission, as it estimated that a mere 64,000 acres would be excised, far below the approximate 400,000 acres that would be removed over the following decade.⁷⁹² The creation of the FBC held the promise of finally beginning an aspect of the extension of forest control that had been laid down in the 1911 Forest Ordinance but never enacted in practice. This was the creation of a 'demarcated forest', a term used in the 1911 ordinance to refer to a forest area with boundaries approved by a body of four forest commissioners and which could only be removed from the forest estate with the approval of the governor and at least half of the forest commissioners.⁷⁹³ By contrast, the legal definition of a state or Crown forest was that of 'forest area', which could be excised and sold off with the sole approval of the governor.⁷⁹⁴ A higher level of protection was thus afforded to demarcated forests as they were insulated from the whims of the governor. This theoretical protection was strengthened further by the Forest Ordinance, 1941, which mandated that alteration to the boundaries of a demarcated forest could only occur with the approval of the Legislative Council.⁷⁹⁵ By allowing boundaries to be scrutinized and firmly established on the ground, the FBC was a first step toward the creation of demarcated forests. This goal was, in fact, never achieved during the colonial period, as no forest area was legally converted to a demarcated forest. The department's optimism toward the FBC was quickly replaced with alarm. As the official history of forestry in Kenya rather diplomatically put it, the FBC made a series of decisions that were "not always palatable" to the Forest Department.⁷⁹⁶

The membership of the FBC was a key reason why it made decisions that were so disagreeable to the Forest Department. The committee was an expression of white settler and colonial government opinion, although these opinions were by no means in agreement. The African and

⁷⁹¹ 'Government Notice No. 262 (13 March 1946)', *The Official Gazette of the Colony and Protectorate of Kenya* 48, no. 14 (19 March 1946): 137.

⁷⁹² Kenya Forest Department, *Departmental Report 1945-1947*, 8.

⁷⁹³ The forest commissioners referred to here should not be confused with the concurrent attempt to establish a forest commission in Kenya.

⁷⁹⁴ *An Ordinance to Provide for the Better Protection of Forests and Trees on Crown Land, No. 3 of 1911*, 1911, 2-3. The Forest Department frequently referred to 'demarcated forests' in its reports and correspondence, however these were, confusingly, not legally recognised demarcated forests but forest areas with boundaries that were physically demarcated (that is, marked on the ground with a post, tree, ditch, road, or fence).

⁷⁹⁵ 'Government Notice No. 262 (13 March 1946)'.

⁷⁹⁶ Logie and Dyson, *Forestry in Kenya*, 7.

Asian population went entirely unrepresented on the FCB. Indeed, when the FBC was accepting appeals regarding excision of land between 1948 and 1951 a directive was issued by the Chief Native Commissioner to his officers specifically stating that “the Forest Boundary Commission was not constituted for the purpose of considering any claims of right which were decided by the Carter Land Commission report.”⁷⁹⁷ Clearly the commissioner was anxious to not dredge up African complaints at what was, of course, a time of increased disquiet within the native reserves. Where Africans did submit claims district commissioners were to vet these before forwarding them to the FBC with comments. Claims of right, the directive repeated, “should not be entertained” as the commission was only concerned with releasing land from Forest Department control that could be better utilised in some other manner.⁷⁹⁸ Concurrent to this, and beyond the remit of the FBC, was an extension of forests under African District Council (ADC) control. This is not to say that land was excised from state forest and amended to ADC forests (legally referred to as Native Forest Reserves). Rather, this was an extension of the forestry philosophy into the African administrative structure; the proceeds from the exploitation of ADC forests may have accrued to the council itself, but the management practices of those forests were very much under the direction of the Forest Department. ADC forests more than doubled in extent in the post-war period, from 420,480 acres in 1947 to 918,656 acres in 1962, and the department maintained it could hardly keep up with African demand for more land to be reserved as ADC forests. This was a result, it argued, of “enlightened opinion” regarding afforestation and its value in water preservation spreading through African councils that had often previously been hostile to the forestry agenda.⁷⁹⁹ As Otieno has shown, realisation of the financial benefits of forest reservation to ADCs was also a key factor, which could also be exploited as a socially divisive measure by African elites.⁸⁰⁰

The omission of any representative of Kenya’s Asian community on the FBC was also a key signifier of the racial and agricultural bias that underlay the committee’s actions. The point is further emphasised by the presence of Yacoob Deen on the Forest Advisory Committee but not on the FBC. Deen was a sawmill owner and appears to have been the most prominent Asian to conduct business with the Forest Department. Certainly, he was considered engaged in both politics and the business community to a sufficient extent to warrant his standing on the Forest Advisory Committee, which was convened after the Second World War to advise the government on forestry matters, but not on boundary issues. The notion of a man such as Deen on the FBC was probably doubly untenable as Deen’s status as a sawmiller suggests he would have been sympathetic to extensions of the forest estate.⁸⁰¹ In fact, there was no representation of the timber industry on the

⁷⁹⁷ Provincial Commissioner (Rift Valley) to Districts Commissioners of Rift Valley, 29 June 1948, DO/ER/2/10/2, KNA. Notably, 22,353 acres were excised from state forest in the 10 years after the Land Commission report was published in 1934, however 583,017 acres were added to the forest estate. Annual Reports of the Forest Department, 1934-1944.

⁷⁹⁸ Ibid.

⁷⁹⁹ Kenya Forest Department, *Departmental Report 1954-1955*, 5-6.

⁸⁰⁰ Otieno, ‘Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s’.

⁸⁰¹ Kenya Forest Department, *Departmental Report 1951-1953*, 1; Kenya Forest Department, *Departmental Report 1954-1955*, 2; Robert G. Gregory, *Quest for Equality: Asian Politics in East Africa, 1900-1967* (Orient Blackswan,

FBC whereas members from the settler farming community and the Agricultural Department were both present.

Of the seven members of the FBC in 1951, three can be classified as broadly supporting the extension of the forest estate.⁸⁰² These were a representative of the Forest Department, a hydrologist of the Public Works Department (Major F. Grundy), and Rebecca Fane, who also sat on the council of the Arbor Society. Hydrologists of the Public Works Department were on record as supporting afforestation and opposing deforestation in the interests of conserving water supplies, so it seems likely that Grundy took this line.⁸⁰³ The presence of Fane on the committee is interesting in and of itself, as it highlights the rarity of the female voice within forestry matters in Kenya. Along with E. Grant, Fane was one of two women who sat on the Kenya Arbor Society's council (out of a total of 12 councillors) in the late 1940s. Fane also acted as the society's general secretary, while the Lady Muriel Jex-Blake one of the society's four vice-presidents. Women within Kenya's white settler community clearly sought engagement with the forestry debate yet could only do so through the Arbor Society. The 1946 annual report of the society states that Fane secured her position on the FBC primarily to pursue an increase in the area of land included within forest reserves, indicating her allegiance to the Forest Department in this matter.⁸⁰⁴

H.R. Montgomery sat as the chair of the FBC from 1951, replacing Sir Guy Pilling who had chaired since 1946. Both had long careers in the colonial service, with Pilling serving as governor of St Helena, and Montgomery rising from the position of district officer in Nyanza to a position of provincial commissioner. There is no indication that either held strong convictions towards forestry matters. Another former district officer that sat on the FBC was R.O. Hennings. He would go on to become secretary to the Legislative Council Member for Agriculture and Natural Resources in 1952 and wrote extensively on African agriculture, particularly in relation to irrigation. Further agricultural knowledge was brought to the committee by Captain G.J.L. Burton, who worked as a

1993), 85. According to Gregory, Yacoob Deen was one of the few Asians within Kenya to support Mau Mau fighters, supplying them food, clothing, and medicine from the cover of his sawmill. For this, Deen apparently fled to India by the late 1950s. If an indication of an incendiary political character, rather than just pragmatism, this could be added to the reasons why Deen was not a member of the FBC.

⁸⁰² 'Government Notice No. 823 (6 July 1951)', *The Official Gazette of the Colony and Protectorate of Kenya* 53, no. 35 (17 July 1951): 686. The composition of the FBC between 1946 and 1951 and after 1951 is less clear. Prior to 1951 the chair of the commission was Sir Guy Pilling, a previous governor of St Helena and Zanzibar, and holder of no obviously strong opinion on forestry matters. Fane sat on the committee from its creation in 1946 (Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1946*, 3.) The official gazette does not report on any further changes in committee members during the 1950s, nor does the Forest Department. It is likely that if changes did occur they followed the same general pattern as laid down in 1946: a chairman drawn from the colonial service, representatives of "unofficial opinion" (excluding Africans and Asians), a Forest Department representative, an agricultural department representative, and an expert on hydrology (Kenya Forest Department, *Departmental Report 1945-1947*, 8.)

⁸⁰³ G Starman and H.G. Michael, 'Correspondence in Response to "Forests and Water Supplies in East Africa"', *Empire Forestry Review* 29, no. 1 (1950): 60-61.

⁸⁰⁴ Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1946*, 3; Mrs R. Fane (General Secretary, Kenya Arbor Society) to Chief Secretary (Kenya Colony), 22 February 1944. Muriel Jex-Blake had clear botanical interests, publishing a short volume on Kenya plants in 1948: Muriel Jex Blake, *Some Wild Flowers of Kenya* (Nairobi: Highway Press, 1948).

plant breeder for the Agricultural Department in the 1920s and 1930s. By 1941 Burton had his own farm in Rongai of Nakura District (Rift Valley Province), and by 1950 his presence on the European Agricultural Settlement Board confirmed his commitment to white settlement in Kenya.⁸⁰⁵ Perhaps ambivalent toward the extent of Crown forest, yet he may have benefitted personally from sitting on the FBC. In 1951 he was granted 178 acres of land in Naru Moro, North Nyeri District (Central Province) and appears to have been resident there through the 1950s.⁸⁰⁶ Significantly, Naru Moro was in proximity to Nyeri and Mount Kenya forest reserves, both of which suffered excisions in 1949 and 1950.⁸⁰⁷ If Burton did have sympathy toward increasing alienation of forest in areas of white settlement, this was a view surely shared by the last member of the committee, E.H. Wright. Chairman of the Njoro Settlers Association from 1927 to 1946 and European elected Member of the Legislative Council for Aberdare until 1940, Wright was shrewd enough to maintain a cordial relationship with the Forest Department in the 1930s that allowed him to exert his influence regarding livestock reductions.⁸⁰⁸ In a 1938 speech to the Legislative Council over the issue of government assistance to agricultural development he portrayed himself as a supporter of forestry and criticised the government for not giving greater assistance to the department. However, Wright's appreciation of forestry only extended so far as it benefitted agriculture within the colony. As such, he believed in the value of forestry in relation to climate, rainfall, and soil conservation and in supplying timber to settlers.⁸⁰⁹ Agriculture was his major concern here; if a forest did not have obvious utility to settler agriculture it is doubtful whether he would have supported its reservation.

Overall, the composition of the FBC espoused various competing views of the value of forestry in Kenya. Along with the Forest Department's representative, Fane and Grundy were probably the keenest supporters of forestry, although Grundy's greatest concern probably lay with the hydrological aspects of forests rather than the economic role of forestry. However, their arguments appear to have lacked sufficient weight, as the extent of the excisions from the forest estate prior to 1955 indicate that it was those forces broadly aligned against the Forest Department that had the upper hand. In its draft report for the Abidjan conference, the Forest Department cited the lack of an official forest policy as a leading cause for this.⁸¹⁰ This explanation, however, is inconsistent with the history of forest reservation before the 1950s and with the large additions that were made to

⁸⁰⁵ 'Government Notice No. 128 (7 Feb 1941)', *The Official Gazette of the Colony and Protectorate of Kenya* 43, no. 7 (11 February 1941): 128; 'Government Notice No. 82 (12 Jan 1950)', *The Official Gazette of the Colony and Protectorate of Kenya* 52, no. 5 (24 January 1950): 53.

⁸⁰⁶ 'General Notice No. 2167 (28 Aug 1951)', *The Official Gazette of the Colony and Protectorate of Kenya* 53, no. 44 (28 August 1951): 869; 'Government Notice No. 1127 (8 July 1953)', *The Official Gazette of the Colony and Protectorate of Kenya* 55, no. 34 (21 July 1953): 732.

⁸⁰⁷ Kenya Forest Department, *Departmental Report 1948-1950*, 4.

⁸⁰⁸ E.H. Wright (Chairman of Njoro Settlers Association) to H.M. Gardner (Conservator), 25 January 1935. See Chapter 2, section 2.3.4 for discussion of this. Wright's relationship with the Forest Department in the 1930s was undoubtedly influenced by personal connections with Gardner, the Conservator of Forests, who reputedly had keen skills as a socialite. 'Transcript of Interview with George E. Lavin, Southern African Airways and East African Timbers, Conducted by Dr. William Beaver', 20.

⁸⁰⁹ E.H. Wright (European Elected Member, Aberdare), 'Agricultural Policy Debate (17 August 1938)', *Legislative Council Debates* 5 (1938): 244.

⁸¹⁰ 'Report from the Colony and Protectorate of Kenya [Draft]', 1.

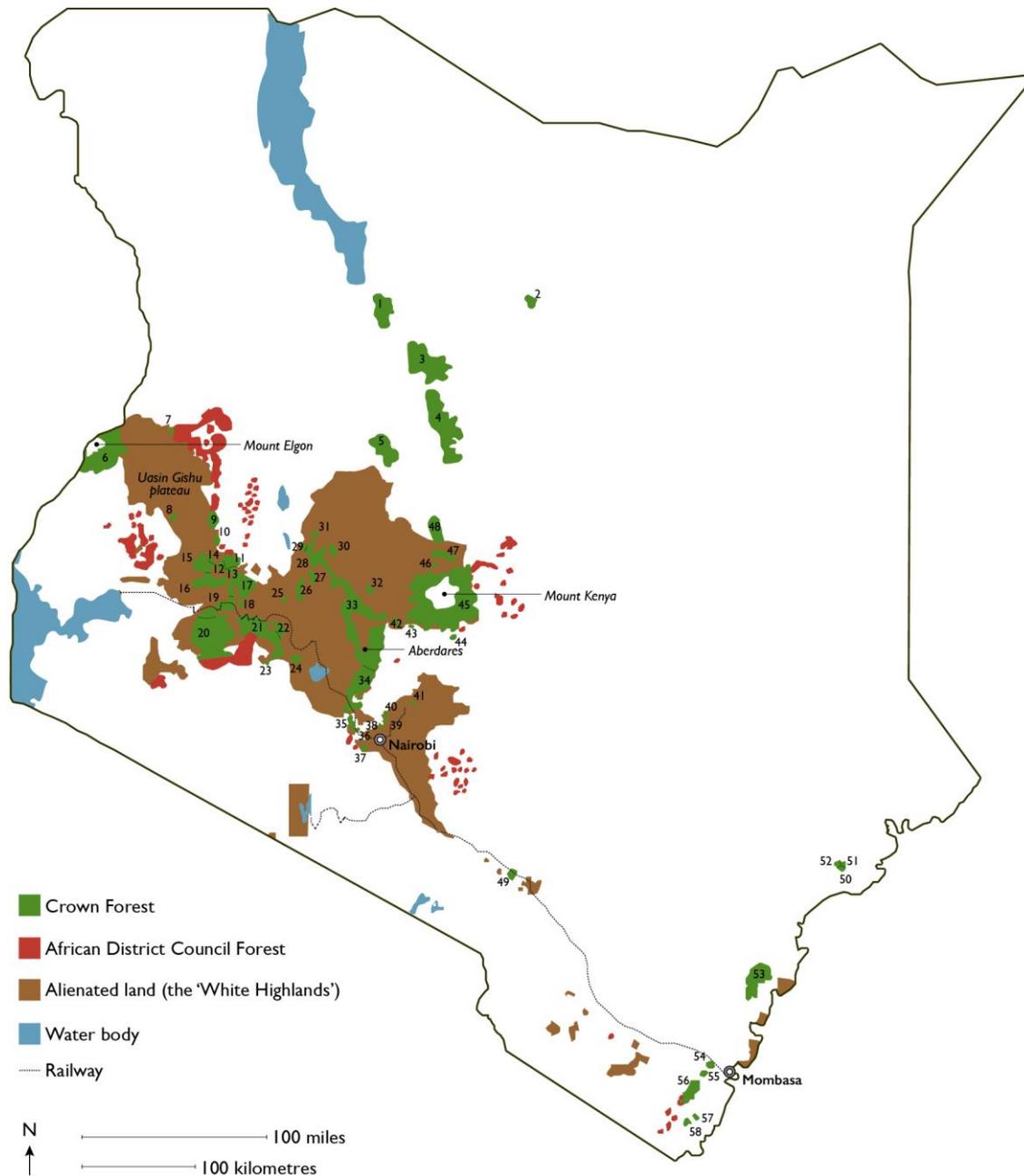


Figure 3-6. Reserved Crown and African District Council Forests, late 1950s. Data for forest reserves comes from 1956 and 1959, that for alienated land from 1954. *Sources:* Atlas of Kenya, 1st ed. (Nairobi: Survey of Kenya, 1959), 19; Directorate of Colonial Surveys, 'East Africa - General', 1954, E1:4 (14), NLS; Survey of Kenya, 'Forest Reserves' (Nairobi: Government Printer, January 1956), E10 (104), NLS.

Numbers refer to the following Crown Forests:

- | | | | |
|--------------------|-----------------------|-----------------------|--------------------|
| 1. Mt. Nturu | 16. Tinderet | 31. Lariak | 45. Mt. Kenya |
| 2. Marsabit | 17. Mt. Londiani | 32. South Laikipia | 46. Timau |
| 3. Nooto's Range | 18. Molo | 33. Aberdares | 47. Ndare |
| 4. Matthew's Range | 19. Western Mau | 34. Kikuyu Escarpment | 48. Mukogodo |
| 5. Leroghi | 20. South Western Mau | 35. Muguga | 49. Kibwezi |
| 6. Mt. Elgon | 21. Eastern Mau | 36. Dagoretti | 50. Mkuni |
| 7. Kapolet | 22. Nakura Lake | 37. Ngong Road | 51. Utwani |
| 8. Kapsaret | 23. South Mau | 38. Kiambu | 52. Gongoni |
| 9. Kaptagat | 24. Eburu | 39. Karura | 53. Arabuko-Sokoke |
| 10. Kipkabus | 25. Menengai | 40. Kamiti | 54. Mwachi |
| 11. Lembus | 26. Bahati | 41. Thika River | 55. Mailuganji |
| 12. Timboroa | 27. Ol Bolossat | 42. Nyeri | 56. Shimba |
| 13. Maji Mazuri | 28. Marmanat | 43. Chieni | 57. Gogoni |
| 14. Nabkoi | 29. Ol Arabel | 44. Njukiini | 58. Buda |
| 15. North Tinderet | 30. Rumuruti | | |

the forest estate in 1955. The absence of a forest policy was apparently no hindrance to the extension of the forest estate before the Second World War, even within a climate of suspicion toward Forest Department activities that emanated from the white settler farming community and the considerable limitations placed on the material resources of the department. Moreover, the largest additions to the forest estate came in 1956 (Figure 3-5), a year before Kenya's forest policy was enacted.⁸¹¹ The policy itself was noteworthy in representing an official endorsement for the preservation of forests and recognition of their dual role in protecting water catchment areas and providing timber, yet it provided no strengthening of the legal status of forests and did not put the department any closer to its goal of creating legally recognised demarcated forests. The key aspect of the policy was that it was the product of a shift in attitudes within a government that was beginning to place significant emphasis on the protective role of the forests and the scientific evidence that supported this role.

The vast majority of the 653,999 acres that were added to the forest estate in 1956 were found in the Northern Frontier (Figure 3-6). These were protection forests; being far from the main transportation corridors of the colony they held little prospect for exploitation. Their gazettelement was a victory for a growing body of research that supported the positive role of forests in the hydrological cycle. Conversely, the excisions from the forest estate in the early 1950s were the result of FBC members with sympathies toward agriculture being swayed by research that argued the opposite, that forests were depleting the colony of valuable water that could be better directed toward agriculture and denying access to land that could be converted to profitable agriculture. The counter-argument against the positive influence of forests on water conservation was highlighted in the draft report the department prepared for the Abidjan conference (and was notably absent from the final report):

The status of forestry in Kenya has suffered greatly from a report written in 1938 [1948] by a visiting 'expert' claiming every soil and water conserving virtue for a well known species of grass...⁸¹²

Erroneously cited as a 1938 report, the publication in question was actually published in 1948. Written by P.A. Buxton, the report addressed the trypanosomiasis issue in Eastern Africa.⁸¹³ The ability of this report to damage the argument in favour of forestry revealed that there existed serious gaps in knowledge relating to the role of forests in water conservation in Kenya.⁸¹⁴ The Abidjan draft argued:

⁸¹¹ 'Forest Policy for Kenya'.

⁸¹² 'Report from the Colony and Protectorate of Kenya [Draft]', 2.

⁸¹³ Patrick Alfred Buxton, *Trypanosomiasis in Eastern Africa, 1947*, Part of a Series Prepared for Tsetse Fly and Trypanosomiasis Committee, Edited by Bureau of Hygiene and Tropical Diseases (London: HM Stationary Office, 1948).

⁸¹⁴ The fact that the positive role of forests on water supplies was unproven was highlighted to foresters reading the *Empire Forestry Journal* in 1930. J. W. Nicholson, 'Forests and Rainfall', *Empire Forestry Journal* 9, no. 2 (1 December 1930): 204–12. At the 1935 Empire Forestry Conference, held in South Africa, this void in empirical research led to debates and the setting up of a special committee on the relation of trees to climate, hydrology, and soil erosion.

Until the advantages of the forest cover types existing in Kenya as water conservers have been demonstrated an understanding by the governing classes of the need for conserving forests will be difficult.⁸¹⁵

Buxton was an extremely well-renowned medical entomologist who held a professorship at the University of London, had headed the Department of Entomology at the London School of Hygiene and Tropical Medicine and had become a fellow of the Royal Society two years before his expedition to East Africa in 1945-46. This was a research trip he undertook at the request of the Colonial Medical Research Committee, upon which he also sat; a body which was greatly concerned with addressing the problem of tsetse fly and trypanosomiasis. It was because of such investigations, as well as numerous others across the empire, that he became a Companion of the Order of St Michael and St George in 1947.⁸¹⁶ Buxton thus wrote with considerable authority on his subject. As he sat on the Colonial Office's Tsetse Fly and Trypanosomiasis Committee, Buxton's 1948 report, along with his 1955 book, undoubtedly informed the tsetse control programme within Kenya.⁸¹⁷ In the early 1950s this programme did not include Forest Department involvement, considered a "marked omission" in the department's draft Abidjan report.⁸¹⁸ This omission was symptomatic of the conclusions drawn by Buxton in his 1948 report; conclusions which extended beyond tsetse control and, if the department's statements in its draft Abidjan document are correct, influenced government and gave ammunition to settlers eager to continue their siege on Forest Department control.

Buxton did not hold a favourable view of forests. Bush land and forest harbour the tsetse fly, particularly around water courses and bodies of water where the fly breed, protected from exposure to the sun.⁸¹⁹ Buxton repeatedly made this point across his several publications on the matter, and in 1955 he explicitly framed this as a dichotomy in his magnum opus on the tsetse fly:

However, this debate was centred on the possibly negative role of *Eucalyptus* and wattle (and exotic timber species in general) on water supplies within South Africa. Although the committee determined that exotic species had no negative effects on hydrology, the debate did lead to five research stations being set up in South Africa before the Second World War to gather data, and therefore ammunition for the forester, on this issue. The conflict over forests and hydrology that played out in Kenya, described below, featured no references to these debates and developments in South Africa, perhaps because the Kenya debate was not centred on exotic tree species but forests in general. However, the South African example does illustrate the wider gaps in empirical knowledge that existed within the forestry community and how these gaps could be picked open by opponents of forestry. See Bennett, 'Locality and Empire: Networks of Forestry in Australia, India, and South Africa, 1843-1948', 277-89; Brett M. Bennett and Frederick J. Kruger, 'Ecology, Forestry and the Debate over Exotic Trees in South Africa', *Journal of Historical Geography* 42 (October 2013): 107-8, doi:10.1016/j.jhg.2013.06.004.

⁸¹⁵ 'Report from the Colony and Protectorate of Kenya [Draft]', 3.

⁸¹⁶ V.B. Wigglesworth and rev. J.F.M. Clark, 'Buxton, Patrick Alfred (1892-1955)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004, <http://www.oxforddnb.com/view/article/32223>; V. B. Wigglesworth, 'Patrick Alfred Buxton. 1892-1955', *Biographical Memoirs of Fellows of the Royal Society* 2 (1 November 1956): 69-84; 'P. A. Buxton, C.M.G., M.R.C.S., D.T.M.&H., F.R.S.', *The British Medical Journal* 2, no. 4955 (24 December 1955): 1565-66.

⁸¹⁷ Patrick Alfred Buxton, *The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera)* (London School of Hygiene and Tropical Medicine, H.K. Lewis & Co. Ltd., 1955). This remains an authoritative source on tsetse biology.

⁸¹⁸ 'Report from the Colony and Protectorate of Kenya [Draft]', 2.

⁸¹⁹ John Ford, *The Role of the Trypanosomiasis in African Ecology: A Study of the Tsetse Fly Problem* (OUP, 1971), 288.

It will be remembered that all species of tsetse are closely associated with forest, trees or bush, at least as breeding places: to a considerable extent, therefore, the struggle against tsetse cannot fail to be an effort to replace woody vegetation by grass. There is, therefore, an essential conflict between control of tsetse and preservation of forests.⁸²⁰

Across western and eastern Africa, this struggle against tsetse within the colonial period invariably took the form of landscape transformation. Clearances of bush, forest, and woody vegetation were in use by the British in Africa as a form of tsetse control from at least as early as 1909 (in Uganda and Tanganyika), and had been shown effective as a means of eliminating tsetse from an area if that area was subsequently grazed.⁸²¹ Tsetse research proceeded at a rapid pace in the interwar period; even more so because of its inter-territorial approach.⁸²² This created a vast body of research upon which Buxton could call and he therefore supported his arguments with reference to pioneers in the field such as Charles Swynnerton.⁸²³

Within Kenya only a small percentage of Crown forest and African forest reserves actually fell within those areas considered infected by tsetse in the 1950s (Figure 3-7). Otieno's work on Chepalungu forest reserve highlights an exception to this statement and also how, prior to the 1950s, the Forest Department was involved in a scheme of tsetse control that sought to exclude the local Kipsigis people from the forest. The ultimate objective of this programme was to protect settler farms from tsetse by allowing the forest to grow to a degree that made it unsuitable for habitation by the tsetse fly, while permanently settling the Kipsigis as a further deterrent to tsetse encroachment.⁸²⁴ The technique of forest development used in Chepalungu was in fact an approach to tsetse control that had been experimented with in Tanganyika through the 1930s. Clearly a way

⁸²⁰ Buxton, *The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera)*, 550.

⁸²¹ Ibid., 558, 552; Kirk Arden Hoppe, *Lords of the Fly: Sleeping Sickness Control in British East Africa, 1900-1960* (Greenwood Publishing Group, 2003), 66-73.

⁸²² Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950* (University of Chicago Press, 2011), 185-200.

⁸²³ Buxton, *The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera)*, 550. Leak has argued that bush clearance should now be recognised as having limited value because it has wider ecological impact and in some cases its effectiveness is disputed. Leak cites a 1933 paper on experimental bush clearings in Northern Nigeria by Lloyd et al to support this assertion. Stephen G. A. Leak, *Tsetse Biology and Ecology: Their Role in the Epidemiology and Control of Trypanosomosis* (Wallingford, Oxon, UK: CABI; International Livestock Research Institute, 1999), 388. The paper Leak references is: L.L. Lloyd et al, 'Experiments in the Control of Tsetse Fly. Part II', *Bulletin of Entomological Research* 24, no. 2 (July 1933): 233-251. Nevertheless, bush clearance and conversion to grassland does continue to be employed on a limited scale as an effective means of tsetse control, see Leak, *Tsetse Biology and Ecology*, 386-88. Notably, Lloyd et al is not among the seven papers that Buxton draws upon in his advocacy of bush clearances as a tsetse control measure. Buxton cites the following (notably, none of these papers deal specifically with Kenya): J. R. Ainslie, 'Forestry and Tsetse Control in Northern Nigeria', *Empire Forestry Journal*, 1934, 39-44; F.S. Collier, 'Notes on the Preservation of Fauna of Nigeria', *Nigerian Field* 4 (1935): 3-13, 51-62, 101-13; Thomas Arthur Manly Nash and others, 'Tsetse Flies in British West Africa.', *Tsetse Flies in British West Africa.*, 1948; C.F.M. Swynnerton, 'How Forestry May Assist towards the Control of Tsetse Flies. Appendix II', in *Colonial Forest Administration*, by Robert Scott Troup (Oxford: Clarendon Press, 1940), 439-42; William Allan, 'African Land Usage', *Rhodes-Livingstone Journal* 3 (1945): 13-20; John Ford and R. de Z. Hall, 'The History of Karagwe', *Tanganyika Notes and Records* 24 (1947): 3-27; J. M. Winterbottom, 'The Ecology of Man and Plants in Northern Rhodesia', *Human Problems in British Central Africa*, no. 3-5 (1945): 33.

⁸²⁴ Alphonse Otieno, "'Reordering and Counterordering": Forestry Preservation, Bush Clearing and the Sociophysical Mapping of Chepalungu, Kericho District, Kenya, 1930-1963', *Environment and History* 16, no. 4 (1 November 2010): 381-408.

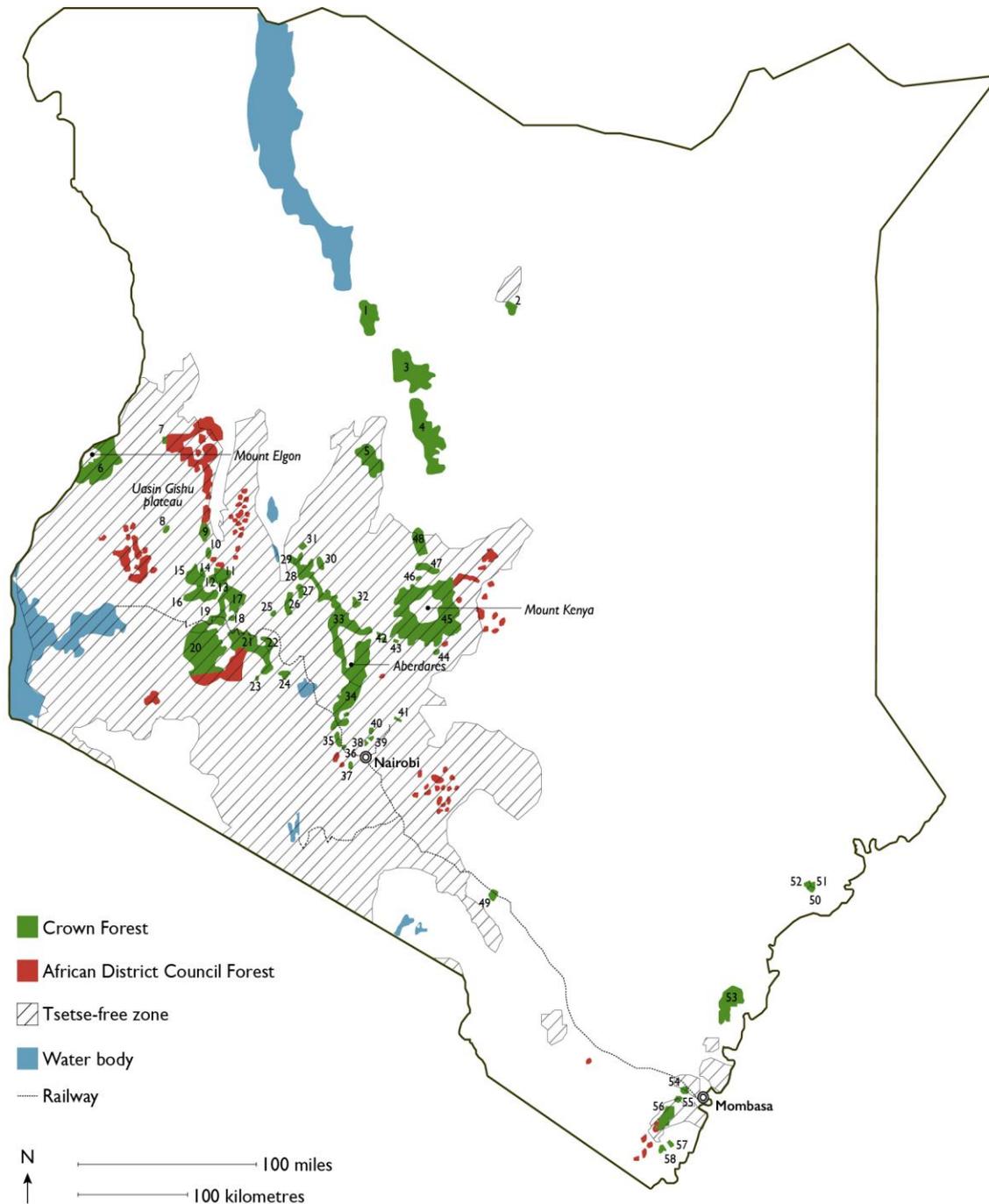


Figure 3-7. The 1959 distribution of Crown Forests and African District Council Forests in comparison to the declared 'tsetse-free' zone. Comparison to a 1954 map of areas surveyed for tsetse corroborates the above distribution, with the exception of tsetse being mapped as occurring on the eastern and south-eastern slopes of Mount Kenya (Meru and Embu). Sources: Atlas of Kenya, 1st ed. (Nairobi: Survey of Kenya, 1959), 19, 21; Directorate of Colonial Surveys, 'East Africa - Population, Tsetse Fly and Rainfall' (GSGS, 1954), E1:4 (15), NLS.

for forestry to play a key role in tsetse control, Buxton considered this approach merely experimental while being largely impractical (because of the slowness of forest growth) and, at worst, “dangerous” for allowing an ecosystem that typically favoured tsetse to remain.⁸²⁵

The real danger of Buxton’s arguments to forestry came not from the direct interaction between tsetse control and the forests but in the applicability of his arguments to forests that were free of tsetse. Using the terms ‘bush’ and ‘forest’ interchangeably without definition, Buxton’s argument of bush clearance was made at a time of high concern about soil erosion, concern that typically benefitted the Forest Department in its mission of increasing the acreage of land under its protection.⁸²⁶ Within the context of a colonial narrative that placed the blame on African land misuse for the spread of the tsetse fly, bush clearance (in concert with forced population movement, settlement, and grazing) became the main weapon employed by the British in attempts to reclaim land from the tsetse fly.⁸²⁷ It was, for example, a primary tool in the anti-tsetse programme in Western Narok, Maasailand and formed part of the strategy implemented in Tanganyika from the 1920s onwards.⁸²⁸ It thus follows that arguments for bush and forest clearance also needed to address the issue of erosion; it was hardly worth the effort of repelling the tsetse fly from an area only to have the fertility of that area washed away. As argued by Hoppe, erosion concern was a key factor along with the dangers of sleeping sickness epidemics for increased intervention by the colonial state in tsetse control from the 1930s onwards.⁸²⁹ The value of forests located on ridges as a means to abate the rapid run off of rainwater was recognised by Buxton, but in other cases he was more sceptical.⁸³⁰ “In the experience of the entomologist,” he wrote, “the danger of erosion after clearing thicket or woodland has been exaggerated, for when grass replaces woody vegetation the land is generally protected from erosion.”⁸³¹ His 1948 report argued that bush and forest “preservation has been applied too widely”, leading to the spread of both *G. morsitans* and *pallidipes* tsetse flies.⁸³² This preservation policy had reduced the use of burnings of bush late in the season, when vegetation was at its driest. This was a practice employed by Africans and the colonial authorities to cheaply and quickly clear an area of woody vegetation. Instead, trees and areas of bush were preserved with the Forest Department-approved practice of early season burning

⁸²⁵ Buxton, *Trypanosomiasis in Eastern Africa, 1947*, 33; Buxton, *The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera)*, 552. Buxton wrote in 1955 that the technique of allowing bush or forest to develop to a degree that inhibited tsetse habitation was actually reliant on the increase in parasites and predatory insects that would accompany forest development. Leak states such methods of biological control invariably fail where the insect used to exert control comes from the same ecological area, as the prey/host and predator/parasite would have adapted to each other. Leak, *Tsetse Biology and Ecology*, 391.

⁸²⁶ Anderson, *Eroding the Commons*, 244; Anderson, ‘Depression, Dust Bowl, Demography, and Drought’.

⁸²⁷ Ford, *The Role of the Trypanosomiasis in African Ecology*, 6–8; Hoppe, *Lords of the Fly*, 143–70.

⁸²⁸ Richard D. Waller, ‘Tsetse Fly in Western Narok, Kenya’, *The Journal of African History* 31, no. 1 (January 1990): 89; Hoppe, *Lords of the Fly*, 95–101; Ford, *The Role of the Trypanosomiasis in African Ecology*, 197–216.

⁸²⁹ Hoppe, *Lords of the Fly*, 128.

⁸³⁰ Buxton, *The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera)*, 553.

⁸³¹ *Ibid.*, 552.

⁸³² Buxton, *Trypanosomiasis in Eastern Africa, 1947*, 30.

(owing to the greater fire resistance of such vegetation after rains).⁸³³ He further argued that replacing bush or forest with grassland would usually have a beneficial effect on protecting the soil and increasing the availability of water.⁸³⁴

As revealed by the response to Buxton's report by J.F. Hughes of the Uganda forestry department, the 1940s witnessed a barrage of publications that undermined the position of forestry as a guardian of the soil and water. Some of these publications, Hughes argues, were written by "well-known extremists," while others came from more authoritative sources such as R.R. Staples of the Veterinary Department of Tanganyika.⁸³⁵ Buxton's 1948 report and his subsequent monograph on tsetse flies were effectively the culmination of these respectable, scientific attacks on forests. Buxton's position of authority, his scientific prestige, and his citations of other scientific works (including Staples and Nash, his former pupil) lent his arguments considerable weight. In reality, the works on which Buxton based his argument were of a highly localised nature; Buxton's conclusions, however, were not. Based on his fieldwork across British Africa, Buxton anecdotally concluded that grass could effectively fulfil the anti-erosion role:

... if grass replaces bush the soil is effectively protected from erosion. This point is very important and I made it my business to enquire about it wherever I went [in East Africa], and from men of different types: in general I am satisfied that if one reduces bush it is replaced by grass, and that nearly everywhere this holds up the soil which is not eroded.⁸³⁶

Herein lay the ammunition that could be taken up by settlers and administrators in Kenya critical of Forest Department control. Previously the Forest Department had retained the high ground through its use of supposedly scientific arguments relating to the hydrological role of forests; this was now under assault with what were, perhaps, equally suspect scientific arguments. Importantly, the claim that grass could replace forest with no damage to the water cycle or the soil was a serious challenge to the department's efforts to increase its holdings classified as protection forests. In this way, arguments that Buxton made to support tsetse control measures were subverted and extended in applicability to any forest in the colony.

It was this argument concerning the replacement of forest with grass that the Forest Department's draft report to the Abidjan conference indicates was the cause of great damage to the case for extending the forest estate. Buxton's writings therefore appear to have influenced the decisions of the FBC relating to the excising of forest. It is clear that ambiguity on the relationship between forest and water supplies existed within the government, outside of the departments of forestry and public works, until the mid-1950s. An account of a speech to influential members of

⁸³³ Ibid. The Forest Department policy of early season burning allowed the burn to be more controlled and was a major fire-prevention strategy because it eliminated grasses and bushes that allowed forest fires in the dry late season to spread rapidly. Deliberate burning in the dry season was looked upon by the Forest Department with great concern because of the large danger of any fire quickly reaching uncontrollable proportions.

⁸³⁴ Ibid.

⁸³⁵ J.F. Hughes, 'Forest and Water Supplies in East Africa', *Empire Forestry Journal* 28 (1949): 314.

⁸³⁶ Buxton, *Trypanosomiasis in Eastern Africa, 1947*, 30. Buxton repeated the point, again without adequate evidence, in 1955: Buxton, *The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera)*, 554.

Kenya's white settler community at the Nairobi Rotary Club in 1955 by the Minister for Forest Development, Game and Fisheries, L.R.M. Welwood, addressed the "great asset" that the forests of Kenya were to the country but admitted "Kenya's forests and climate were indelibly linked although it was difficult to say what effect each had on the other."⁸³⁷ Welwood clearly did not want to antagonise such an influential audience by entering a scientific debate that he was himself unsure of. Misunderstanding also occurred outside of government. After visiting EAAFRO's laboratories in March 1956, a reporter for the *East African Standard* came away with quite the wrong impression of their research, writing "Indigenous forests are drinking millions of gallons of water which would otherwise flow down mountain-sides to irrigate pastures and cultivated farmland...".⁸³⁸ H.C. Pereira of EAAFRO viewed such statements with alarm, particularly as it was printed in the Friday edition of the *Standard* and would have therefore been widely read by the farming community. Addressing the Secretary for Forest Development, Pereira stated the article "will have a very bad effect indeed on your Ministry's case for forest protection unless it is promptly refuted."⁸³⁹ Refuted it was, with Pereira drafting the responses that would appear within the following week's edition of the paper. As Figure 3-5 shows, the tide was beginning to turn in favour of more reservation by this point in the mid-1950s.

By 1960 the government became fully committed to forest protection on the grounds that it would be dangerous to allow further excisions until clarity was obtained on the relationship between forest cover and water supplies. This attitude was clear when the African Member of the Legislative Council for Central Province North urged the excisions of Crown forest on Mount Kenya to allow the local Chuka residents to establish tea plantations on the land. Support came from the European Member for the Coast Constituency, who in stating the government should "go in for short term profit rather than for long-term forest planning" displayed his ignorance of the government's concerns for water supplies.⁸⁴⁰ W.E. Crosskill, Minister for Tourism, Game, Forests and Fisheries, was adamant excision would not occur. While acknowledging the value of tea production, Crosskill maintained the government:

...is not prepared to consider excisions until conclusions can be drawn from the water catchment research now taking place in the southern-western Mau forest reserve, with particular reference to the effect of converting indigenous forest to tea gardens.⁸⁴¹

This turnaround was the result of a decade of scientific research into forests and water supplies that, although still not complete by 1960, had progressed to a sufficient degree to allow this delaying tactic to be employed. Hughes' article in the *Empire Forestry Journal* of 1949, which was essentially a response to Buxton's 1948 report, framed the scope of this research. Hughes

⁸³⁷ 'Forests and Wildlife "a Great Trust"', *East African Standard*, 4 August 1955.

⁸³⁸ 'Zoology Has a Big Role in Developing East Africa', *East African Standard*, 16 March 1956.

⁸³⁹ Dr H.C. Pereira (EAAFRO) to Colchester (Secretary for Forest Development), 19 March 1956, VF/8/3, KNA.

⁸⁴⁰ S.V. Cooke (European Member for Coast Constituency), Colony and Protectorate of Kenya, 'Legislative Council Debates Official Report' (Vol. LXXXV. Fourth Session. Hansard, Nairobi, 12 June 1960), 488.

⁸⁴¹ W.E. Crosskill (Minister for Tourism, Game, Forests and Fisheries) *ibid.*, 487.

addressed the matter by looking at the fundamental relationship of forests to the water cycle. He considered the role of forests in relation to precipitation, the interception and evaporation of rainfall, and the run off and storage of rainfall. The paper emphasized the large knowledge gap and continued debate over these points in East Africa. Compared to the repeated assurances of the inexorable link between forests and water supplies commonly found in forestry literature of the period, Hughes displayed a refreshing frankness.⁸⁴² He stated, for example, “The effect of vegetation upon rainfall has been debated for many years and, it may as well be admitted, is far from being resolved.”⁸⁴³ Hughes even concludes that many forested areas could be replaced by grassland with a resulting positive effect on local water supplies. His ultimate conclusion, however, was that the matter needed urgent and extensive research and that “until we have a better knowledge of local hydrology there surely should be no question of large scale attack on bush... .”⁸⁴⁴ Support came from hydrologists from the Public Works Department, who also urged more research and were eager to engage with the Forest Department on this, something which they claimed had not previously been achieved.⁸⁴⁵

The Forest Department was well aware of Buxton’s research and his likely conclusions before his 1948 report was published. In its report for 1945-47 the department pre-empted those conclusions by admitting it had paid “little attention” to hydrological questions when creating plantations.⁸⁴⁶ The statement foreshadowed Hughes’ more detailed and honest assessments of the complex relationship between forests and water supplies.⁸⁴⁷ A turning point was being reached in the mind set of foresters in East Africa by this point. Under assault by another branch of science, forestry reacted by engaging in more research. This was its only option if it was to persuade the government and prominent settlers who held power within or influence over that government of the value of forestry in areas where competition for land that could be used for agriculture was strong.

The Forest Department was not equipped or staffed to handle the highly technical level of research needed to refute the arguments epitomized by Buxton. Indeed, when Dr C.R. Hursh, an

⁸⁴² The Sub-committee of the 1945 Development Committee stated, for example, that all forests or potential forests should be reserved “for climatic reasons.” Kenya Forest Department, *Departmental Report 1945-1947*, 2.

⁸⁴³ Hughes, ‘Forest and Water Supplies in East Africa’, 315.

⁸⁴⁴ *Ibid.*, 322.

⁸⁴⁵ Starmans and Michael, ‘Correspondence in Response to “Forests and Water Supplies in East Africa”’. The hydrologists were clearly no fans of Buxton, writing: “[we] agree with Mr. Hughes on his criticism of Professor Buxton’s ‘contribution’ towards the hydrologic planning of East Africa... .”

⁸⁴⁶ Kenya Forest Department, *Departmental Report 1945-1947*, 16. The full statement was: “Little attention has been paid by the Department up to date to the possibility that there may very well be localities in which, in the interests of water supplies in adjacent streams, it is definitely undesirable to make plantations, at all events of certain tree species, and possibly to retain tree growth of any description.”

⁸⁴⁷ It should be remembered that the research programme concerning forests and water supplies in East Africa engaged in during the 1950s was merely the beginning of research, even if it was successful in strengthening the hand of forestry against agricultural development. Research and debate on hydrology and forests very much continues today. For example, a question raised by Hughes concerning the origin of rainfall within East Africa continues to be debated: Rudi J. van der Ent et al., ‘Origin and Fate of Atmospheric Moisture over Continents’, *Water Resources Research* 46, no. 9 (2010).

expert hydrologist with the United States Forest Service, arrived in Kenya in 1952 to advise on hydrological matters he was very critical of past inaction. He cited a lack of co-operation between forestry and the other branches of government that manged land and the “failure” of those involved “to acquire a working knowledge of the natural processes that determine favourable soil, water and climate relations.”⁸⁴⁸ While Hursh’s presence under a Fulbright Act grant may be interpreted as representing the growth of American soft power within Africa, his brief work in Kenya appears to have added considerable weight to the Forest Department’s case.⁸⁴⁹ The creation of EAAFRO was of huge benefit in this regard as it allowed the department to draw on the assistance of experts from within the empire and beyond. This was assistance that Kenya’s new Conservator of Forests, R.R. Waterer, actively sought after he too realised that foresters in Kenya had too long laboured alone, often not even communicating adequately with other foresters in the colony.⁸⁵⁰ It would be EAAFRO that took the lead on the matter, with research on hydrology beginning after the organisation’s headquarters were complete in 1952. Dr H.C. Pereira led research from his base within EAAFRO throughout the 1950s; the Forest Department providing little more than labour for the endeavours. Pereira was extremely capable: his pioneering work is still read and he was knighted in 1977 for the far-reaching effects of his hydrological research on agriculture.⁸⁵¹ By the mid-1950s Pereira had begun two water-catchment research projects within Kenya. The first concerned the hydrological effects of replacing bamboo on the Aberdares with pine plantations, and the second on water use following the conversion of montane rainforest to tea plantations in the Timbilil area of the south-west Mau forest.⁸⁵² These were joined by a project in Mbeya, Tanganyika that looked into the comparative water use of montane rainforest and subsistence agriculture on steep slopes, and a study in Karamoja, Uganda on the hydrological effects of overgrazing on rangeland.⁸⁵³

Preliminary results of these investigations began to be published in 1962.⁸⁵⁴ As early as 1954, however, Pereira published a paper that supported the argument for the retention of forests rather than their conversion to agricultural land. Two years later the department was able to reserve a record annual acreage of forest, largely because of arguments for the value of protection forests. Pereira even argued that maximum water catchment could be achieved by a periodic clear felling of the forest and then replanting with trees which would be allowed to develop until they formed a

⁸⁴⁸ Charles Raymond Hursh, ‘Forest Management in East Africa in Relation to Local Climate, Water and Soil Resources’, *EAAFRO Annual Report 1952*, 1952, 27.

⁸⁴⁹ Hursh conducted work in Kenya under the Fulbright Act of 1946, the purpose of which was to financially support the international exchange of knowledge. Hursh’s paper for EAAFRO is very supportive of forestry in relation to the water cycle.

⁸⁵⁰ R.R. Waterer (Chief Conservator of Forests) to Conservators of Forest (East and West of Rift) and Divisional Forest Officers, 12 December 1952, VF/8/2, KNA.

⁸⁵¹ J. S. G. McCulloch, ‘Sir Herbert Charles Pereira. 12 May 1913 - 19 December 2004’, *Biographical Memoirs of Fellows of the Royal Society* 54 (12 December 2008): 245–56.

⁸⁵² Kenya Forest Department, *Departmental Report 1955-1957*, 15.

⁸⁵³ McCulloch, ‘Sir Herbert Charles Pereira. 12 May 1913 - 19 December 2004’, 250.

⁸⁵⁴ H.C. Pereira et al., ‘Hydrological Effects of Changes in Land Use in Some East African Catchment Areas’, *East African Agricultural and Forestry Journal* 27 (1962).

closed canopy.⁸⁵⁵ Such conclusions were ideally suited to the goals of forestry and were no doubt influential in persuading government of the importance of the forests in the 1950s while it waited, and stalled excisions, for the final results to arrive. When the results of EAAFRO's investigations did come they were in fact only partially supportive of forestry. It was concluded that there was no discernible hydrological difference when a bamboo forest was replaced by a pine plantation, thus supporting the planting programme of the department. Yet, this research also showed that the water catchment abilities of a montane rainforest and a tea plantation were almost identical. In other words, there was no longer any argument relating to hydraulic concerns over the preservation of forest that could be more economically utilised for tea.⁸⁵⁶ When African demands for land became triumphant during the transition to independence of the early 1960s, the lack of an iron-clad scientific argument against forest clearance meant the department could not stop the 1962 excising of 10,930 acres of Crown Forest from Central Province for African settlement, although this did not prevent simultaneous additions that resulted in the department controlling a record total of 4,309,120 acres as the country moved to independence.⁸⁵⁷ Overall, through the 1950s the Forest Department, in essential partnership with EAAFRO, rose to the challenge of the counterclaims concerning the place of forests in the water cycle and a scientific programme was engaged which successfully reversed the trend of excisions which was evident at the beginning of the decade.

3.3 Scientific Exploitation

3.3.1 *Growing the economy*

The increased attention given by Britain to the development of its colonies extended beyond administrative and technical improvement. The placing of economic advancement, even industrialisation, at the core of post-war colonial governance carried with it capital that flowed out to the private sphere. Much of this capital accumulated in the hands of Kenya's white settlers because of their discriminatory role in Kenya's exports. The protected markets and artificial prices guaranteed by the wartime produce control boards ensured that many settlers entered the post-war period as newly prosperous, no doubt full of the same optimism that characterised Forest Department accounts of this time. Through the 1950s the settlers were joined by further white immigrants keen to establish their own farms in a buoyant market. The colonial government of Kenya spent £2 million on assisting these new arrivals and passed legislation, such as the 1948 Industrial Licensing Ordinance, designed to facilitate an influx of private capital into Kenya's

⁸⁵⁵ W. MacF. Robertson, 'Editorial on Article: H.C. Pereira, "The Physical Importance of Forest Cover in the East African Highlands", East African Agricultural Journal, vol.19, no.4, 1954, pp.233-236', *Empire Forestry Review* 33, no. 4 (December 1954): 386.

⁸⁵⁶ McCulloch, 'Sir Herbert Charles Pereira. 12 May 1913 - 19 December 2004', 250.

⁸⁵⁷ Kenya Forest Department, *Annual Report 1962*, i. Interestingly, the department claimed that many of those slated to settle on this land were prior Forest Department employees (presumably meaning forest squatters). Further investigation is needed to determine if this was indeed the case.

nascent commercial and industrial sectors.⁸⁵⁸ The metropolitan and colonial states were now proactive in the aid and leadership they gave to the private sphere. Material, educational, and legislative assistance were delivered to the white settlers to shore up the racial status quo and attempt to guarantee the prosperity of the core export commodities they produced, such as coffee. Concurrently, the pre-war aversion to industrial development held by the Colonial Office and its colonies out of the fear of competing with British industries was replaced by a commitment to establish industries that could replace imports into the colonies. The opportunities for metropolitan capital were epitomised by the arrival of companies such as Unilever (1953) in Kenya, while the majority of firms formed in Kenya in the post-war period were owned by white settlers and a minority by the Asian community.⁸⁵⁹

The post-war period represented a fundamental alteration of the relationship between the state and the private sphere in Kenya. The new emphasis on industrial development and the need to supply local markets to support this had a profound effect on forestry in Kenya. The Development Committee's focus on the importance of exotic softwood plantations was directly related to this need. As softwoods were the major type of timber traded and consumed across the northern hemisphere, it was expected that Kenya would also have far reaching needs for these high-utility woods. Because Kenya could establish large plantations of these cheaply, it became apparent that forestry should also strive to ensure that local production could replace imports and even produce an excess that could be exported to the other East African colonies and, vaguely, "to countries bordering the Indian Ocean."⁸⁶⁰ W.A. Robertson, Forest Advisor to the Secretary of State for the Colonies, toured East Africa after the Second World War and expressed the same opinions.⁸⁶¹ Forestry in Kenya therefore appeared to have a clear purpose within the wider scheme of the colony's development.

Immediately following the close of the Second World War, the Kenya government's priority concerning forestry was ensuring that the timber needs of the military continued to be as ably met as they had been during the war; this was then supplemented by a rapidly expanding timber demand within the colony itself. The government ordered the Forest Department "to produce an arbitrary tonnage to meet the present local demand and that of the military authorities."⁸⁶² This amount, set at 54,000 tons of timber in 1947 and 1948, respectively,⁸⁶³ was easily surpassed in those years and in every subsequent year of colonial rule, as shown in Figure 3-8. Military need was practically nil by 1949; thereafter the timber was sold locally or exported. Significantly, this tonnage

⁸⁵⁸ Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, 267–72. Berman state that an additional 240 white settler farmers (and families) were settled in the white highlands on farms of under 1,500 acres by 1952. By 1960 there were 3,609 total land holdings in the white highlands, a 14 per cent increase since 1954.

⁸⁵⁹ Zwanenberg and King, *An Economic History of Kenya and Uganda 1800-1970*, 125–34. Nicola Swainson, *The Development of Corporate Capitalism in Kenya, 1918-77* (University of California Press, 1980), 143.

⁸⁶⁰ Kenya Forest Department, *Departmental Report 1945-1947*, 2.

⁸⁶¹ *Ibid.*, 4.

⁸⁶² *Ibid.*, 5.

⁸⁶³ *Ibid.*, 19.



Figure 3-8. Annual timber production (in hoppus tons) from Crown forest between 1946 and 1963. Timber harvested from indigenous forest (that is, natural forest) primarily constituted podo and cedar (it is assumed that the plantations of cedar that the department established from the mid-1920s onwards would not have reached sufficient maturity to contribute greatly to the output of cedar within this period). Timber harvested from the plantations was primarily cypress, with small quantities of pine becoming available from 1953 onwards. *Source:* Forest Department Annual Reports, 1945-1963.

was overwhelmingly the result of the exploitation of Kenya's natural forest, with the plantations of cypress that the department had begun in the 1920s only making a meaningful contribution to this figure in the late 1950s. Indeed, before 1955 cypress was "becoming unpopular" in the local Kenya market because the only timber available from the not yet mature plantations was of a low grade.⁸⁶⁴ The plantations of eucalypts and black wattle that dominated the department's planting programme prior to the mid-1930s produced little timber, instead being used for fuel. The reliance on the natural forests was a situation that deeply affected the success of individual sawmilling firms and influenced the character of the entire industry.

The exploitation of the indigenous natural forests and the plantations required different approaches. Kenya's natural forests produced a very low yield of timber per acre as the limited number of trees of economic value, primarily podo, were scattered and of extreme variability in quality. These dispersed trees were typically extracted by teams of Kikuyu with the aid of oxen employed by the millers.⁸⁶⁵ These problems of low yield per acre and the costs of extraction meant

⁸⁶⁴ Kenya Forest Department, *Departmental Report 1951-1953*, 32.

⁸⁶⁵ Data recording the labour employed by sawmills are largely incomplete, with these workers usually passing unrecorded by the Forest Department or wider government. Many squatted in the forests close to the area of exploitation but it is not at all clear if this was a case of entire families squatting. Similarly, whether and how much land these sawmill squatters cultivated is unknown. Sporadic data on numbers employed indicates that approximately 610 were engaged in 1927, rising to 5,000 in 1944 during the timber exploitation surge of the Second World War with an additional 15,000 casual labourers. In the early 1950s the number was roughly 3,500, falling to

that the natural forests could only be profitably exploited by establishing small mills situated close to the source. The irregular growth and presence of numerous 'defects' such as knots in indigenous tree species further meant a lower rate of conversion of merchantable timber from these species than the straight and uniform imported exotic softwoods. Conversion itself required milling techniques and equipment adapted for either indigenous or exotic species because of these differences. Essentially, a sawmill built to exploit the indigenous forests could not exploit the exotic plantations because of its location, the unsuitability of its machines, and the training, or lack of, given to its workers.⁸⁶⁶

By 1957, when logs from the cypress plantations were becoming available, several mills were processing these using the same techniques they employed for indigenous species. However, as a report from Timsales, the representative body of the timber industry, indicated, "they are not likely to remain in business very long unless they change their methods."⁸⁶⁷ At least one mill that did embrace modern techniques for processing exotic timber was that of Sokoro Saw Mill Limited, incorporated in 1952 but apparently set up in 1945 to exclusively process thinnings from the exotic plantations.⁸⁶⁸ The industry as a whole had no choice in the eventual changeover to the processing of cypress rather than podo. As early as 1947, the Forest Department "believed, though the full data to substantiate the belief are not available, that the forests are being overcut particularly with regard to *Podocarpus*."⁸⁶⁹ If the sawmilling industry was to remain viable through the 1960s, it had to modernise in order to exploit the plantation forests that would be replacing the indigenous forests as the source of softwood. Mills that did not adapt to this change would be unable to compete against the cost and efficiency savings made by mills that had begun exploiting the plantations.

3.3.2 *The retardation of modernisation*

As argued in chapter 2, the lack of modernisation was a defining factor that inhibited the further development of the timber trade prior to the Second World War. Although some mills did take some steps toward updating their equipment, facilities, and methods, particularly with regard to the chemical treatment of timbers and seasoning, between the time of the war and Kenyan independence, many did not. In 1947 the department stated the mills "leave much to be desired to achieve efficient milling."⁸⁷⁰ In 1955, the department again complained that mills seemed happy to

half this during Mau Mau and falling to approximately 1,000 by 1960 as they were replaced by wage labour. Source: Forest Department Annual Reports, 1927 to 1963.

⁸⁶⁶ Frank T. Henson, 'The Future of the Timber Industry of Kenya' (Timsales, 11 November 1957), 5–6, MSS 115/37/14, KNA.

⁸⁶⁷ *Ibid.*, 6.

⁸⁶⁸ F.M. Kamau, 'Development of a Fibreboard Factory at Elburgon, Kenya', in *Selected Papers of an Expert Consultation Held in Jakarta, Indonesia 30 September-6 October 1985* (FAO/Finland Expert Consultation on Appropriate Forest Industries, Jakarta: Food and Agriculture Organization of the United Nations, 1986), 262; *The Official Gazette of the Colony and Protectorate of Kenya*, vol. 54, 23 (Nairobi, 1952), 755.

⁸⁶⁹ Kenya Forest Department, *Departmental Report 1945-1947*, 20.

⁸⁷⁰ *Ibid.*, 19.

satisfy large local demand with unseasoned, low quality timber.⁸⁷¹ By 1957, most mills were still operating using steam power rather than diesel or electric, limiting their efficiency, and were not kiln-drying their timber,⁸⁷² and in 1960 complaints were still being received from timber inspectors checking wood for export.⁸⁷³ At the point of Kenya's independence from British rule, an official history of forestry in the country lamented the inability of the industry to keep pace with wider forestry developments. As large acreages of exotic softwood plantations were reaching maturity the industry was not ready to exploit them and the changes required to do so were considered "difficult as the necessary capital is not in the present industry."⁸⁷⁴ At least in the early 1950s, the sluggish pace of modernisation in the milling industry hampered its ability to compete internationally. In 1951 a representative of the Twentsche Overseas Trading Company Limited complained to Waterer, the conservator of forests, that mills were unable to cut timber to the standards required by overseas buyers.⁸⁷⁵ Responding to similar complaints a year later, Waterer was "not at all surprised" as "Till recently any exporter could export any rubbish in the form of timber that he liked, it is known that many such parcels of timber did leave Kenya."⁸⁷⁶ As will be seen, what the Forest Department perceived as the unresponsiveness of many mills to modernisation was actually a response to the market conditions for timber in Kenya and the United Kingdom.

The production of timber from government forests increased 117 per cent (Figure 3-8) between 1946 and 1955, representing both a very strong local demand and a market for Kenya's timbers in the United Kingdom. This period continued and accelerated the trend of exploitation begun during the war, when massive military demand was able to absorb all that the forests of Kenya could produce. While wartime production had turned sawmilling from a "side-line"⁸⁷⁷ into an industry in Kenya, the military's eagerness for any wood, no matter the quality, meant "the sacrifice of the initial groundwork done in the seasoning and grading of timber."⁸⁷⁸ Both imports and exports of timber rose between 1946 and 1949, feeding the needs of development in Kenya and the military in North Africa (Figure 3-9), yet continuing the situation that proper grading and seasoning was not required to achieve a profit. Timber exports as a percentage of production fell

⁸⁷¹ Kenya Forest Department, *Departmental Report 1954-1955*, 22.

⁸⁷² Kenya Forest Department, *Departmental Report 1955-1957*, 23.

⁸⁷³ Kenya Forest Department, *Annual Report 1960*, 21.

⁸⁷⁴ Logie and Dyson, *Forestry in Kenya*, 13.

⁸⁷⁵ N.V. Twentsche (Produce Branch, Twentsche Overzee Handel Maatschappij) & G.S. Turner (Manager, Timber Department, Twentsche Overzee Handel Maatschappij, Mombasa) to R.R. Waterer, 11 October 1951, VF/12/5, KNA. Twentsche Overzee Handel Maatschappij (Twentsche Overseas Trading Company Limited) was a Dutch agency specialising in importing radios, cars, lorries, and farm tractors that entered the British East African market in the 1920s and achieved considerable success in the 1950s, see Joost Jonker and Keetie Sluyterman, *At Home on the World Markets: Dutch International Trading Companies from the 16th Century Until the Present* (McGill-Queen's Press - MQUP, 2001), 277.

⁸⁷⁶ R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 9 June 1952, VF/12/5, KNA.

⁸⁷⁷ Rule, 'East African Timber Production', 47.

⁸⁷⁸ *Ibid.*

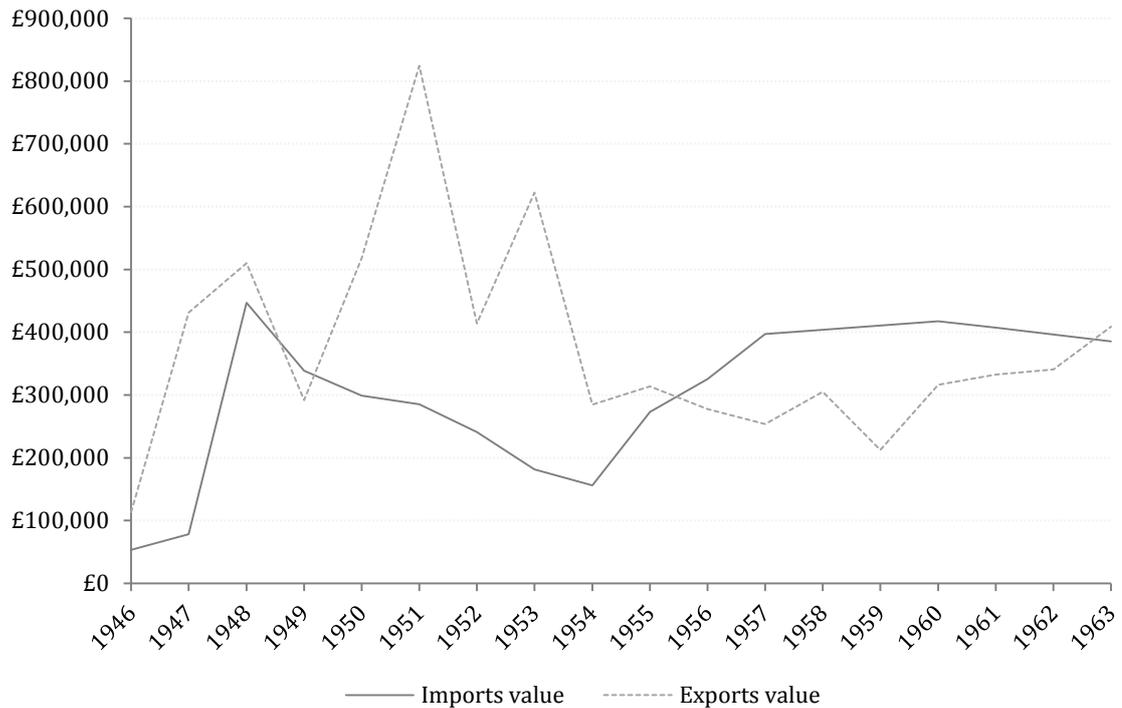


Figure 3-9. Imports and exports of timber and timber products (e.g. cedar slats, flooring blocks, plywood, and box boards). *Source:* Kenya Forest Department Annual Reports 1945-1963.

from 37 per cent in 1947 to 10 per cent in 1949⁸⁷⁹ as military need ended and the timber industry began to divert timber to the burgeoning local market.⁸⁸⁰ The Forest Department then “hoped from the forest point of view that the demand for timber might fall to something nearer to what is believed to be the permissible cut.”⁸⁸¹ This was not to be. Military need was replaced by a rapidly expanding local need and a strong market in the UK.

Within the UK, Forestry Commission alarm at the rate of unsustainable deforestation in 1950 led it to curtail the exploitation of the UK’s forests, providing a huge opportunity for increased imports.⁸⁸² As a result, exports from Kenya to the UK surged. Shipments of Kenya’s general utility softwood, podo, more than doubled to 10,000 hoppus tons in 1950, with the UK share of this rising from 62 per cent in 1949 to 92 per cent in 1950. Control of timber production in Kenya by the timber marketing board ceased in 1950, however powers over timber exports were retained by the

⁸⁷⁹ Production is here defined as timber extracted from the government forest reserves. There are no extant figures on the amount of production from private forests (that is, forests on settler estates). However, 1951 correspondence concerning the remaining woodfuel supplies of the colony indicated that the European settled areas forests were almost completely cleared by that year, suggesting that their contribution to timber production was also surely declining markedly. It is assumed, therefore, that production from the private forests was restricted to a few percentage points of the total production at best. See, A.P. Hume (Price Controller) to Member for Commerce and Industry, 9 March 1951, VF/2/6, KNA.

⁸⁸⁰ Kenya Forest Department, *Departmental Report 1948-1950*, 20.

⁸⁸¹ *Ibid.*, 19.

⁸⁸² H.R. Blanford, ‘Editorial on United Kingdom Timber Market’, *Empire Forestry Review* 29, no. 3 (1950): 200.

Forest Department to safeguard supplies for the local market and prevent the export of low quality timber that might “prejudice”⁸⁸³ the international market against Kenya’s forest products.

The department was instructed to only issue export licences to “bona fide millers,”⁸⁸⁴ that is not middle men or millers putting an inferior product onto market. However, as the correspondence on the matter reveals, this instruction was only issued verbally and seemingly just to Rammell, the outgoing Conservator of Forests. In the nine months between Rammell’s retirement in June 1950 and the arrival of his successor, R.R. Waterer, in March 1951 this instruction was lost. The arrangement was absurdly informal given the importance of supplying local demand and conserving indigenous forests because there was expected to be a gap between when the indigenous forests were depleted and the softwood plantations reached maturity in the 1960s. “Caution”, a British timber merchant assessing East Africa advised, “must be the watchword and the low-yielding natural forest conserved to cover this gap.”⁸⁸⁵ Seemingly casting caution aside, the Forest Department freely gave out licences to timber merchants and millers eager to dump largely ungraded timber on a desperate UK market.⁸⁸⁶ The mistake, which only became apparent and corrected in April-May 1951 with a 20 per cent limit on mill exports, was the cause of the peak in exports in 1951. With a value of £824,435, 1951 represented the zenith of timber exports from Kenya for the entire colonial period. This loss of government control over exports was not something to be celebrated. In April 1951, Ahluwaha Pritam, Member of the Legislative Council for Western Area, began voicing his concern to Cavendish-Bentinck, Member for Agriculture and Natural Resources, over worsening timber shortages in his district. Prices of podo were rising alarmingly on the local market, forcing buyers, at least in western Kenya, to source timber from the black market to supply their building projects.⁸⁸⁷

Pritam and Waterer agreed that the problem was exacerbated by the actions of agents, such as Twentsche Overzee Handel Maatschappij, who sought only the export market and showed little regard for the local market.⁸⁸⁸ Such middlemen were buying up timber from local traders that was intended for the local market and exporting it to Britain. The gains from doing this were short term, but agents such as Twentsche were diverse in their business activities and therefore had no great investment in what to them was the minor business of timber export: it was a means to a quick profit in a buoyant market that was, unintentionally, left unregulated by the Forest Department.

⁸⁸³ F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources) to R.R. Waterer, 9 May 1951, VF/12/5, KNA.

⁸⁸⁴ Ibid.

⁸⁸⁵ Col. Stuart S. Mallison, ‘A Timber Merchant Looks at East Africa’, *Empire Forestry Review* 29, no. 1 (1950): 17.

⁸⁸⁶ R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 30 April 1951, VF/12/5, KNA; R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 26 May 1951, VF/12/5, KNA.

⁸⁸⁷ A. Pritam (Member of Legislative Council for Western Area) to F.W. Cavendish-Bentinck, 5 April 1951, VF/12/5, KNA; A. Pritam to F.W. Cavendish-Bentinck, 26 May 1951, VF/12/5, KNA.

⁸⁸⁸ A. Pritam to F.W. Cavendish-Bentinck, 26 May 1951; R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 30 April 1951.

The fleeting benefits of such exports to middle men, which naturally did not feed back into investment in the mills, were likely more than offset by the further damage caused to the reputation of Kenya's timbers in the United Kingdom. By mid-1952, the chairman of the Timber Development Association in the UK complained to Cavendish-Bentinck that there appeared to be "no grading rules in regard to timber exports from East Africa, including Kenya, or that rules were not being enforced", and that podo shipments were arriving at UK docks "in spite of defects" in the wood.⁸⁸⁹

Timber grading was an issue that went back to the 1930s in Kenya and still, 20 years later, had not been resolved. In 1949 the Forest Department was beginning to grapple the issue through the work it was doing with the East Africa Timber Advisory Board (EATAB).⁸⁹⁰ EATAB advised the East African colonial governments on all matters relating to the production, distribution, utilization, and export of timber. Immediately after its formation it began drafting legislation dealing with the grading and handling of timber.⁸⁹¹ However, it was not until the closing months of 1951 that the Export of Timber Ordinance was passed, and the following year on 1st April when rules stipulating grading standards allowed by this law were promulgated, finally giving the Forest Department legal powers over the quality of timber exported.⁸⁹² Even so, further legislation on the matter was needed by 1955.⁸⁹³ After this, the paucity of complaints in the records and the acceptance of cypress timber on the European market by 1962 indicate that real progress had finally been made and Kenya's mills were producing the quality of product demanded overseas.⁸⁹⁴

Undermining the rather limited Forest Department efforts to improve the timber industry was a branch within that industry that sought to maximise its profits with the absolute minimum of development required. This branch was epitomised by the actions of the "business houses" between 1949 and 1951 who applied for export licences of almost double the tonnage of those applied for by sawmills who were members of Timsales.⁸⁹⁵ The Forest Department relied on Timsales for liaison with the industry: those who were not members essentially escaped the gaze of the department. In 1950, there were 45 firms licensed to operate sawmills in Kenya and of these, 17 were not members of Timsales.⁸⁹⁶ To Pritam, the Legislative Council member greatly concerned with local timber shortages, these unaffiliated mills would willingly disobey government directives as "they are busy in exporting every piece [of timber] and would continue to do so until some

⁸⁸⁹ J. Keith Edwards (for Member for Agriculture and Natural Resources) to R.R. Waterer, 2 June 1952, VF/12/5, KNA.

⁸⁹⁰ This board, set up by recommendation of the East African High Commission in August 1949, was composed of the conservators of all three east African Forest Departments, railway officials, a High Commission representative, and three unofficial members charged with representing the timber industry.

⁸⁹¹ Kenya Forest Department, *Departmental Report 1948-1950*, 2-3.

⁸⁹² R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 9 June 1952. Kenya only gained these powers after the forest departments in Uganda and Tanganyika.

⁸⁹³ Kenya Forest Department, *Departmental Report 1954-1955*, 23.

⁸⁹⁴ Kenya Forest Department, *Annual Report 1963*, 13.

⁸⁹⁵ R.R. Waterer to F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources), 30 April 1951.

⁸⁹⁶ Kenya Forest Department, *Departmental Report 1948-1950*, 18.

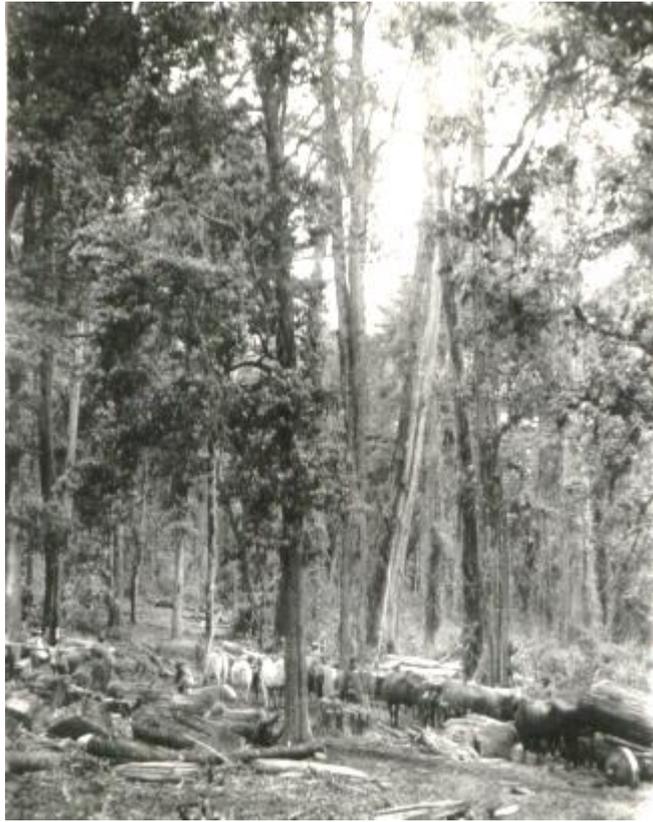


Figure 3-10. Extraction of podo or possibly pencil cedar by ox, c.1945, Rift Valley Province. The description accompanying this images notes that "Oxen are used for logging in forests of this type, though where practicable tractors are gradually taking their place." Photograph by H.M. Gardner. *Source: The Timber Forests of Kenya*, 1945, CO 1069-137-73, TNA, <https://www.flickr.com/photos/nationalarchives/5404433689/>

administrative action is taken against them."⁸⁹⁷ This action would only come with the passing of the Export of Timber Ordinance 1951. What these mills and middle men with eyes fixated on exports seem to have been either ignorant of or indifferent to was that the market they sought was entirely artificial with little prospect for future expansion.

The chief source of expanding export revenue for Kenya timbers between 1945 and 1952 was podo, that met some of the demand for softwoods in the post-war reconstruction of Britain, which was favouring timber from the Commonwealth. This timber was aided greatly by its classification in the UK market not as a softwood, which it botanically is, but as a hardwood. Hardwoods from the Commonwealth required no licence and carried no duty, whereas hardwoods from outside the Commonwealth were subject to both a licence (that is, approval for import from the government) and a 10 per cent ad valorem import duty.⁸⁹⁸ The market for podo in Britain was thus artificially

⁸⁹⁷ A. Pritam to F.W. Cavendish-Bentinck, 26 May 1951.

⁸⁹⁸ H.R. Blanford, 'Editorial on United Kingdom Timber Market', *Empire Forestry Review* 31, no. 2 (1952): 98; East African Commissioner (The East Africa Office, London) to Twentsche Overseas Trading Company Ltd., 8 May 1952, VF/12/5, KNA; F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources) to the Commissioner for East Africa, 9 April 1952, VF/12/5, KNA. The incorrect classification of podo as a hardwood appears to have been part of a deliberate attempt by the British government to foster imports from the Commonwealth. It should be noted that the distinction between softwoods and hardwoods is largely one of the timber trade for marketing purposes and carries with it no scientific baseline for how 'hard' a wood should be; some softwoods are indeed harder than some hardwoods.

receptive. By the beginning of 1952, the UK had introduced a quota on softwoods imported from outside the sterling area, effectively providing a huge opportunity for imports from the Commonwealth of both softwoods and hardwoods to replace those from North America. Under this new arrangement, instigated by the newly formed commodity trade controller, the Ministry of Materials, podo was reclassified as a softwood that required a freely-issued licence for import.⁸⁹⁹ Theoretically, this should have continued the preferential treatment given to podo, however at least some of the members of Timsales did not believe so and dispatched a representative, W.W. Murton, to the UK in the autumn of 1952 to investigate the matter and plead the case for the import of East African timbers. Writing to the Ministry of Materials, Murton argued the increase in bureaucracy had caused a 70 per cent fall in podo exports.⁹⁰⁰ Such pleas were rejected by the Ministry of Materials, the East African High Commissioner, and finally silenced completely by the Secretary of State for the Colonies in December 1952.⁹⁰¹

The Ministry of Materials was deliberately restricting the usage of softwoods in the UK because demand outstripped supply, which, combined with the Forest Department's restriction on the level of exports and a fall in the prices of timber coming from the huge and very efficient Swedish producers caused the slump in exports of Kenya timber.⁹⁰² Significantly, licenses were not the issue as exports of pencil cedar slats, for which the main market was also Britain, fell 55 per cent between 1951 and 1952 yet required no licence for import into the UK and faced no regulatory restriction of any kind.⁹⁰³ As Edwards, writing for the Member for Agriculture and Natural Resources, stated, "the Podo market in the United Kingdom is somewhat artificial and unlikely to survive a return to free consumption of softwoods."⁹⁰⁴ Waterer was in complete agreement with the assessment and was proved right. After the temporally buoyant market for softwoods in the UK in 1953, restrictions on softwood imports to the UK were lifted in November 1953, causing podo exports to slump to their lowest level since the war and a mere 8 per cent of what they stood at in 1951.⁹⁰⁵ In 1954 exports of podo fell to only 1 per cent of total podo production and would only rise above 2 per cent at the end of the decade.⁹⁰⁶ Surprisingly, while the escalation of the Mau Mau conflict caused

⁸⁹⁹ East African Commissioner (The East Africa Office, London) to Twentsche Overseas Trading Company Ltd., 8 May 1952.

⁹⁰⁰ W.W. Murton (Timsales) to the Timber Directorate (Ministry of Materials), autumn 1952, VF/12/5, KNA. There was, in fact, a 62 per cent fall in exports of podo from Kenya between 1951 and 1952.

⁹⁰¹ W.W. Murton, 'Report on Consumer Licensing of Podo in the United Kingdom, Market, Etc.' (Timsales, 1952), VF/12/5, KNA; J. Keith Edwards (for Member for Agriculture and Natural Resources) to General Manager (East African Timber Co-operative Society Ltd. [Timsales]), 3 December 1952, VF/12/5, KNA.

⁹⁰² J. Keith Edwards (for Member for Agriculture and Natural Resources) to General Manager (East African Timber Co-operative Society Ltd. [Timsales]), 3 December 1952; Murton, 'Report on Consumer Licensing of Podo in the United Kingdom, Market, Etc.'

⁹⁰³ East African Commissioner (The East Africa Office, London) to Twentsche Overseas Trading Company Ltd., 8 May 1952.

⁹⁰⁴ J. Keith Edwards (for Member for Agriculture and Natural Resources) to General Manager (East African Timber Co-operative Society Ltd. [Timsales]), 3 December 1952.

⁹⁰⁵ W. MacF. Robertson, 'Editorial on United Kingdom Timber Market', *Empire Forestry Review* 33, no. 1 (March 1954): 19.

⁹⁰⁶ Kenya Forest Department, *Departmental Report 1954-1955*.

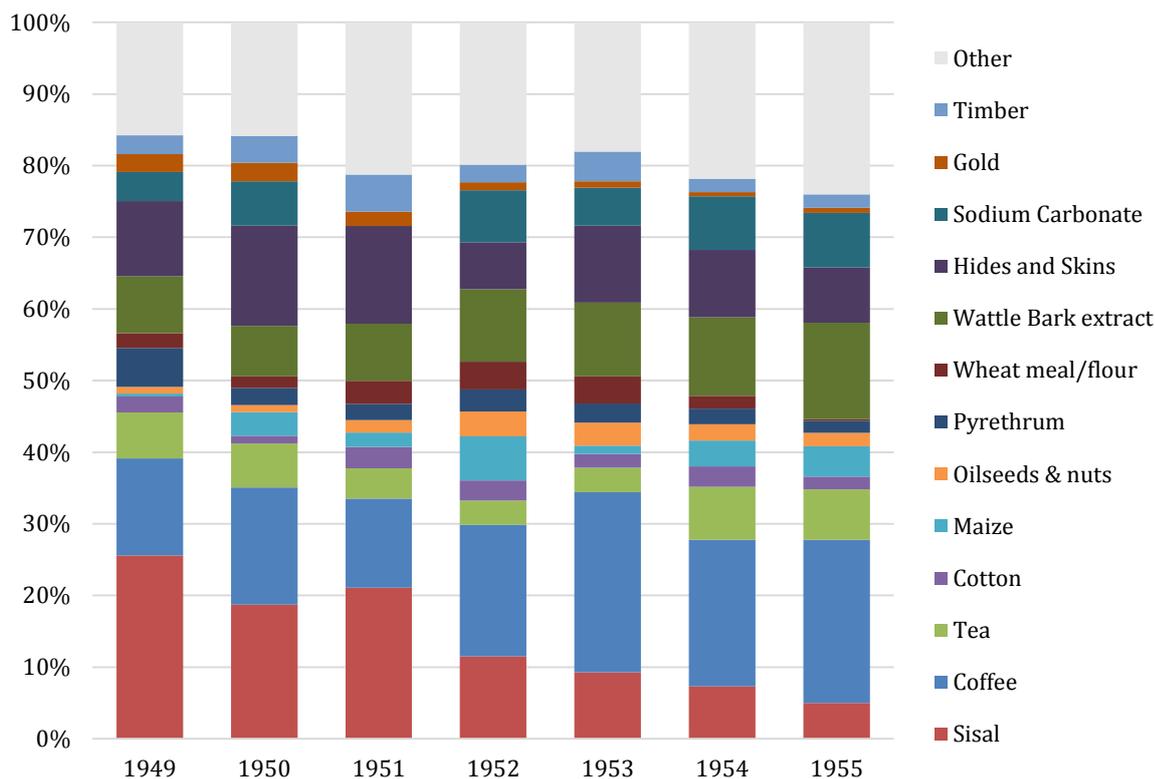


Figure 3-11. Annual export article value as percentage of total value of exports. *Source:* Forest Department Annual Reports, 1948-1955; Colony and Protectorate of Kenya, *Statistical Abstract 1955* (Government Printer, Nairobi, 1957), p.22. Note that a wider definition of timber to include logs, slats, manufactured articles, and railway sleepers has been used to produce the timber data in preference to the definition in the *Statistical Abstract*, which only considered logs.

production to drop from Nyeri, Nairobi, and Thomson's Falls forest divisions, this was compensated by increased output from mills west of the Rift Valley that were unaffected. Indeed, production from the indigenous forest reached its peak during Mau Mau in 1954 and only started to decline in 1957 (Figure 3-8) because of the knock-on effects of a recession in the world timber trade that followed the post-war boom and increased exploitation of the exotic plantations.⁹⁰⁷

When Waterer stated in regard to the post-war timber industry up to 1953, that "in the space of a very few years ... an export trade [has grown] which ranks as one of the major currency-earners for the Colony,"⁹⁰⁸ he may have been trying to put a positive face to the expanded trade of 1951, but the reality was that timber exports were not a large earner for the colony (Figure 3-11). The post-war surge in demand, especially UK demand, allowed many sawmills to continue bad practices in their processing of logs into timber. The exports to the UK indicate that at least some of the mills were producing to a standard that was acceptable in the UK. However, the reports of poor quality shipments and the preference to return to the use of European and North American timbers once these became available are indications that the Kenyan mills had failed to make a favourable impression on the UK market. This was so because while supplies of indigenous timbers were

⁹⁰⁷ Kenya Forest Department, *Departmental Report 1955-1957*, 23-26.

⁹⁰⁸ Kenya Forest Department, *Departmental Report 1951-1953*, 32.

plentiful and there was a strong market for these within Kenya and abroad that could apparently be satisfied by low-quality produce, there was little incentive to sink large amounts of capital into the modernisation of equipment and techniques. Such an attitude was indicative of a wider malaise within the Kenya timber industry. Timber brokers and importers in the United Kingdom reported that they had seen little commitment from millers in Kenya in regards to developing exports. The lack of a proper timber storage yard in Mombasa was taken as evidence “for not taking the export trade seriously.”⁹⁰⁹ The overwhelming focus of the timber exporters was the British market in the post-war period,⁹¹⁰ a fact that exposed the sawmills in Kenya to the fluctuations in that market with only moderate penetration in other markets in Africa and around the Indian Ocean that could compensate for slumps.

Criticism like that offered by the British timber brokers and the slump of 1951 that resulted in two sawmill firms going bust and a further four changing hands appear to have woken some of the mills to the realisation that reform was needed.⁹¹¹ Timsales reported in 1957 that “very efficient mills, very near to the optimum for these circumstances [of exploiting indigenous forests], are already operating.”⁹¹² These were perhaps the most profitable mills, as the same report considered that “profits are meagre for all but the most efficient millers.”⁹¹³ It seems likely that such efficient millers were pulling ahead in the industry, leaving behind those smaller, less professional mills more suited to the ad hoc patterns of exploitation associated with the earlier days of colonialism in Kenya. Lack of extant financial data concerning the mills hinders assessment of this claim, however it seems clear that Timsales itself was evolving into a major player in milling. More than simply an association of millers, by 1947 Timsales owned four sawmills and by 1955 it was sufficiently capitalised to respond to criticisms of lack of commitment by erecting new warehouses at Mombasa

⁹⁰⁹ Murton, ‘Report on Consumer Licensing of Podo in the United Kingdom, Market, Etc.’ Murton specifically reported a lacklustre approach to handling export enquires and an indifference to the UK market among many Kenyan millers apparently because they felt they could always fall back on the local market or sell to South Africa and Rhodesia.

⁹¹⁰ There is little evidence that millers or timber merchants sought timber markets in South Africa or Rhodesia between 1945 and 1963. Data compiled from across the department’s annual reports indicates that in 1946 38 per cent of the export of ‘other timber’ (including podo and cedar planks but not pencil cedar slats) were destined for South Africa, with the figure for Southern Rhodesia being 11 per cent. However, 1946 was something of an anomaly. In no other year in this period did the percentage of exports of ‘other timber’ to South Africa and Rhodesia rise above 2 per cent, with the level in most years being well below 1 per cent. East African Timbers Propriety Limited was one company that did try to compete in South Africa in the specialist “mahogany type” timbers market but found Kenya unable to supply these in suitable quantities (‘Transcript of Interview with George E. Lavin, Southern African Airways and East African Timbers, Conducted by Dr. William Beaver’, 28–35.) No pencil slats were exported to South Africa or Rhodesia. For both pencil slats and other timber, exports to the UK dominated. After wartime demand ceased, the percentage of exports of other timber to the UK would reach 90 per cent of the total. After 1955 this figure was eaten away by a dramatic increase in export share to Somaliland, Zanzibar, Pakistan, Greece, and Australia. Exports of pencil slats were almost all destined for UK ports, although West Germany’s share of these expanded to almost equal that of the UK by 1960. With the overall drop in total exports of timber in the second half of the 1950s, these changes should be interpreted as a result of the declining demand in the UK rather than an actual increase in amounts of timber heading for other countries.

⁹¹¹ Kenya Forest Department, *Departmental Report 1951-1953*, 27.

⁹¹² Henson, ‘The Future of the Timber Industry of Kenya’, 5.

⁹¹³ *Ibid.*, 13.

for the proper storage of timber awaiting export.⁹¹⁴ By 1957, Timsales was reporting an annual turnover of £1.5 million, by contrast it considered the financial position of many of the other mills in Kenya to be “little short of disgraceful.”⁹¹⁵

The primary cause of this divide between the larger, progressive sawmill firms and the others was the lack of investment into the industry. In the first three decades of colonial forest exploitation in Kenya, wealthy settlers like Delamere were able to call upon their assets in Britain to invest in small milling operations that would in turn bolster their nascent attempts at farming. The situation by the 1950s was very different. Sporadic attempts at exploiting the timber export market had largely been unsuccessful; where financial success had been achieved it typically accompanied a worsening of the reputation of Kenya timbers as low quality product was dumped on the market. At the same time, sustained, large-scale local demand was predicated on the economic development of the colony’s African population and secondary industry, which was projected by Timsales to only reach a significant level in the 1960s.⁹¹⁶ The timber industry in Kenya was therefore very much a long-term project. Thus, there was negligible attraction for foreign capital in Kenya’s timber industry between 1945 and 1963, a situation reflected in the Timsales’ statement that “by and large, there is very little overseas capital at all invested in the timber industry of Kenya, except in the form of bank overdrafts.”⁹¹⁷

The lack of capitalisation within the timber industry stood in stark contrast to the large amounts of money flowing into both white and African enterprises in the 1950s, as well as the huge expansion in financing the Forest Department itself received. Of the forestry fund the department accrued during the Second World War, nothing was directly invested into the timber industry although mills did indirectly benefit by the building of a more extensive road network into the forests and would, of course, ultimately benefit from the increase in plantations of softwoods. Henson, of Timsales, argued in a draft press release of 1954 that “the Forest and Timber Industries of Kenya may provide the major pattern of economic expansion now so essential to the well being of the future of the Colony.”⁹¹⁸ His hyperbole was no doubt rejected by most, yet the influx of money into forestry indicates that its value to the colony was recognised whereas the importance of the other arm of forest development, exploitation, was not. Three years later, Henson had ceased talking of forestry and the timber industry as quite so closely connected. Instead, he wrote of what

⁹¹⁴ Kenya Forest Department, *Departmental Report 1945-1947*, 21. Kenya Forest Department, *Departmental Report 1954-1955*, 22. Timsales growth continued after Kenya gained independence, buying up smaller mills such as the previously mentioned Sokoro mill in the 1960s and specialising in exploiting the exotic plantations and converting their timber into a large number of processed timber products (such as plywood and flooring). Now based in Elburgon, Timsales appears to still possess a number of processing plants and, at least in the 1980s, led the industry in terms of timber exports. Kamau, ‘Development of a Fibreboard Factory at Elburgon, Kenya’, 262; ‘Timsales’, No date, <http://www.timsales.com>.

⁹¹⁵ Henson, ‘The Future of the Timber Industry of Kenya’, 13.

⁹¹⁶ *Ibid.*, 9.

⁹¹⁷ *Ibid.*, 13.

⁹¹⁸ Frank T. Henson, ‘Draft Press Publication on Forest and Timber Industries’, September 1954, VF/8/3, KNA.

was tantamount to an ideological division between the forester and lumberman that was hindering the ability of the Forest Department to assist the industry:

The high degrees of specialization necessary in forestry make it practically certain that foresters lack the industrial qualifications and experience necessary to offer guidance to the industry. The most successful foresters remain foresters, just as the most successful lumbermen remain within the industry.⁹¹⁹

This was an attitude that though strongly felt in Kenya was not confined to that colony. Comments by a delegate of the Timber Trades Federation on his attendance of the Sixth Commonwealth Forestry Conference held in Ontario, 1952, that “too long have Foresters and Timber Traders dwelt as races apart”⁹²⁰ indicate that the division between forestry and private enterprise was a common and long-standing situation.

As the Forest Department retained a monopoly of control over the timber industry’s raw material, the forests, its attitude shaped the success or otherwise of that industry.⁹²¹ Through its system of licenced exploitation the Forest Department regulated the quantity and type of timber that could be extracted from its forests and therefore could restrain the profits of the timber industry in the name of sustainable yield. When the department stated in its 1950 report that it hoped demand for timber would decrease to enable production to fall back into line with the “permissible cut”⁹²² it was essentially stating that production, and therefore the potential profits, of the sawmills should be held back. The Forest Department’s position was informed by its fear of overexploitation. This was a fear that had been very publically aired in the pages of the *Empire Forestry Review* in 1945 and 1946 when R.M. Graham, Assistant Conservator within the department, wrote an uncompromising article, complete with detailed statistics to argue his case, on how the forests of Kenya were being overexploited.⁹²³ Graham’s intention was no doubt to make the case for the expansion of forestry efforts in Kenya, but to the potential investor in the timber industry such pessimistic accounts can hardly have been reassuring. The department’s utilization officer, S.H. Wimbush, unsurprisingly refuted all that Graham argued, and did so very publically by

⁹¹⁹ Henson, ‘The Future of the Timber Industry of Kenya’, 16.

⁹²⁰ E. Bryan Latham, ‘The Sixth British Commonwealth Forestry Conference as Seen by a Timber Man’, *Empire Forestry Review* 32, no. 1 (March 1953): 50.

⁹²¹ Forest Department Annual Reports, 1945-1963. Though the department did not have full control over the small area of remaining forest that existed on the estates of settlers nor those forests within native reserves, the production from these was marginal in comparison to the state forests. Data on the amount of timber extracted from the native reserve forests is not available, however data on fuel extracted are and give an indication of the relative level of exploitation. Between 1944 and 1956, an average of only 6 per cent of woodfuel production recorded by the department came from the native reserve forests; the vast majority was from those forests controlled directly by the department. Assuming a similar scenario for timber production would indicate the central position of state not private or native reserve forests. After 1956, the proportion of woodfuel obtained from native reserve forests rose, reaching a high of 20 per cent in 1959. However, the actual tonnage of fuel extracted from the native reserve forests did not increase dramatically (indeed, more fuel was extracted in 1948 than 1959) as the decline of railway demand and the gradual switchover of industry to hydro and diesel power reduced the cut from state forests. This in turn indicates a remarkably steady African demand for woodfuel.

⁹²² Kenya Forest Department, *Departmental Report 1948-1950*, 19.

⁹²³ Graham, ‘Forestry in Kenya’.

calling Graham's article a "slur upon forest management in Kenya."⁹²⁴ Graham was effectively implying that Wimbush was failing in his role as liaison and assistant to the timber industry.⁹²⁵ Five years later, Graham was acting conservator of the department and it is therefore no surprise that the department's annual report again expressed his concern at overexploitation; again, the reaction among potential timber industry investors can hardly have been positive.

The establishment of the position of utilisation officer in the 1930s has been shown (chapter 2, section 2.2.2) as an important development as it increased Forest Department engagement with the timber industry. Wimbush was transferred on promotion to Nigeria after the Second World War with a successor arriving at the end of 1948. The new utilisation officer, R.A.C. Skipper, brought experience from his time working in an "important sawmilling post" in a timber company in Burma: he was a lumberman not a forester.⁹²⁶ Clearly, then, the Forest Department was aware that it needed a man with practical experience of the industry not forestry, and put him in charge of improving the handling and care of timber during transit and storage, the creation of timber grading rules (appointing two grading inspectors to work under him) and investigating the characteristics of Kenya's timbers pertinent to their use in industry. Publically the department stated that Skipper "is a great asset"⁹²⁷ because of the work he was undertaking. Privately the department considered, "it must be confessed that Mr. Skipper's efforts to improve the organisation and technique of sawing in the mills throughout the country generally have so far been disappointing."⁹²⁸ This statement appeared to blame Skipper for the lack of development in the timber industry, and displayed no awareness of economic conditions that were curtailing investment. The lack of faith in Skipper led the department to reject the idea that he be sent to America on a fact-finding mission about the US timber industry in favour of W.E.M. Logan, a conservator of forests who received a Commonwealth Fund Fellowship for the trip.⁹²⁹

The choice of Logan represented the department falling back to old ways: Logan followed the classic forestry path, being educated at Oxford and then going into a senior position in Kenya immediately after the Second World War. Logan went on to become Chief Conservator of Forests in Uganda, and so was certainly a very capable officer, yet he had no particular specialism in forest exploitation nor experience of working with or for industry. His promotion to Deputy Chief Conservator of Forests, Tanganyika, almost immediately after his return from his one-year mission to America also meant that the primary means for the dissemination to the timber industry of all that he had learnt was his report of 1953.⁹³⁰ How this report was taken and how widely it was read

⁹²⁴ S.E. Wimbush, 'Correspondence Re: Graham, "Forestry in Kenya"', *Empire Forestry Review* 25, no. 1 (1946): 102.

⁹²⁵ Wimbush, 'Correspondence Re: Graham, "Forestry in Kenya"'.

⁹²⁶ Kenya Forest Department, *Departmental Report 1945-1947*, 35.

⁹²⁷ Kenya Forest Department, *Departmental Report 1948-1950*, 18.

⁹²⁸ C.W. Elliot (for Conservator of Forests) to Secretary for Agriculture and Natural Resources, 25 May 1950, VF/14/2, KNA.

⁹²⁹ W.E.M. Logan, 'Report of a Study of American Softwood Logging and Milling Methods with Special Reference to Their Potentialities in Kenya' (Colony and Protectorate of Kenya, Government Printer, 1953).

⁹³⁰ *Ibid.*; Webster and Osmaston, *A History of the Uganda Forest Department 1951-1965*, 93.

within Kenya's timber industry is unknown. For those that did read it, Logan's main point of emphasising the extent of mechanisation of American exploitation must have seemed little more than a pipe dream to many millers in Kenya although some of his points on efficient mill design may have been taken on board.⁹³¹ All of Logan's suggestions would have required extensive capital investment, yet not a single paragraph within the 121 pages that made up his report mentioned finance. The report was a reflection of the approach the Forest Department was, at its core, taking toward industry: akin to its experiments with establishing exotic trees within Kenya, the department viewed the problems within the industry as technical and saw its role in solving these as advisory.

Skipper resigned in 1953 to move to Uganda.⁹³² His replacement as utilisation officer, L. Lowsley, had a background in sawmilling in many countries, thus illustrating that the department did continue to recognise the value of employing a liaison with experience of industry. Along with Lowsley, the department also continued to employ two timber grading officers whose duty it was to ensure the timber produced by the sawmills met the standards defined by the East Africa Timber Advisory Board (EATAB).⁹³³ Under Lowsley, between late 1955 and 1957 the department also set up a sub-committee of EATAB composed of the utilisation officers of the three East African territories: Kenya, Uganda, and Tanganyika. EATAB itself had provided a means for executive collaboration on matters of timber exploitation, although the comparatively immature state of milling in Uganda and Tanganyika meant this functioned more as a way for Kenya to distribute its knowledge to the other territories. The utilisation sub-committee extended such co-operation to those who had most regular communication with the industry.⁹³⁴

⁹³¹ Logan, 'Report of a Study of American Softwood Logging and Milling Methods with Special Reference to Their Potentialities in Kenya', 110–21.

⁹³² The episodes of Skipper and Logan were repeated in the appointment of A.K. Constantine as a forest economist. Formerly the general manager of Timsales, the 1948 recruitment of Constantine into the Forest Department as an economist was intended to aid with "dealings with industry and commerce..." It was reported in 1950, however, that he had spent the previous two years investigating not industry and commerce but the economics of the department's own plans for development, which culminated in the assistance he gave to a report on the possibility of Kenya establishing its own forest commission but did not consider the development of industry. Constantine resigned between 1951 and 1953, for unknown reasons, and with him went the position of forest economist, perhaps considered by the department's new chief, Waterer, to be unnecessary. Of the little information available about Constantine (notably there is no extant correspondence on or by him) there is no indication that the post of forest economist was to be temporary or only exist to meet the needs of the Hiley enquiry. This lends credence to the idea that the post was abandoned during Waterer's reorganisation of the department. It is possible to speculate that this was the reason for Constantine's resignation, or even that he felt he was not able to pursue his job remit, however as Constantine is recorded as living in Kenya since at least 1910 and operating businesses in the colony since at least 1918 it seems more likely he retired due to his age. Kenya Forest Department, *Departmental Report 1951-1953*, 38. Kenya Forest Department, *Departmental Report 1948-1950*, 1; Hiley, Gill, and Constantine, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission'. Kenya Forest Department, *Departmental Report 1945-1947*, 35.; *The Official Gazette of the East Africa Protectorate of Kenya*, vol. 12, 252 (Nairobi, 1910), 250; *The Official Gazette of the East Africa Protectorate of Kenya*, vol. 20, 576 (Nairobi, 1918), 58.

⁹³³ Kenya Forest Department, *Departmental Report 1951-1953*, 27–28, 39.

⁹³⁴ Kenya Forest Department, *Departmental Report 1955-1957*, 25.

Little material survives that allows thorough evaluation of the impact Lowsley, who served until his death in 1960, and his colleagues were able to make on the timber industry. However, documentation such as that by Henson certainly make it clear that mill efficiency did generally improve, albeit this was also because the licences the department was issuing to mills mandated improvements.⁹³⁵ In its report of 1954-55 the department very clearly, almost defensively, stated:

The Department, through its Utilization Officer, has provided all assistance within its power toward the improvement of sawmill layout, design, and equipment to the industry.⁹³⁶

Such a statement was also printed in its 1951-53 report. In doing so, the Forest Department was pre-empting and possibly responding to any criticism of the timber industry; any problems in the industry, in other words, were laid squarely on the shoulders of the industry itself while the department could be congratulated for its assistance in any improvements that were made. In fact, the strong market for timber up to 1955 would have allowed those mills equipped to cater for it to gradually invest and improve (Figure 3-6), which was probably as significant a motivator for investment as the regulatory measures enforced by the department.

It was only with the 1962 official history of forestry in Kenya that the department spoke directly of the issue of undercapitalisation of the timber industry and identified its own policies as partly to blame. The department had an inherent fear of over-exploitation of the forests. Intensified by the absence of proper enumerations of the forests, the granting of overly generous concessions to individuals such as Grogan in its nascent phase of establishment, the rampant exploitation of the Second World War and immediate post-war years, and the very patchy distribution of easily exploitable trees within the natural forests, such fears were manifest in its insistence on short-term licences that rarely exceeded ten years.⁹³⁷ With only limited prospects and an unpredictable local and export market, mills operated on a temporary footing, seeing large investments as unnecessary and even a risk to short-term profit.

One option that would have allowed more cost-effective forest exploitation was the more extensive use of pit sawing.⁹³⁸ This extraction method relied on large teams of Africans working with hand tools to fell trees and process the logs on the spot. Long in use by forestry across the world before extensive mechanisation took over, the method was also used in Kenya throughout

⁹³⁵ Henson, 'The Future of the Timber Industry of Kenya'; Kenya Forest Department, *Departmental Report 1951-1953*, 27.

⁹³⁶ Kenya Forest Department, *Departmental Report 1954-1955*, 22.

⁹³⁷ Logie and Dyson, *Forestry in Kenya*, 13.

⁹³⁸ Another option for more efficient milling that could have been implemented more extensively to overcome the limitations, natural and artificial, of exploitation in Kenya was that of the mobile mill. Described in detail by Logan after his time examining American milling methods, these mills relied on increased mechanisation and high mobility to exploit more isolated parts of the forest (Logan, 'Report of a Study of American Softwood Logging and Milling Methods with Special Reference to Their Potentialities in Kenya', 116.) Their requirements of larger initial capital investment and more specialist staff, of which there was a considerable shortage in the 1950s and no plans to train Africans for such positions, seems to have been enough to deter their extensive use in Kenya (Henson, 'The Future of the Timber Industry of Kenya', 14.)

the colonial period. The department had gradually allowed an apprentice system to develop among pitsawyers, who were largely Kikuyu. With the massive need for any grade of timber during the Second World War pitsawing became a large-scale and mostly unregulated industry.⁹³⁹ Forest Department alarm at this was joined by that of at least one Local Native Council (LNC, which later became African District Councils), Meru's. In 1942 Meru LNC expressed alarm at the exploitation of large timber trees by pitsawyers in their district. Such trees were supposedly protected by clan elders, yet the LNC complained that elders were routinely being "persuaded by means of a small present" from Kikuyu pitsawyers who wanted access to trees in Chuka and Mwimbi (north-east Mount Kenya).⁹⁴⁰ With pitsawyers thus diverting money away from LNCs, over-exploiting the forests, and a cause of ethnic division in the Meru case, between 1945 and 1950 the department strove to extend regulation to this burgeoning business, and by 1947 it stated that most pitsawyers had been disposed of, with those remaining being the most efficient and now operating under licences issued by LNCs. This was a process that attracted the full support of the Meru LNC, which also set in place a scheme for replanting trees felled by pitsawyers.⁹⁴¹

Significantly, this process allowed pitsawing to become isolated to those areas where no sawmills operated, preventing competition between low-cost African enterprise and the mills.⁹⁴² Between 1948 and beginning of the Mau Mau rebellion in 1952, the department attempted to intensify the regulation of pitsawing by encouraging the formation of pitsawing co-operative societies with the aim of raising production standards. With the majority of pitsawyers being Kikuyu, Mau Mau meant they were "obviously a menace to the security of the districts in which they were working."⁹⁴³ Pitsawing was therefore all but completely eradicated by the end of 1952 and although it did return by the late 1950s, it did not resume anything like the scale it operated at before 1952. The draconian regulation inhibiting the growth of this industry was a cause for complaint in the Legislative Council by the early 1960s, when S.I. Kathurima of Meru raised the issue of an apparent de facto prohibition on pitsawing in Crown forests; a complaint no doubt related to the revenue the Meru council had lost with the demise of the industry.⁹⁴⁴ Even prior to 1952 pitsawing can be seen as a marginalised industrial activity, kept in its place to protect the weak sawmilling sector that supplied colonial needs. In 1952 the department sold 5,130 hoppus tons of logs for processing to pitsawyers. Seemingly an impressive figure, this equated to just 2 per cent of total timber sales in 1952.⁹⁴⁵

⁹³⁹ Logie and Dyson, *Forestry in Kenya*, 13.

⁹⁴⁰ 'Minutes of Meru Local Native Council Meeting' 24 March 1942, VQ1/28/37, KNA.

⁹⁴¹ 'Minutes of Meru Local Native Council Meeting' 26 September 1947, VQ1/28/37, KNA.

⁹⁴² Kenya Forest Department, *Departmental Report 1945-1947*, 21.

⁹⁴³ Kenya Forest Department, *Departmental Report 1951-1953*, 30.

⁹⁴⁴ Colony and Protectorate of Kenya, 'Legislative Council Debates Official Report' (Vol. LXXXVII (Part 1). First Session. Hansard, Nairobi, 11 July 1961), 1058.

⁹⁴⁵ Kenya Forest Department, *Departmental Report 1951-1953*, 30.

3.3.3 Science versus the lumberman

The post-war period was one in which the Forest Department reinforced its position of control over the exploitation of state forests, expanding its regulatory powers and effectively pursuing a policy through licencing that exacerbated the reluctance of investors to look upon Kenya's sawmill industry in a positive light in a period of fluctuations in timber demand. The department's mistake in 1950 that allowed huge quantities of timber to be exported, hurting local supply, must have shown it that the timber industry would seek short-term gain at the expense of its own future if it was unregulated. Caution, then, characterised the department's approach. Assistance to the industry was increased, although this largely took the form of guidance that, for the smaller sawmill firms in particular, was probably lost in the clamour to stay solvent. Essentially, the Forest Department needed a timber industry to absorb what it considered to be the sustainable yield of the natural forests, but it did not need anything more than this while its exotic plantations of softwoods were still immature. This was a point the Hiley report on the future of forestry in Kenya explicitly made regarding exports. The immediate goal was not to develop a large export trade as Kenya had not the standing timber available to do so; exports would only turn a significant profit when the output of the plantations was ready from the mid-1960s onwards.⁹⁴⁶

This attitude toward economic development was also present in other national forest policies of this period. Neighbouring Uganda, for example, established a forest policy in 1948 that ranked the importance of protection forests⁹⁴⁷ equal with that of production forests and was clear that production could only be allowed at a level where it did not threaten the core value of maintaining the country's forest reserves at a set acreage.⁹⁴⁸ Owing to debate concerning the Hiley report's recommendations for establishing a forest commission and the subsequent outbreak of Mau Mau, Kenya did not publish its own official forest policy until 1957. Within it the same attitude as that presented in Uganda was present. Its first three articles were all exclusively concerned with conservation of the forest estate and protection of water catchment and soil. Only after this were articles in which forest product exploitation was highlighted, with the caveat that this must be done following the principle of sustained yield.⁹⁴⁹ This was a principle that the policy did not define, perhaps considering it common knowledge, which it certainly was within the sphere of forestry.⁹⁵⁰ An actual definition of sustainable yield is given in the handbook of forestry produced by the

⁹⁴⁶ Hiley, Gill, and Constantine, 'An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission', 21.

⁹⁴⁷ Protection forests were defined in the forest policy statement as those that had the primary purpose of protecting hydraulic systems (maintaining tree cover over catchment areas) and preventing soil erosion, but also had a secondary purpose of production.

⁹⁴⁸ Eggeling and Sangster, *Elementary Forestry*, 10–11.

⁹⁴⁹ 'Forest Policy for Kenya'.

⁹⁵⁰ The principle of sustained yield was first made an explicit part of the resolutions passed at the Empire Forestry Conferences, which directed the very general path of forestry development across the colonies, in 1952, where it formed a part of the first resolution of the conference. A useful summary of the resolutions passed at the forestry conferences of 1935, 1945, and 1952 can be found in: W. MacF. Robertson, 'A Note on the Second Three Forestry Conferences, Empire and Commonwealth, Held in South Africa, the United Kingdom, and Canada', *Empire Forestry Review* 36, no. 2 (June 1957): 157–68.

Uganda Forest Department, but was also suitable for use across the tropical and sub-tropical colonies, where it is stated that the yield must be “equal in quantity each year and for all time.”⁹⁵¹ A sustainable yield was thus a rigid figure that, it follows, could only be derived at once a full inventory of forest stock had been made and estimates produced on annual increases in the volume of this stock. To Bryan Latham, a representative of the timber industry present at the Sixth Commonwealth Forestry Conference (1952) this idealistic view on yield ignored the reality that “a policy of sustained yield required as a necessary corollary a policy of sustained and orderly markets, as free as possible from Government interference.”⁹⁵² Indeed, the fifth resolution of the conference called for Commonwealth governments to pursue the goal of “orderly marketing” to aid the sustainable yield goal.⁹⁵³ Five years later, at the Seventh Commonwealth Forestry Conference, the need to support industry was made explicit as it was resolved that sustainable yield needed “to be more closely linked to the needs of the wood-using industries as an essential to their long-term stability.”⁹⁵⁴ The Kenya Forest Department made no such link between its policies and the needs of the timber industry.

The Kenya Forest Department did not possess a full inventory of its forests, needed to calculate accurate sustainable yield, within the colonial period. A project to accomplish this by using aerial photography, which was funded by the Canadian government and conducted by staff of the Canadian Department of Forestry, was only begun as Kenya gained independence.⁹⁵⁵ Throughout the 1950s the department did increase the number of working plans it compiled. Mau Mau hindered this process but by 1961 approximately a quarter of the colony’s forests were under working plans or the simpler planting plans.⁹⁵⁶ Prior to these being completed, estimates that were essentially little more than educated guesses on the quantity of timber in the colony’s forests varied widely. Graham’s dire predictions of future timber shortages and overexploitation published in 1945 stated that Kenya’s forests would be exhausted of podo after another 400,000 hoppus tons were extracted.⁹⁵⁷ However, Graham knew this was just a guess, later adding “nobody is in a position to

⁹⁵¹ Eggeling and Sangster, *Elementary Forestry*, 13.

⁹⁵² Latham, ‘The Sixth British Commonwealth Forestry Conference as Seen by a Timber Man’, 49.

⁹⁵³ Robertson, ‘A Note on the Second Three Forestry Conferences, Empire and Commonwealth, Held in South Africa, the United Kingdom, and Canada’, 165.

⁹⁵⁴ ‘Resolutions of the Seventh British Commonwealth Forestry Conference Held in Australia and New Zealand, 1957’, *Empire Forestry Review* 36, no. 4 (December 1957): 424.

⁹⁵⁵ Kenya Forest Department, *Annual Report 1963*, 3.

⁹⁵⁶ Kenya Forest Department, *Annual Report 1961*, 5. Planting plans appear to have been simply directions for the course of planting and did not include the extensive enumerations required of working plans, they were also confined to the exotic plantations. At a meeting of the working plans officers of Kenya, Uganda, and Tanganyika in 1950 it was revealed that even where plans had been made prior to that meeting there were “numerous cases” where they had been simply lost and not followed. Existing documentation does not reveal whether this alarming habit continued, but the same meeting did set down practical guidelines including such basics as the printing of plans with the aim of establishing working plans as coherent and effective documents. East African Agriculture and Forestry Research Organization (EAAFRO), ‘Proceedings of the Specialist Committee on Forestry Research, 13-15 December 1950’, 9.

⁹⁵⁷ Graham, ‘Forestry in Kenya’, 161.

say how much millable timber is left in Kenya.”⁹⁵⁸ His own figure was a vast underestimate; between 1946 and 1962 more than one million hoppus tons of podo were felled from Kenya’s forests. Another remaining standing timber figure of 4,400,000 hoppus tons of podo and cedar calculated for the 1947 Fifth British Empire Forest Conference was considered accurate enough to be repeated in other official publications although the department, probably keen to downplay its own lack of knowledge and the possibly dismal economic opportunities, never published it in its own annual reports.⁹⁵⁹

The closest to an actual annual sustainable yield, surely the figures investors would have been most interested in, are those given in Henson’s 1957 survey of lumbering. Henson provides a figure of 50,000 hoppus tons of podo and cedar available for exploitation in 1960, with an additional 35,000 hoppus tons of exotic softwoods (mainly cypress) available in the same year.⁹⁶⁰ He further states that local demand for softwoods would be approximately 64,000 hoppus tons in 1960.⁹⁶¹ These figures for both availability and demand were conservative in the extreme. Clearly the 50,000 tons figure for 1960 was not a yield set by the Forest Department, as in actuality the department allowed 151,809 hoppus tons of timber (all species) to be extracted in that year (Figure 3-8).⁹⁶² Rather than there appearing to be a clear set of sustainable yield figures being produced by the Forest Department, it seems that an entirely ad hoc approach was being taken with the local forest officer effectively deciding on the spot how much a licensee could fell. Furthermore, Henson’s low figure for local demand was far below any amount that had been felled since 1942. This figure appears to have been set deliberately low to mask the great deal of uncertainty that existed on the levels of local demand and overall yield; if this had been known publically it would have damaged even further the investment appeal of the Kenya timber industry. The department’s attitude to the timber industry should very much be seen within this light; it could not allow the industry to develop to a large degree when it did not have a clear picture of how much stock it possessed.

The attitude is further reflected in incidences of Forest Department interaction with the industry. When uncertainty over Kenya’s future caused a reduction in local building in 1960 and a subsequent recession in the timber trade the department brought in a 50 per cent rebate on timber royalties. This was enough to save the industry but not the smaller, less efficient mills, who went into receivership or liquidation while the more modern mills operating under Timsales

⁹⁵⁸ Ibid., 165.

⁹⁵⁹ Hiley, Gill, and Constantine, ‘An Economic Survey of Forestry in Kenya and Recommendations Regarding a Forest Commission’, 12.

⁹⁶⁰ Henson, ‘The Future of the Timber Industry of Kenya’, 2. According to Henson’s figures the availability of podo and cedar would have dropped to 5,000 hoppus tons by 1975 and have been virtually nil by 1980. Production from cypress (and later pine) plantations would have risen from 35,000 hoppus tons in 1960 to 142,000 in 1970 and 257,000 hoppus tons by 1980.

⁹⁶¹ Ibid., 9. Local demand estimates for other projected years were: 1965: 73,000, 1970: 82,000, 1975: 93,000, and 1980: 105,000 hoppus tons.

⁹⁶² 95 per cent of the 151,809 production figure was exported in 1960, indicating that local demand was more than double Henson’s estimate. Kenya Forest Department, *Annual Report 1960*.

continued.⁹⁶³ The culling of the less efficient operations was a boon to a department whose focus was propagating the proper level and manner of exploitation, not propping up industry. Within this light, the heavy involvement of the department in attracting overseas interest, investigation and investment in the establishment of a paper mill through the 1950s, a process that was still ongoing in 1963 but eventually successful, was not motivated by an interest in developing the already existing timber industry.⁹⁶⁴ Indeed, the project did not assist the existing industry at all, rather it was the result of a realisation that the timber industry was not in a position to exploit the increasing quantity of small, secondary material that was being produced by the exotic softwood plantations. Abandonment of such material would have been wasteful and reflect badly on the department, its exploitation was therefore needed; the participation of the existing Kenya sawmills was not. Henson of Timsales was thus very much correct in identifying a rift between the technocrats of the Forest Department and the businessmen of the sawmills. The Forest Department never wanted a large timber industry as the sustainable yield of the forests would not permit it; instead, it was working toward fostering a smaller but modern industry that would be able to properly exploit its large acreage of exotic plantations for years to come.

3.4 Reservation, Re-forestation, and Re-education

3.4.1 Taking control

The Forest Department was the largest beneficiary of the rampant forest exploitation of the early 1940s, yet Africans within the native reserves were certainly not blind to the potential riches that this period of extensive logging revealed. In particular, African elites sought engagement in forestry dialogues in an attempt to gain access to forest revenues and products that were being appropriated by the sawmilling industry and the government. However, Africans were almost totally excluded from the machinery of high-level forest policy; within the Forest Department Africans were restricted to only junior positions, and had no representation on the key bodies that directed forestry: the Forest Boundary Commission, the Forest Advisory Committee, the Specialist Committee on Forestry Research, the East Africa Timber Advisory Board and its Utilisation Subcommittee, nor were Africans part of Timsales. From 1946 onwards, Africans attempted to gain access to the discourse occurring on the subject of forests through a rather unlikely agent: the settler-initiated and backed Kenya Arbor Society (KAS).

⁹⁶³ Ibid., 20; Kenya Forest Department, *Annual Report 1961*, 18.

⁹⁶⁴ Kenya Forest Department, *Departmental Report 1951-1953*, 29; J.S. Spears, 'Kenya Pulp and Paper Mill Project Appraisal' (Nairobi: Pulp and Paper Company of East Africa Ltd., c/o Ministry of Natural Resources, 1963).

In 1946 the Local Native Councils (LNCs) of Meru, Machakos, Kamasia, Elgeyo, Central Kavirondo, and Digo all joined KAS as corporate members.⁹⁶⁵ KAS was primarily concerned with increasing both rural and urban tree cover, through the Forest Department and by private means, within Kenya and preserving standing forests. From this viewpoint, the society no doubt saw its new LNC membership and a further 20 African members in 1947 as a result of the ‘enlightenment’ of Africans toward forest conservation as it considered “only a few [Africans] are now beginning to have an understanding of their right relationship to the land.”⁹⁶⁶ This statement is ignorant of the probable true rationale behind the sudden upsurge in African membership of an organisation that had existed since 1934; membership allowed indirect access to, and possibly influence, the colonial government’s forest policy. This was possible because KAS’s executive council comprised such influential figures as the Conservator of Forests, Director of Agriculture, Regional Planning Adviser, and the executive officer of the national parks.⁹⁶⁷

Whether this move to gain access to the networks of forestry discourse within the colonial state was useful or not for the LNCs is unclear. Indeed, it is not obvious that the LNCs actually sent delegates to KAS meetings. Certainly the LNCs felt the chance of engaging with this discourse was worth the 10 shilling annual membership fee.⁹⁶⁸ This, then, was the significance of the moves made by the LNCs to engage in forestry through KAS; it represented a wish by African elites within the native councils to participate in affairs related to forestry beyond that which was allowed through the apparatus of the Native Reserve Forest. This was a wish that was at least partly motivated by the revenue potential that forestry represented to LNCs. Figures for 1944, the only year represented in Forest Department records, indicate that at least some of the LNCs were making healthy profits during the Second World War. Meru LNC received £756 in revenues from its Native Reserve Forests (NRFs) in 1944, while Kakamega (Central Kavirondo) received £2,122 and Elgeyo £ 4,970.⁹⁶⁹

The first of those native councils to join KAS, Meru LNC, is illustrative of the push for participation in forestry, particularly in relation to how the council attempted to modify forest development for its own benefit. The case of the reservation of Meru’s forests under LNC control was, indeed, used as a model and an example for the same process in neighbouring Embu in the

⁹⁶⁵ Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1946*, 1.

⁹⁶⁶ Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1947* (W. Boyd & Co., Nairobi, 1947), 3.

⁹⁶⁷ 1946 the governing council of the Kenya Arbor Society was: President: H.B. Sharpe; Vice presidents: The Lady Muriel Jex-Blake, Major K.A. Brown, Captain A.T.A. Ritchie MC OBE, and Captain F. O’B. Wilson CMG DSO; Council: D. Blunt, CMG, G. Gwinnet Bompas, E.W. Carroll, Lt.-Colonel M. Cowie, Mrs C.G. Fane, Mrs E. Grant, Captain J.G. Hewett, MC, N.H. Lee, A. Legat, OBE, J. Rammell, H. Thornleigh Dyer, and E.A. Vasey CMG. Additionally, Rammell became a vice-president in 1947, when the total membership of the society stood at 250. Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1946*, 1; Kenya Arbor Society, *Annual Report and Balance Sheet for the Year 1947*, 1.

⁹⁶⁸ ‘Minutes of Meru Local Native Council Meeting’, 24 July 1946, VQ1/28/37, KNA.

⁹⁶⁹ Kenya Forest Department, *Annual Report 1944*, 7.

1930s.⁹⁷⁰ Contiguous with the Mount Kenya forest reserve, the western third of what would be later become Imenti forest was identified as the possible site of Meru District's first NRF in the early 1920s. A modicum of Forest Department interest was stirred when James Rammell, then an assistant conservator, conducted a rapid tour of the district from the vantage point of a motor car in 1923 and recommended gazettement as NRFs.⁹⁷¹ However, the department showed little interest in pursuing this matter with much vigour beyond the pages of correspondence. The extent of action by the end of 1923 was the cutting of a rough boundary along the forests while royalties from a sawmill established there were not finding their way back to the Meru people.⁹⁷² By early 1928 the Forest Ordinance (Meru) 1927 came into force.⁹⁷³ By 1933, the department was controlling 40,514 acres of forest in Meru, all within Imenti NRF.⁹⁷⁴ By 1959 the department had extended this to 96,127 acres in 18 separate NRFs across the entire district; all managed according to the principles of scientific forestry and with revenues directed to the LNC.⁹⁷⁵

Beginning in 1932 the Forest Department introduced the *shamba* system into Meru. Pitsawyers and forest squatters, both predominantly Kikuyu, were brought in and clashes between these immigrant groups and Meru occurred rapidly after their arrival.⁹⁷⁶ The process continued,

⁹⁷⁰ Alfonso Peter Castro, 'Njukiine Forest: Transformation of a Common-Property Resource', *Forest & Conservation History* 35, no. 4 (1 October 1991): 160–68, doi:10.2307/3983495.

⁹⁷¹ Apparently never venturing far from the road, Rammell's preconceived notions were confirmed when he recorded Meru cultivator encroachment into Crown Forest and numerous other forests scattered across the district's many hills. It was because of this that he recommended these forests be declared NRFs as a matter of urgency, especially in light of the promising softwoods he had found within them. Indeed, a sawmill owned by Young and Ayre had been operating in the vicinity for two to three years prior to Rammell's whistle-stop tour. J.C. Rammell, 'Report on Meru Native Reserve Forests' in Acting Conservator of Forests to Chief Native Commissioner, 23 March 1923, FOR/1/227, KNA.

⁹⁷² A Senior Commissioner complained to his superior that the whole situation was most unsatisfactory, with a lack of definition over boundaries, rights, and the royalty situation. Certainly there was considerable anger directed toward the sawmilling operation, witnessed by the setting of forests fires within the concession by Meru farmers who viewed the forest as their own. R. Weeks (Acting Senior Commissioner) to Chief Native Commissioner, 9 October 1923, FOR/1/227, KNA; Mutegi and Kyalo, 'Origins of Human-Wildlife Conflicts in Meru District', 62.

⁹⁷³ 'Forest Ordinance (Meru) 1927', 6 January 1928, AG/23/315, KNA; 'Notice #14, Native Trust Fund Ordinance', 6 January 1928, AG/23/315, KNA; G.V. Maxwell (Chief Native Commissioner) to Provincial Commissioner (Kikuyu Province), 26 October 1927, FOR/1/227, KNA. The Forest Ordinance finally clarified the legal position of the forests. Dead and fallen wood could be collected by residents of Meru without hindrance or fee, while all cutting of trees had to be done under licence. Simultaneously came the publication of notice 14 under the Native Trust Fund Ordinance, which specified that any royalties derived from this new set of rules should be credited to the Meru LNC. The passing of the ordinance appears to have been directly related to reports of Meru farmers taking advantage of the Forest Department's negligent attitude by increasing encroachment upon the boundary reaching government by October 1927.

⁹⁷⁴ Kenya Forest Department, *Annual Report 1933*, 22.

⁹⁷⁵ 'Meru Forest Rules 1959 (Legal Notice No. 502)', 9 November 1959, AG/23/315, KNA; Mutegi and Kyalo, 'Origins of Human-Wildlife Conflicts in Meru District', 63. Mutegi and Kyalo highlight the popular reaction to this tightening of the noose: further incidents of arson in 1927 and knock-on effects for local farmers as the now protected forests allowed wildlife to proliferate and destroy crops through the 1930s.

⁹⁷⁶ 'Minutes of Meru Local Native Council Meeting', 17 March 1937, VQ1/28/35, KNA; 'Minutes of Meru Local Native Council Meeting', 8 June 1937, VQ1/28/35, KNA. By 1937 the Forest Department did attempt to employ Meru squatters in its forests, yet such engagements were unpopular as the department insisted on filling supervisory positions from its pool of experienced Kikuyu forest squatters. The Meru, it seems, were unwilling to be supervised by Kikuyu while the department insisted this was necessary as the Meru farmers it had managed to recruit did not adapt well to the *shamba* system. They were not, for example, willing to reside within the forests themselves. The reasons for this are not clear, although it was perhaps related to the restrictions placed on forest squatters that deterred other ethnic groups from taking up Forest Department contracts. As a result, the department brought in a

however, and by 1946 divisions within Meru district were demanding that Kikuyu forest squatters be made to leave the district after their contracts were up; suggesting that Kikuyu squatters were using the *shamba* system as a conduit for immigration into areas outside the Kikuyu reserves.⁹⁷⁷ At a LNC meeting in mid-1947 this “problem of Kikuyu immigration into Meru District”⁹⁷⁸ was discussed in detail, wherein:

The Rev. Philip M’Inoti stated that the original trouble began when Government agreed to allow Kikuyu squatters in Imenti Forest. When the contract with these Kikuyu squatters terminated they settle in Meru District instead of being returned to their own District. These squatters then brought their friends and relations who in turn brought their friends and relations until the numbers grew to the present proportions.⁹⁷⁹

Investigation of the “proportions” of the problem were begun a week earlier when the LNC forest committee demanded to know the number of Kikuyu forest squatters in the district and what measures had been taken to replace them. “New appointments” to the forest squatter force, it maintained, “should only be Meru.”⁹⁸⁰ The Meru LNC forest committee was satisfied to hear that the number of Meru forest squatters had increased from eight in 1944 to 44 in 1946.⁹⁸¹ Several months later the issue was raised once again as the Forest Department persisted with its policy, “until the Meru displayed more energy and skill it was essential to retain a nucleus of 30 Kikuyu, as at present.”⁹⁸² The department clearly had preference for its experienced Kikuyu squatters and so placed the goal of efficient plantation establishment over that of local ethnic politics.

The Meru LNC’s insistence on prioritising Meru farmers for squatter contracts combined with the reluctance of those farmers to accept such contracts again became an issue in 1949 when the assistant conservator for Meru was forced to issue an “urgent appeal”⁹⁸³ for Meru squatters. One hundred squatters were required, yet only 10 had come forward. The assistant conservator’s environmental argument that “the forests would degenerate and become barren in 50 years time”⁹⁸⁴ if insufficient labour caused the halting of replanting was unsuccessful as the silence of Forest Department records on the matter of Meru forest squatters in the 1950s indicates that none were found. The true context for this need for 100 squatter families was the Forest Department’s 1946 Development Plan. This called for the annual planting of 200 acres of plantations by *shamba* within Meru’s Imenti forest until a target of 5,788 acres had been reached.⁹⁸⁵ Based on a comparison

larger number of Kikuyu, a policy that exacerbated Meru concerns over Kikuyu immigration into the district through the 1940s.

⁹⁷⁷ ‘Minutes of Meru Local Native Council Meeting’, 24 July 1946.

⁹⁷⁸ ‘Minutes of Meru Local Native Council Meeting’, 16 June 1947, VQ1/28/37, KNA.

⁹⁷⁹ ‘Minutes of Meru Local Native Council Meeting’, 11 June 1947, VQ1/28/37, KNA.

⁹⁸⁰ Ibid.

⁹⁸¹ Ibid.

⁹⁸² ‘Minutes of Meru Local Native Council Meeting’, 23 September 1947, VQ1/28/37, KNA.

⁹⁸³ ‘Minutes of Meru Local Native Council Meeting’, 22 August 1949, VQ1/28/37, KNA.

⁹⁸⁴ Ibid.

⁹⁸⁵ D. Davis, ‘Basic Plan for Exotic Softwood Planting in Kenya’ (Nairobi: Kenya Forest Department, September 1955), 7.

of the annual acreage of plantations created between 1945 and 1963 with the annual number of squatters employed across the colony in those years, each family, on average, was capable of establishing 1.97 acres of forest plantation per year.⁹⁸⁶ One hundred squatters, then, was the number the department needed to meet its annual planting target. By 1954, eight years after the Development Plan began, only 212 acres had been established in Imenti, indicating that the department had failed to recruit the needed number of squatters and that the Meru LNC had continued to resist the employment of Kikuyu squatters in its forests.⁹⁸⁷

By resisting the Forest Department over the matter of Kikuyu squatters the Meru LNC was taking the initiative on matters of forestry within its jurisdiction. This trend was mirrored with its handling of pitsawyers within its forests in 1947, wherein their regulation and registration by the Forest Department was supported by the LNC because it was losing revenue from pitsawyers who were paying bribes to local elders to illegally work in forests.⁹⁸⁸ After its early troubles in securing the creation of NRFs within Meru in the 1920s, through the 1930s to when reservation of the district's forests was complete in the late 1940s the Forest Department appears to have encountered little resistance among the elites of the Meru LNC.

Across the interwar and post-war period the Forest Department employed the rhetoric of soil erosion and the relationship between forests and local climate to bolster its case for the creation of NRFs. Despite the effective absence of scientific research in relation to Kenya's local conditions to back these arguments, the Meru LNC appears to have been receptive to them. Hinting at a connection between forest reservation and missionary activity, in early 1937 the Rev. Phillipe, presumably the same reverend who would talk on the matter of Kikuyu immigration ten years later,⁹⁸⁹ explained to a receptive Meru LNC meeting that trees should be protected because they "bring rain".⁹⁹⁰ Several months later the LNC minutes recount a talk given by the council's president, District Commissioner V.M. McKeag, in which he argued the issue of "afforestation is intimately connected with that of soil erosion."⁹⁹¹ To this statement the council was apparently in unanimous agreement and reported they would have no trouble in getting their constituents to plant trees. Indeed, the rationale behind the final set of NRFs created within Meru in the colonial period was an environmental one. These were the Tharaka Hills, totalling some 36,000 acres scattered across southern Meru District. According to the Forest Department these 11 hills were "purely protection

⁹⁸⁶ This figure drops to 1.64 acres per family per year if the date range is taken from 1923 to 1963. Data compiled from annual reports of the Forest Department, 1923 to 1963.

⁹⁸⁷ Davis, 'Basic Plan for Exotic Softwood Planting in Kenya'.

⁹⁸⁸ 'Minutes of Meru Local Native Council Meeting', 23 September 1947.

⁹⁸⁹ Several variations on the name of Rev. Philip M'Inoti of the Methodist mission in Meru appear in the Meru LNC minutes. The autobiography of British missionary John W. Gerrard recounts that the Methodist church in Meru, which was built in 1940, drew upon the "Meru forest" and the local sawmill for its raw materials and was fortunate to do so before war time needs appropriated all available timber in Meru. John W. Gerrard, *Africa Calling: A Medical Missionary in Zambia and Kenya* (I.B.Tauris, 2001), 133-35.

⁹⁹⁰ 'Minutes of Meru Local Native Council Meeting', 17 March 1937.

⁹⁹¹ 'Minutes of Meru Local Native Council Meeting', 27 November 1937, VQ1/28/35, KNA.

forests and of little economic value.”⁹⁹² It was this protection argument and the threat of desertification that the department employed in its debates with the LNC beginning in March 1944.⁹⁹³ Concerns raised by a lone chief over reservation inhibiting the use of the hills as areas of cultivation during periods of famine appear to have been swept aside; the council thereby implicitly advocating the forestry argument of the greater good of the forests to the district as a whole rather than just the people of Tharaka.⁹⁹⁴ Opposition was so slight that agreement, demarcation, and the cutting and beaconing of boundaries was complete by the time of the publication of the department’s 1945-47 report.⁹⁹⁵ Far from being a case of simple opposition to the encroachment of Forest Department control into the native reserves, the Meru LNC’s interactions with the department suggest some African elites were able to exploit and benefit from forestry arguments.

3.4.2 *Hamlets, Village Greens, and the Engineering of a European Idyll*

Concurrent to the expansion of the influence and interest of African elites over forest areas within the native reserves was the Forest Department’s massively expanded post-war planting programme. This was a programme designed to meet Kenya’s long-term timber needs and as such became the core interest of the department, and it was a programme that was almost wholly dependent on the department’s forest squatter system. Discussed here will be the manner in which the Forest Department attempted to mould its workforce into a viable, stable entity between 1946 and 1952 that would ensure the security of its plantations and planting programme for generations to come, while the reciprocal interactions between the squatter workforce and the Mau Mau conflict will be discussed following this.

The increased rate of planting in the post-war period would see the size of the forest squatter population reaching new heights. By 1952, some 5,500 adult men were contracted as resident labourers to the Forest Department (Figure 3-12). If the department’s estimate that every male worker, on average, headed a family of five wives and children, the total squatter population was approximately 28,000 in 1952 and reached a height, in 1960, of some 42,000 men, women, and children.⁹⁹⁶ This substantial workforce allowed the department to establish larger acreages of plantations than it ever had before. The only significant dip in the planting rate in this period came during the State of Emergency when all forestry activity in the Aberdares and on Mount Kenya ceased because of Mau Mau activities.⁹⁹⁷ The drop in both the planting rate and squatter population

⁹⁹² Kenya Forest Department, *Departmental Report 1945-1947*, 9.

⁹⁹³ ‘Minutes of Meru Local Native Council Meeting’, 31 March 1944, VQ1/28/37, KNA.

⁹⁹⁴ *Ibid.*

⁹⁹⁵ Kenya Forest Department, *Departmental Report 1945-1947*, 9.

⁹⁹⁶ The Forest Department very rarely reported on the overall size of the forest squatter population and retained few detailed records of the squatters. The estimate of an additional five family members for each contracted adult male worker comes from Kenya Forest Department, *Departmental Report 1954-1955*, 31. There is no indication of how this estimate was arrived at.

⁹⁹⁷ Kenya Forest Department, *Departmental Report 1951-1953*.

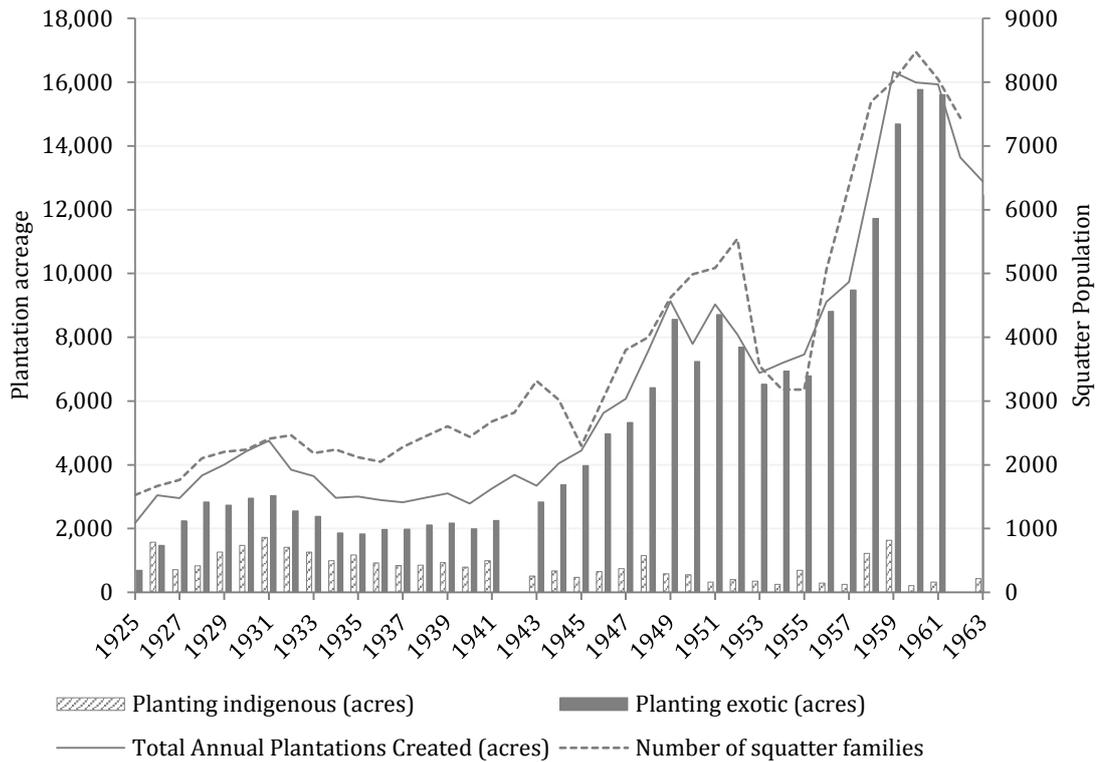


Figure 3-12. Annual total acreage of plantations and type of plantation (indigenous tree species and exotic tree species) compared to the annual size of the forest squatter population (representing male heads of household only). Data on the breakdown of plantation type is unavailable for 1942 and 1962. Sources: Forest Department Annual Reports 1925-1963.

as Kenya transitioned to independence goes unexplained by the department. It was perhaps merely a pause as planting programmes came to an end before new programmes began. Excisions of several thousand acres from the forest estate were also being considered at this point, including one scheme for the resettlement of ex-Forest Department squatters.⁹⁹⁸ It was natural, therefore, for the department to be hesitant in beginning or continuing planting in areas that were possibly to be excised.

Rapid expansion in the size of the forest squatter workforce came immediately after the cessation of hostilities in 1945 and by 1947 the department was employing more squatters than it ever had before. This great bolstering of the forest squatter population stood in stark contrast to the concurrent deprivations being suffered by the squatters residing on the farms of European settlers. This immediate post-war period, up until the outbreak of Mau Mau in 1952, was one in which the settlers strove to reduce the status of squatters from that of farmers who worked for 90 days per year to almost pure resident labourers. That is, the squatters on settler farms suffered dramatic reductions in the amount of land they could cultivate and the livestock they could keep while also being required to work 240 days per year. As Furedi has argued, this was a time of the

⁹⁹⁸ Kenya Forest Department, *Annual Report 1962*, i, 2. Areas earmarked for excision were: Muguga forest (3670 acres), Chieni forest (1522 acres), Mt. Kenya (a) (2446 acres), Mt. Kenya (b) (1404 acres), and Kikuyu Escarpment Forest (1888 acres).

“gradual impoverishment of the Kikuyu squatters.”⁹⁹⁹ Heightening political consciousness that would eventually erupt in the all-out revolt of Mau Mau, many farm squatters resisted these restrictions, peacefully or with violence against property, but many more were simply evicted by the farm owners or chose to leave of their own accord.¹⁰⁰⁰

The Forest Department benefitted from the impoverishment of the settler farm squatters. While the department had never struggled to attract Kikuyu into the ranks of its forest squatter force, by the late 1940s the potential pool of recruits was expanding daily because of squatters leaving settler farms, at precisely the time when the department needed more labour than ever before. Kanogo’s evidence indicates that prior to the Second World War Forest Department employment was seen by farm squatters as a very attractive alternative; this view was surely prevalent among the farm squatters who suffered at the hands of their settler landlords after the war.¹⁰⁰¹ In at least one documented case after the war, Kikuyu farm squatters were becoming forest squatters, resulting in complaints from a settler in Eldoret, Uasin Gishu, that he was unable to get enough labour for his farm.¹⁰⁰² The department, then, could continue to pick only those Kikuyu which it considered to be the best workers without any hindrance on the rate of recruitment.

The Forest Department, of course, also imposed restrictions on its squatters. Indeed, as was demonstrated in chapter 2, it sometimes led the way in curtailing livestock ownership within the forests. Further appeasement of settler attitudes came after 1945 when the Forest Department agreed to allow its squatters, now usually referred to by the settlers preferred term of ‘resident labourers’, to be subject to resolutions passed by District Councils.¹⁰⁰³ This came at a time when certain groups of forest squatters, particularly those in Elburgon, Uasin Gishu, and Mount Elgon were raising considerable concern within the Labour Department and settler associations because of their alleged ability to cultivate and engage in numerous enterprises apparently with virtually no supervision from the Forest Department. Indeed, Furedi goes as far as to argue that these forest communities were centres of political subversion.¹⁰⁰⁴ In part, this claim is supported. For example, the Forest Department clearly had significant issues with the level of forest crimes perpetrated by its squatters in Elburgon through the 1930s.¹⁰⁰⁵ As shown in chapter 2, however, across Uasin Gishu there was a great deal of settler resentment of the Forest Department and its squatters that led to exaggerated statements on the criminality of the forest squatters. The extension of the minimum of 240 labour days per year to the forest squatters should therefore probably be seen as both a

⁹⁹⁹ Frank Furedi, ‘The Social Composition of the Mau Mau Movement in the White Highlands’, *Journal of Peasant Studies* 1, no. 4 (1974): 492, doi:10.1080/03066157408437907.

¹⁰⁰⁰ Ibid., 493–97; David Anderson, *Histories of the Hanged: The Dirty War in Kenya and the End of Empire* (WW Norton & Company, 2005), 26.

¹⁰⁰¹ Kanogo, *Squatters and the Roots of Mau Mau, 1905-63*, 102.

¹⁰⁰² B. Davis (Labour Officer, Eldoret) to Labour Commissioner (Nairobi), 24 February 1947, DC/KMGA/1/5/2, KNA. The settler making the complaint was a Mr Traill (also a Special Magistrate) of Farm 35.

¹⁰⁰³ Kanogo, *Squatters and the Roots of Mau Mau, 1905-63*, 104.

¹⁰⁰⁴ Furedi, *Mau Mau War in Perspective*, 52, 61–62.

¹⁰⁰⁵ See section 2.4.4 of chapter 2.



Figure 3-13. A woman tends her crops within a *shamba* plantation of pine trees, c.1952, at Kinangop, southern Aberdare Mountains. Copyright and reproduced with permission of Commonwealth Forestry Association. *Source*: H.M. Glover, 'Soil Conservation In Parts Of Africa And The Middle East: Part I (Continued)', *Empire Forestry Review* 33, no. 1 (1954): 39–44.

concession to settlers and others in government and also a partial realisation by the Forest Department that it needed to do more to control its resident labour force. This was done not without protest from forest officers who realised the importance of successful cultivation by the squatters as a foundation of the system, yet by 1948 the 240 days rule was being enforced and achieved almost without exception across the department's forests.¹⁰⁰⁶ The squatters apparently accepted these limitations of forest life and did not choose to leave Forest Department employment as they had done the settler farms. The ultimate reason behind this acceptance was probably a factor repeatedly highlighted by the department in its defence of the forest squatter system:

There is one fundamental difference between the requirements of the [European settler] farmer and Forester. The farmer requires the minimum of native cultivation on his land and the Forester requires the maximum...¹⁰⁰⁷

As cultivation was a necessary precursor to tree planting within the *shamba* system, the department did not view squatter cultivation as the evil that settlers did. Kanogo's oral testimony indicates that for some at least forest squatting was a means to illicitly cultivate acreages beyond those actually prescribed by the Forest Department; a point supported by Furedi.¹⁰⁰⁸ If the increased labour days mandated after the war did have a negative effect on forest squatter recruitment or retention this is not reflected in the statistics or statements published by the Forest Department. Rather, the

¹⁰⁰⁶ Divisional Forest Officer (Eldoret), 11 June 1946, DC/KMGA/1/5/2, KNA; Kenya Forest Department, *Departmental Report 1948-1950*, 35.

¹⁰⁰⁷ Kenya Forest Department, *Departmental Report 1945-1947*, 33.

¹⁰⁰⁸ Kanogo, *Squatters and the Roots of Mau Mau, 1905-63*, 102; Furedi, *Mau Mau War in Perspective*, 49.

	1948- 50	1951- 53	1954- 55	1955- 57	1958	1959	1960	1961	1962	Total
<i>Quarters/housing</i> *	10	32	36	19	9		44	72		222
<i>Schools</i>	11	21	5	13	1	9	9	11	4	84
<i>Dispensaries</i>	8	4					5	5	8	30
<i>Shops</i>	8	35	19	51	1		25	26		165
<i>Water schemes/sanitation</i>	1	3	3	25			25	19	8	84
<i>Other</i> †	7	28	8	5			4	16		68

* *Quarters and housing refers to permanent accommodation for school teachers and other staff, most notably the African Village Managers and their assistants.*

† *Market stalls, milk distribution centres, produce stores, slaughter house/blocks, sports grounds, and community halls*

Table 3-2. Buildings constructed under the Forest Department's African welfare schemes. *Sources:* Forest Department Annual and Triannual Reports, 1948-1962.

department was extremely keen in the post-war period to build on its burgeoning pre-war efforts to engineer a contented, multi-generational forest workforce.

In 1948 the Forest Department began its forest squatter development programme in earnest. This programme was in keeping with rising awareness of the need to increase welfare provision and foster communal spirit as an element of development, not least by senior members of the Agricultural Department.¹⁰⁰⁹ Although it had always hinted at its goal to create a loyal forest community of workers it was only after 1948 that this became an explicit element of policy. This was a goal that strikingly reflected the European roots of forestry. The department presented its vision in its 1948-50 report:

There will be villages with shops and a village green, a church and a school. Cottages and tradesmen will be grouped together. Roads will connect these centres and hamlets and cottages will be scattered along these roads. The population will be one of skilled forest workers living in and on the forest and handing on the trade from father to son. Such, briefly, is the build-up which the Department has in view for the Forest Estate of Kenya.¹⁰¹⁰

The department dreamt of a rural idyll, a recreation of the English countryside but with the long-term focus on forestry found in Germany or France.¹⁰¹¹ This was but part, albeit a core element, of

¹⁰⁰⁹ N Humphrey, 'Thoughts on the Foundations of Future Prosperity in the Kikuyu Lands' (Nairobi: Colony and Protectorate of Kenya, 1945), 41-42, 53, 55-59. Humphrey, a Senior Agricultural Officer, proposed a thorough reappraisal of the approach to agricultural development that encompassed African education, co-operative activities and communal spirit (based on a rekindling of what he considered to be traditional tribal power structures). He fully supported the role of forestry, not just because of its role in safeguarding watersheds vital for agriculture but also in terms of the ability of the *shamba* system to relieve land and population pressure in the African reserves.

¹⁰¹⁰ Kenya Forest Department, *Departmental Report 1948-1950*, 37.

¹⁰¹¹ This move to the creation of forest villages was certainly not confined to Kenya. In Scotland during the 1950s the Forest Commission also created forest villages and these too combined the practical need for labour for forest plantations and the ideals of community creation. See Mairi Stewart, *Voices of the Forest. A Social History of Scottish Forestry in the Twentieth Century* (Edinburgh: John Donald, 2016), 200-218.

the larger dream espoused by forestry across the empire: forestry could be a large, self-sustaining industry supporting not only direct forest workers but numerous indirect industries and their workers and craftsmen who processed the products of sustainable, perpetually managed forests. As forestry students learnt from Wilhelm Schlich's tome on forestry, the model was Germany, where forestry was claimed to have supported not just a large, forest-dwelling workforce but the livelihoods of 12 per cent of the population of the entire country in the early twentieth century.¹⁰¹² The Kenyan Forest Department's possession of a large workforce resident in the forests, which was unique in scale in British Africa, and apparent ability to expand this workforce at will must have played strongly into this dream, suggesting that in Kenya at least it might be possible to achieve. This partly explains why the department so strongly defended its *shamba* system from what it saw as meddling by settlers and government: *shamba* was not just cost-effective, it was a key element in achieving a larger forestry goal.

Prior to 1948 the Forest Department took very little action in terms of the direction of capital or construction of facilities to assist the welfare of its forest squatters. Significantly, however, and in contrast to many European settlers, the department did not resist initiatives taken by the squatters themselves, particularly in regard to the construction of schools. The extent of active assistance was, as admitted by the department, the provision of cleared land for schools or shops.¹⁰¹³ Kanogo's evidence suggests that squatting with the Forest Department before the 1940s was already seen by some Kikuyu squatters residing on settler farms as a means to access the education denied to them by settlers and the colonial government.¹⁰¹⁴ Furedi also argues that from the 1930s onwards the economic opportunities that forest squatting offered allowed squatters in Elburgon to spearhead the independent schools movement in that area.¹⁰¹⁵ Resistance by colonial forces to African education, especially the independent schools movement that was pioneered by Kikuyu and taught a syllabus more aligned with the political aspirations of Kikuyu elites than the practical skills preferred by the mission schools, was born of the racially motivated protectionist approach taken by the British to many issues in Kenya.¹⁰¹⁶ Following the Second World War, the more interventionist and formalised approach taken to African welfare and development within

¹⁰¹² Schlich, *Manual of Forestry (Vol. 1)*, 23.

¹⁰¹³ Kenya Forest Department, *Departmental Report 1948-1950*, 36.

¹⁰¹⁴ Kanogo, *Squatters and the Roots of Mau Mau, 1905-63*, 83, 87-89.

¹⁰¹⁵ Furedi, *Mau Mau War in Perspective*, 52. Note that it is unclear on what evidence Furedi makes this claim.

¹⁰¹⁶ Anderson, *The Struggle for the School*, 138-39; Clive Whitehead, 'Education for Subordination? Some Reflections on Kilemi Mwiria's Account of African Education in Colonial Kenya', *History of Education* 22, no. 1 (1993): 85-93; Kilemi Mwiria, 'Education for Subordination: African Education in Colonial Kenya', *History of Education* 20, no. 3 (1991): 261-273; Theodore Natsoulas, 'The Kenyan Government and the Kikuyu Independent Schools: From Attempted Control to Suppression, 1929-1952', *Historian* 60, no. 2 (1 December 1998): 289-306, doi:10.1111/j.1540-6563.1998.tb01395.x. 'Practical skills' is here used to suggest the teaching of manual skills that in the racist considerations of the missions were deemed more suited to life in rural Africa, for example woodworking and farming. For discussion of the wider debate within the empire on the course of African education see Walter Schicho, "Keystone of Progress" and Mise En Valeur D'ensemble: British and French Colonial Discourses on Education for Development in the Interwar Period', in *Developing Africa: Concepts and Practices in Twentieth-Century Colonialism*, ed. Joseph M. Hodge, Gerald Hödl, and Martina Kopf (Manchester University Press, 2014), 222-50.

Kenya was clearly reflected in the new attitude to education. With the 1948 Ten-Year Plan for the Development of African Education and the 1949 report of the Beecher Committee into African education in Kenya, the extension of primary, and to a much lesser extent secondary, education to Africans became clear government policy because of the government's practical realisation that it must take control of education from the burgeoning independent schools movement.¹⁰¹⁷

It was within this context of increasing government intervention into welfare and specifically African education that the Forest Department launched its own welfare programme, which was also very heavily focused on education.¹⁰¹⁸ This was a programme in which the department took direct control of the direction of development and oversaw the building of shops, dispensaries, community halls, maize storage facilities, water and sanitation systems, and sports facilities, but by the early 1950s the department was publically stating that the building of schools was the "first consideration."¹⁰¹⁹ This was an operation overseen by two dedicated officers first appointed in 1948, a reflection of the budget expansion the department experienced after the war. Initially styled as Welfare Officers, from 1951 onwards these became Forest Officers (African Affairs). These officers worked closely with the Commissioner for Social Welfare and the Education Department as well as the newly created position of African Village Managers, which were intended to bridge the gap between the forest squatter villages and District Commissioners and were being installed in all forest villages by 1953.¹⁰²⁰

The African Affairs officers' ultimate responsibility was the allocation of funds from the department's African Trust Fund. The government's ten-year education plan of 1948 established the principle that primary education should be paid for by Africans themselves, hence the majority of primary schools in the African reserves being built with Local Native Council funds from the late 1940s onwards.¹⁰²¹ The Forest Department also followed this principle and applied it to its entire welfare programme. Thus, the department's African Trust Fund, which stood at £15,315 in January 1948, was generated entirely by a tax placed on all maize produced by forest squatters and administered by the Maize Controller. By the early 1950s, the rents the department charged to

¹⁰¹⁷ Anderson, *The Struggle for the School*, 33, 39, 128; *Education Department Annual Report 1949* (Government Printer, Nairobi, 1951), 5; *Education Department Annual Report 1950* (Government Printer, Nairobi, 1951), 4.

¹⁰¹⁸ The discussion of Forest Department African welfare presented here is confined to the Forest Divisions contained within Central, Rift Valley, and Nyanza Provinces: Nairobi, Nyeri, Thomson's Falls, Londiani, Elburgon, Eldoret, Kitale, and Nyanza. As the Forest Department employed only a small number of casual labourers, and no forest squatters, in Coast Province, the Masai Extra-Provincial District, or the extra-provincial districts of northern Kenya there were virtually no forest welfare programmes operating in those areas.

¹⁰¹⁹ Kenya Forest Department, *Departmental Report 1951-1953*, 41, 44. In a further indication of the department's goal of creating true German-style forest communities from its squatters, the same report envisaged the building of industrial training schools that would teach not only those skills found in mission schools – carpentry, masonry, and agriculture – but would have a special emphasis on woodsman's crafts with the overall goal of developing a "woodman artisan class." There is no evidence from Forest Department records that this suggestion was pursued any further.

¹⁰²⁰ Kenya Forest Department, *Departmental Report 1948-1950*, 36; Kenya Forest Department, *Departmental Report 1951-1953*, 41-42; *Education Department Annual Report 1952* (Government Printer, Nairobi, 1953), 28.

¹⁰²¹ *1949 Education Department Report*, 5; *1950 Education Department Report*.

shops in the forest reserves were being added to this fund, as were levies on potatoes, vegetables, and other produce being grown by the forest squatters.¹⁰²²

A rough comparison of the Forest Department's spending on education and that of the Local Native Councils in Central Province, where the majority of the Kikuyu population from which the forest squatters were drawn can be made. In 1949 the Education Department estimated that LNCs in Central Province spent a combined £64,855 on education. With a total African population of 750,000 (also an imprecise figure) in that province according to the 1948 Census of Kenya, this puts the per person LNC spending on education in Central Province at £0.08. In 1950 (a figure for 1949 is unavailable) the Forest Department spent £6,087 on welfare in total. Based on figures provided for that year it appears that approximately 42 per cent of this was devoted to schools. With an estimated total forest squatter population of 24,012 in 1950, the department was spending £0.10 per person on education. Although the various estimations in these figures preclude a definitive conclusion, it would appear that the Forest Department was at least displaying a commitment in financial terms to education that was on parity with that of the LNCs in Central Province.¹⁰²³ The contribution of the Forest Department's schools in the high rate of primary school enrolment in Central, Rift Valley, and Western Provinces by independence should be recognised in this respect.¹⁰²⁴

The Forest Department reported little opposition from its squatters to the taxes on their produce, with the forest squatters largely supporting the welfare programme. Particular support was apparently received from women, "who have proved receptive to new ideas and eager to profit by the instruction given them"¹⁰²⁵ in terms of postnatal care and in handicrafts that provided further revenue streams. Such support is hardly surprising: self-help (Swahili: *harambee*) grew dramatically during the inter-war period and became the principle means by which thousands of schools and other welfare initiatives across the colony were established independently of colonial control as Africans sought the keys that would give them access to a modern world free of the disenfranchising policies of colonial rule.¹⁰²⁶ The key difference was that this was development on Forest Department terms. Government control of the independent schools movement failed partly because it feared teaching Africans the skills beyond the rudimentary for a stable, rural life. This failure would ultimately lead to the draconian measure of closing down the independent schools

¹⁰²² Kenya Forest Department, *Departmental Report 1948-1950*, 36; Kenya Forest Department, *Departmental Report 1951-1953*, 42.

¹⁰²³ The forest squatter population figure for 1950 is based on the department's own estimate that each male forest squatter was accompanied by five women and children. Figures come from *1949 Education Department Report*, 30; Kenya Forest Department, *Departmental Report 1948-1950*, 36.

¹⁰²⁴ Donald Rothchild, 'Ethnic Inequalities in Kenya', *The Journal of Modern African Studies* 7, no. 4 (1969): 692. Using data gleaned from a 1965 Kenya Education Commission report, Rothchild reported that 94 per cent of 7-13 year-olds in Central Province were in primary education by 1964. The figures for Western Province were 70.6 per cent and for Rift Valley Province 38.6 per cent. The large presence of forestry in Rift Valley Province may indicate that forest village schools played a particularly significant role in the provision of primary education in that province.

¹⁰²⁵ Kenya Forest Department, *Departmental Report 1951-1953*, 42.

¹⁰²⁶ Anderson, *The Struggle for the School*, 136-38.

movement in 1953 because of further fear of its involvement with Mau Mau recruitment, while settler opposition to schooling forced schools operating on their farms to go underground after the Second World War.¹⁰²⁷ By contrast, the forest squatter schools flourished. As shown in Sandgren's research, access to education in the 1950s was at the heart of the creation of the first generation of postcolonial African elites.¹⁰²⁸ Yet, within this clamour for modernisation the Forest Department was not about to hand over the keys to the forests. Forestry may have been intrinsically modern, embracing science and framing itself as an essential cog in the machinery of the capitalist, industrial machine, but it was (as has been seen) mistrustful of capital and private enterprise. Its model for social and economic development in *shamba* was to look to Europe's idealised past in an attempt to complement sustainable exploitation of the forests with a sustainable workforce. This workforce was intended to remain locked in a stage of economic development that would make it dependent on the forests and the Forest Department.¹⁰²⁹ Therefore, prior to Mau Mau, the Forest Department's schools were restricted to a maximum of standard six education: below the standard required for entrance to a secondary school outside the forest reserves.¹⁰³⁰ Yet, the Forest Department appears to have been successful in providing the educational opportunities that its squatters wanted; a process that was undoubtedly eased by the department's long experience with partially pacifying politics within its forest squatter villages and in the "very close bond" that it reported as existing between itself and its workers in its 1954-55 report, coupled with its promises of impending further expansion of education in the forests to the higher grades, and the underlying productivity that forest cultivation offered over that found on many settler farms.¹⁰³¹

¹⁰²⁷ Mwiria, 'Education for Subordination', 268-73; Anderson, *The Struggle for the School*, 128.

¹⁰²⁸ David P. Sandgren, *Mau Mau's Children: The Making of Kenya's Postcolonial Elite* (University of Wisconsin Press, 2012).

¹⁰²⁹ Notably, this element of dependence may have been an intrinsic feature of historic *shamba/taungya* systems. Raymond Bryant has shown that in colonial Burma, the Forest Department there forced *taungya* systems onto the local Karen people in the nineteenth century to grow teak, causing multiple incidents of protest. Just as these people had accepted the system and become dependent on it in the early twentieth century the British abandoned it (as it was no longer required economically since access to larger forests of teak had opened up). Bryant, 'The Rise and Fall of Taungya Forestry', 20. I have argued elsewhere that giving forest cultivators greater involvement and investment in the system, through guaranteed land rights and the growing of tree crops that are of worth to the cultivator not just the forester and his customers are probably important functions of creating a long-term, stable *shamba*-style system. Fanstone, 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?'

¹⁰³⁰ Kenya Forest Department, *Departmental Report 1951-1953*, 44. A summary of the education structure established in Kenya by the Beecher Report in 1950 can be found in Anderson, *The Struggle for the School*, 168-70. In sum, primary grades ran from standard 1 to 4, followed by intermediate at standard 5 to 8, at which point candidates could sit the Kenya African Preliminary Examination that would allow them to enter secondary school.

¹⁰³¹ Kenya Forest Department, *Departmental Report 1954-1955*, 31. Furedi has briefly argued that the advantages of holding a forest squatter contract were directly linked to the greater productivity of farming on forest land and the associated developmental opportunities that this and other forest enterprises (such as charcoal burning) brought, which were particularly marked in Elburgon: Furedi, *Mau Mau War in Perspective*, 52.

3.4.3 *Disruption, eviction, and concentration: shamba during Mau Mau*¹⁰³²

As the smouldering tensions over land and the lack of economic and political opportunities in the reserves of Central Province and on the European farms began to erupt in increasing acts of violence through 1952, precipitating the official recognition of the Mau Mau uprising with the Declaration of Emergency in late October, the Forest Department increasingly found its policies and operations being drawn into the conflagration. As shown in section 3.3.2, the Mau Mau conflict actually had little effect on the overall exploitation of Kenya's forests. Conversely, in other areas this was not the case. Several European forest officers were called up to serve in the military, although precise numbers are unclear.¹⁰³³ At least during the early stages in the development of the government's counter-insurgency campaign, when British forces lacked expertise particularly in small-scale forest fighting and tracking, European forest officers were called upon to participate in raids and tracking operations because of their obvious familiarity with the area and terrain.¹⁰³⁴ Overall, however, the Forest Department took a back seat in the British campaign despite its forest knowledge. This was likely because foresters' knowledge was not actually suited to military operations; it was the European officers of the Game Department and National Parks Department, and their African trackers, who found their skillset of hunting and tracking in high demand during the conflict, not those of the Forest Department.¹⁰³⁵ There is a hint that this was also the case with the Forest Department's Forest Guards, with an account by one guard, Sigila arap Cheptale, who was stationed at Lari Forest Station shortly after the infamous massacre there in March 1953, emphasizing that "I left the Mau Mau alone and only guarded the forest."¹⁰³⁶ Indeed, Cheptale further reveals that Forest Department Land Rovers would often lead columns of British soldiers into the forest but that Cheptale would warn Mau Mau fighters ahead, out of fear for his own life, by waving a white handkerchief.¹⁰³⁷

Cheptale's attitude of neutrality, of prioritising his duty as a Forest Guard to the forest while civil and colonial war waged around him, is also reflected on a general level by the Forest Department. This commitment to forestry was evident in the Chief Conservator of Forests closing statement of the 1954-55 departmental report in which he described how his staff "overcame every

¹⁰³² Largely owing to practical reasons of time and the identification of documents in the Kenya National Archives, the following analysis of the *shamba* system and Mau Mau should very much be considered as an introductory investigation that seeks to establish the major themes of this interaction through an examination of documents that primarily deal with Rift Valley Province.

¹⁰³³ Kenya Forest Department, *Departmental Report 1951-1953*, 47.

¹⁰³⁴ Anthony Clayton, *Counter-Insurgency in Kenya: A Study of Military Operations against Mau Mau*, Transafrica Historical Papers 4 (Transafrica Publishers, 1976), 22; Ian Parker, *The Last Colonial Regiment: The History of the Kenya Regiment (T.F.)* (Kinloss: Librario Publishing, 2009), 344.

¹⁰³⁵ Timothy J. Stapleton, *Warfare and Tracking in Africa, 1952-1990* (Routledge, 2015), 44-53.

¹⁰³⁶ Sigila arap Cheptale, 'The Adventures of a Forest Guard', *Old Africa*, May 2007, 6.

¹⁰³⁷ Ibid. Cheptale, a Kipsigis not Kikuyu, recounts a tale that probably contains a degree of exaggeration out of his clear concern to paint himself as a neutral party during the Emergency. Forest Department records do not illuminate the issue of the role of its European officers or Forest Guards in the conflict. However, as Forest Guards were armed with rifles, in Cheptale's case a powerful elephant gun, it does seem likely that they may have been called upon in emergency situations to aid British or KAR soldiers, settlers, and of course the Forest Department's own squatter workforce in defence against attack.

difficulty and carried on the work of forestry cheerfully and with great fortitude in spite of every possible obstruction” during the period of Emergency.¹⁰³⁸ For the Forest Department, Mau Mau represented not just a physical threat to the lives of its personnel but a threat to the very forest policy of plantation establishment that the department had strived to develop for decades. As a testament to the determination of the department’s personnel to continue working as normal, while the fall in annual acreage of plantation established was large between 1951 and 1953, at 24 per cent, the figure for 1953 of 6,882 acres was larger than anything that had been achieved on an annual basis before 1948. After 1953 the acreage once again started to increase (Figure 3-12). The real danger in Mau Mau to the department was that it would force the government to end the system of squatting that allowed it to operate its plantation policy. Squatting, principally on the settler farms but also in the forests, was a system that had allowed dissent against colonial rule to grow. While the government never seriously considered ending the squatting or resident labour system, it was certainly something that some European farmers were pressuring for. In 1953, for example, the Nakura County Council proposed the “forest squatter system be done away with.”¹⁰³⁹ As this section will show, it was defence of forest squatting, of the *shamba* system, that would colour the department’s eagerness to reform the system and proactively engage in evictions and the concentration of forest villages.

Shortly after European farmers in the Rift Valley began to evict Kikuyu squatters from their land in November 1952 the Forest Department, or rather some forest officers, began to use the same tactic. Ironically, the first to go were those Kikuyu forest squatters furthest from the areas of trouble in Central Province. These were the forest squatters on Mount Elgon, bordering Uganda. These squatters were repatriated using a “movement by driblets” approach because of the logistical problems of moving the entire squatter force at one time. For the local District Commissioner the uncertainty that this policy introduced into the daily lives of the squatters, who were never told when they were to be moved, had benefits as a form of “psychological warfare” which might induce the squatters to relinquish useful intelligence about Mau Mau.¹⁰⁴⁰ It was extremely doubtful that these squatters, who lived more than 300km from Central Province, had extensive knowledge of Mau Mau. The Forest Department was probably little interested in the slight possibility of Mau Mau among its squatters on Mount Elgon and their eviction seems more connected with attracting other ethnic groups, possibly Elgonyi, to diversify *shamba* but who refused to work alongside Kikuyu, especially as Mau Mau intensified.¹⁰⁴¹ This highlights the other significant theme of how the Forest Department operated during Mau Mau: while it was engaged in defending its operations from

¹⁰³⁸ Kenya Forest Department, *Departmental Report 1954-1955*, 36.

¹⁰³⁹ ‘Minutes of Provincial Commissioners Meeting of 30 Sept 1953 and 1 Oct 1953’, 1953, DC/KMGA/1/5/2, KNA.

¹⁰⁴⁰ District Commissioner (Kitale) to Provincial Commissioner (Rift Valley Province), 10 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁴¹ E.J. Honorè (Divisional Forest Officer, Eldoret) to R.R. Waterer (Conservator of Forests), 23 July 1951, DC/KMGA/1/5/2, KNA; E.J. Honorè (Divisional Forest Officer (Eldoret) to District Commissioner (North Nyanza), 29 December 1950, DC/KMGA/1/5/2, KNA; District Commissioner (Kitale) to Provincial Commissioner (Rift Valley Province), 27 May 1954, PC/NKU/2/17/18, KNA.

attack by insurgents and European critics, it was also using emergency powers to tackle old problems.¹⁰⁴²

During the final month of 1952 a general policy began to emerge in regards to the handling of the Forest Department's squatters. Cavendish-Bentinck, Member for Agriculture and Natural Resources, envisaged a limited programme of "repatriating a few of the worst characters [forest squatters] whom the forest officers thought they should be rid of."¹⁰⁴³ Concurrently, the Forest Department was putting forward its own policy for the eviction not of "a few" squatters but for between 20 and 25 per cent of its entire resident labour workforce. As Honorè, the Conservator of Forests West of the Rift, explained, "the individuals to go would be the less satisfactory workers and those upon whom any suspicion has fallen" but that these evictions would be in addition to "any batches or individuals who are removed following conviction for being actively connected with any subversive activities."¹⁰⁴⁴ As the Provincial Commissioner for Rift Valley Province highlighted, "Few, if any, of those discharged would be known to be Mau Mau adherents."¹⁰⁴⁵ Statistics provided in response to a House of Commons question regarding evictions up to 23 December 1952 in Kenya highlight this issue further. The Forest Department led the way in evictions outside of Central Province by evicting 300 men, women, and children from Njoro Forest in Nakura District; by contrast, only one settler had evicted his squatters in Nakura by that time. Of the 300, only 13 were charged with Mau Mau offences; the rest were victims of the department's pruning of its squatter force.¹⁰⁴⁶ While the evictions allowed the Forest Department to rapidly rid itself of poor workers, Cavendish-Bentinck also admitted that its proposals for further large-scale evictions of forest squatters were partly because it wished to comply with the wishes of District Councils in settler areas.¹⁰⁴⁷ The Forest Department was now being shrewd enough in its dealings with the settlers to understand that it needed to sacrifice a substantial part of its squatter workforce that it considered most likely to have Mau Mau sympathies in order to protect the *shamba* system as a whole. If large

¹⁰⁴² The state was particularly empowered in its evictions of squatters from the forests and settler land, and in its concentration of squatters in villages by Defence Regulations supplemented by CONF.0/12/10C106 of 12 December 1952, which allowed the movements of squatters to be restricted, Government Notices 189 and 192 of 1953, which allowed District Officers to move suspect persons and the Governor to order any Kikuyu moved, respectively, and the Emergency (Forest Area Resident Labourers) Regulation 1953 (Government Notice 32 of 1953) which allowed District Officers, Labour Officers or special magistrates to compel forest squatters to concentrate into villages regardless of Forest Department approval.

¹⁰⁴³ Chief Native Commissioner to Provincial Commissioner (Rift Valley Province), 15 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁴⁴ E.J. Honorè (Conservator of Forests, West of Rift) to Provincial Commissioner (Rift Valley Province), 16 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁴⁵ Provincial Commissioner (Rift Valley Province) to Provincial Commissioner (Central Province), 23 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁴⁶ C.M. Johnston (Provincial Commissioner, Rift Valley Province) to Chief Native Commissioner, 23 December 1952, PC/NKU/2/17/18, KNA. The same response outlines that approximately 4,324 men, women, and children were evicted from European settler farms that fell under the remit of the Aberdares District Council. 17 families were evicted from the farm of Michael Blundell, the only settler in Nakura to have done so at this point.

¹⁰⁴⁷ 'Note of a Meeting Held in the Secretariat on Wednesday 31st December, 1952 between Deputy Chief Secretary, Member for Agricultural and Natural Resources, Member for Health, Lands and Local Government, Chief Native Commissioner, Provincial Commissioner (Central Province), Provincial Commissioner (Rift Valley Province), Native Courts Officer, and Commissioner Local Government.', 31 December 1952, PC/NKU/2/17/18, KNA.

numbers of Mau Mau adherents had been discovered within the ranks of the forests squatters it would have added significantly to calls for the entire system to be scrapped.

While the Forest Department's main concern was reducing further criticism of its *shamba* system, Cavendish-Bentinck and the Provisional Commissioners of Rift Valley Province and Central Province expressed alarm at the practicalities and dangers of trying to resettle so many forest squatters in the native reserves. Cavendish-Bentinck went so far as to argue it "would be an injustice to the Kikuyu to carry out this policy [of large-scale evictions]." ¹⁰⁴⁸ By March 1953 he was reiterating the point by spelling out the clear economic dangers of decimating the key workforce of the forests and the farms. ¹⁰⁴⁹ In agreement with the PCs on 31 December 1952, he therefore ordered the Forest Department to primarily direct its energies into the concentration of its squatters into easily controllable and defensible villages; the same policy that was being urged on settler farms. ¹⁰⁵⁰ Settlers were demanding that the Forest Department take action over its forest squatters, and anticipating this Cavendish-Bentinck also saw this process as important in improving relations with the settlers, stating that as, ¹⁰⁵¹

... it was frequently alleged that Forest squatters did little work and were insufficiently controlled, and in order to exercise control more effectively the forest squatters were now being grouped into villages in the forest glades... ¹⁰⁵²

The use of villagization did not mean an end to the reduction in size of the forest squatter force. Indeed despite Cavendish-Bentinck's reservations it decreased not by a quarter but by 36 per cent by the end of 1953, with a total 43 per cent reduction between late 1952 and the end of 1954 (where after the number of squatters increased). ¹⁰⁵³

Villagization, usually referred to in documents as concentration, was a process that the department had actually begun in early December 1952 although progress was determined more by the attitudes of individual forest officers to the proposal than central departmental policy. ¹⁰⁵⁴ At

¹⁰⁴⁸ Ibid.

¹⁰⁴⁹ 'F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources) to Chairman of Board of Agriculture, Members and Executive Committee of the Board of Agriculture, Chairman of Production Committee and Sub-Committees, Provincial Commissioners and District Commissioners, Senior Labour Officers and Labour Officers, and European Elected Members', 11 March 1953, PC/NKU/2/17/18, KNA.

¹⁰⁵⁰ 'Note of a Meeting Held in the Secretariat on Wednesday 31st December, 1952 between Deputy Chief Secretary, Member for Agricultural and Natural Resources, Member for Health, Lands and Local Government, Chief Native Commissioner, Provincial Commissioner (Central Province), Provincial Commissioner (Rift Valley Province), Native Courts Officer, and Commissioner Local Government.'

¹⁰⁵¹ 'Njoro Settlers Association. Notes for Interview by President with Provincial Commissioner', 16 January 1953, PC/NKU/2/17/18, KNA.

¹⁰⁵² 'Note of a Meeting Held in the Secretariat on Wednesday 31st December, 1952 between Deputy Chief Secretary, Member for Agricultural and Natural Resources, Member for Health, Lands and Local Government, Chief Native Commissioner, Provincial Commissioner (Central Province), Provincial Commissioner (Rift Valley Province), Native Courts Officer, and Commissioner Local Government.'

¹⁰⁵³ Kenya Forest Department, *Departmental Report 1951-1953*; Kenya Forest Department, *Departmental Report 1954-1955*.

¹⁰⁵⁴ Within Uasin Gishu the District Commissioner complained of the slow progress the local forest officer was making with the concentration of his squatters. By contrast, the forest officer in Laikipia proceeded much more quickly. District Commissioner (Uasin Gishu) to Provincial Commissioner (Rift Valley Province), 8 December 1952,

Bahati Forest Reserve, between Nakura and Thomson's Falls, some 50 km west of the Mau Mau strongholds within the forests of the Aberdares, the forest officer's concern with building proper housing and welfare facilities caused considerable delay, and frustration for the local DC, in the establishment of the new concentrated forest squatter village.¹⁰⁵⁵ Bahati has been identified by Furedi as one of the forest sites with deep anti-government and anti-settler sentiment. Within this context of Bahati as a possible site for Mau Mau recruitment the forest officer's interest in welfare should be seen as more than just concern for his squatters.¹⁰⁵⁶ Through welfare the department was perhaps attempting to address the issue of ill-discipline within its forests and attempting to generate loyalty within its workforce. Nevertheless, security concerns overrode those of the Forest Department's grander plans for the development of its idealized forest community, with the PC politely ordering the forest officer to ignore welfare and concentrate as soon as possible on 30 December 1952.¹⁰⁵⁷

The first stage of the concentration process was to screen the forest squatters for Mau Mau oath-taking and so determine who could be trusted to live in the newly formed and barricaded villages. Like the screening process undertaken in much of the Rift Valley and the settled areas, this was conducted by Europeans, specifically the forest officers themselves, rather than the infamous Home Guard screening teams.¹⁰⁵⁸ The concentration of a village in South Kinangop illustrates at least one of the procedures employed: the forest officer classified each squatter on a scale from A to D, with those falling within A or B considered loyal, the allegiance of those in class C being largely unknown although they were not considered dangerous, and those in class D being labelled "disaffected" and therefore possibly Mau Mau. Only those in class D were evicted and sent to a transit camp. In South Kinangop the department employed 190 families of Kikuyu forest squatters, of which the forest officer determined 13 per cent fell within the "very loyal" classification of A while only 4 per cent were considered class D; the forest officer argued, "The worst that can be said of the vast majority of the rest is that they are undecided."¹⁰⁵⁹ By this point in April 1953 the Forest

PC/NKU/2/17/18, KNA; District Commissioner (Laikipia) to Provincial Commissioner (Rift Valley Province), 16 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁵⁵ District Commissioner (Nakura) to Provincial Commissioner (Rift Valley Province), 29 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁵⁶ Furedi, *Mau Mau War in Perspective*, 63.

¹⁰⁵⁷ C.M. Johnston (Provincial Commissioner, Rift Valley Province) to Divisional Forest Officer (Thomson's Falls Division), 30 December 1952, PC/NKU/2/17/18, KNA.

¹⁰⁵⁸ S.S. Gill (for Conservator of Forests, East of Rift) to Provincial Commissioner (Rift Valley Province), 22 April 1953, PC/NKU/2/17/18, KNA; Greet Kershaw, *Mau Mau from below* (James Currey, 1997), 325–27; Daniel Branch, *Defeating Mau Mau, Creating Kenya: Counterinsurgency, Civil War, and Decolonization*, 111 (Cambridge University Press, 2009), 82. It is unclear whether forest squatters were subjected to periodic or random screening by Home Guard units after the initial screening and villagization process.

¹⁰⁵⁹ S.S. Gill (for Conservator of Forests, East of Rift) to Provincial Commissioner (Rift Valley Province), 22 April 1953. The precise definitions of the classifications used at South Kinangop were:

"A. Those who were believed to be as loyal as any Kikuyus are and who should be kept at the station where they would be extremely useful to Government.

B. Those who were thought to be loyal and who were wanted on the station to do necessary work.

C. Those about whom nothing was known for certain, either for or against them. They also should remain to work.

Department was following Cavendish-Bentinck's orders to attempt to retain as many workers as possible, an attitude that was no doubt strengthened until the end of the Emergency by the department's inability to attract other ethnic groups into its workforce.¹⁰⁶⁰

The retention of Kikuyu labour was not unique to the Forest Department. While many settlers became paranoid with fear concerning the loyalty of their squatters, many were also totally dependent on them economically.¹⁰⁶¹ Cavendish-Bentinck led the government in believing that the Forest Department villages could act as a positive example to terrified settlers: concentrated and fortified forest squatter villages filled with loyal workers would be centres of government control within Central and Rift Valley Provinces and spur settlers on to concentrate their own squatters. Already by late March 1953, 30 forest villages had been created in Central Province with many more under construction in Rift Valley Province.¹⁰⁶² This seems to have been a particular concern in Uasin Gishu. Far from Mau Mau activity, the settler-dominated Uasin Gishu District was slow to concentrate its Kikuyu squatters, with only 37 per cent of all farm labour in Kitale being concentrated by the end of April 1953. By contrast, all of the Forest Department's labour was concentrated by that time and the trend seems to have been a general one across Rift Valley Province.¹⁰⁶³ The same was true of defences erected around the villages, with the PC, Rift Valley, hoping that the barb-wire fences around forest squatter villages would encourage recalcitrant settlers to overcome the expense of doing the same for the villages on their farms. Other, more security paranoid European farmers and officials pushed for even greater defences around forest villages because of the tactical positions of such villages near to the forests and the danger of food being taken from them.¹⁰⁶⁴

Limited evidence also reveals that some groups of forest squatters were actively assisting the government in anti-Mau Mau operations. One such group was that found in North Kinangop forest who had an initial population of 170, although it is not clear if this is a reference to the total population or the number of families. After screening in January 1953 this number was reduced to

D. Those whom it was thought were disaffected and ought to be removed."

¹⁰⁶⁰ Kenya Forest Department, *Departmental Report 1951-1953*, 41; District Commissioner (Kitale) to Provincial Commissioner (Rift Valley Province), 27 May 1954.

¹⁰⁶¹ 'F.W. Cavendish-Bentinck (Member for Agriculture and Natural Resources) to Chairman of Board of Agriculture, Members and Executive Committee of the Board of Agriculture, Chairman of Production Committee and Sub-Committees, Provincial Commissioners and District Commissioners, Senior Labour Officers and Labour Officers, and European Elected Members'.

¹⁰⁶² W.R.N. Hinde (Chief Staff Officer to the Governor) to Provincial Commissioner (Central Province), 26 March 1953, PC/NKU/2/17/18, KNA.

¹⁰⁶³ Prov. Staff Officer, Kenya Police Reserve (Nakura) to Provincial Commissioner (Rift Valley Province), 28 April 1953, PC/NKU/2/17/18, KNA.

¹⁰⁶⁴ District Commissioner (Thomson's Falls) to Provincial Commissioner (Rift Valley Province), 8 April 1953, PC/NKU/2/17/18, KNA; C.M. Johnston (Provincial Commissioner, Rift Valley Province) to District Commissioner (Laikipia District), 11 April 1953, PC/NKU/2/17/18, KNA; H.B. Sharpe (Chairman, Laikipia Man Power and Production Committee) to District Commissioner (Laikipia), 7 April 1953, PC/NKU/2/17/18, KNA.

72. As early as November 1952, these squatters had apparently willingly and in large numbers been assisting the government in operations against Mau Mau:

They are being used mostly as guides in the forest areas, trackers, and general labour when assistance is required by Military Forces, etc. besides carrying out their own duties as Forest Department Labour. Whenever there is a camp placed on top of the mountain where supplies have to be taken up, this labour has done its work with their own donkeys without complaint, or asking for any recompense whatsoever.¹⁰⁶⁵

This is the only reference to Forest Department squatters acting as trackers for the military; indeed, this may have been a unique case as most trackers appear to have been recruited from Game Department staff, 'martial tribes' such as the Kamba and Turkana, or from the forest-dwelling Ogiek, although many more came from the Kikuyu Home Guard.¹⁰⁶⁶ Forest squatters sometimes directly opposed military operations: in one case an African scout for British forces "was lured to a drinking session by some forest labourers and on his way home was abducted and executed in the forest."¹⁰⁶⁷ As has been shown in work by Daniel Branch on loyalism to the colonial government, the deep divisions evident in Kikuyu society by this time were reflected in the actions of Kikuyu. As with any internal state conflict, the boundaries between sides were porous, with individuals and groups passing from the status of 'loyalist' to 'insurgent' or vice versa, or even occupying both positions at once. Motivations for assisting or fighting for either side could be numerous, based on local incidences of retaliation or with a mind to which side was likely to aid the social, political, or economic position of an individual or group at that particularly time.¹⁰⁶⁸

The North Kinangop forest squatters had clearly determined that assisting in the early stages of anti-Mau Mau operations was of benefit to them. They also captured, apparently unaided, two of the Mau Mau fighters who killed Eric Bowyer, the first white casualty of the conflict, and broke up a large Mau Mau meeting in December 1952.¹⁰⁶⁹ Furedi's casting of forest squatters as often at the heart of Mau Mau sentiment therefore seems an overgeneralisation and while certain forest areas may have bred discontent it does not follow that they continued to do so through the conflict. Conversely, forest squatters acting in a 'loyal' manner may not have always done so or been doing so out of any sense of loyalty to the government or Forest Department.¹⁰⁷⁰ Yet, overall the evidence suggests that many forest squatters did obey the government. The development of welfare within the forest villages, the economic opportunities that forest squatting offered, and the department's

¹⁰⁶⁵ A. Dale (ADC, North Kinangop) to Provincial Commissioner (Rift Valley Province), District Commissioner (Naivasha) and Brig. Dew (Naivasha), 20 November 1953, PC/NKU/2/17/18, KNA.

¹⁰⁶⁶ Stapleton, *Warfare and Tracking in Africa, 1952-1990*, 48, 51-52.

¹⁰⁶⁷ *Ibid.*, 50. Stapleton identifies this incident as occurring near Ragati Forest Station (Nyeri Forest Division).

¹⁰⁶⁸ The complex motivations behind the perpetrators of the infamous Lari massacre and the many motivations that underlay recruitment to the Kikuyu Home Guard stand out as examples of this. Anderson, *Histories of the Hanged*, 241-42; Branch, *Defeating Mau Mau, Creating Kenya*, 56-57, 72-81.

¹⁰⁶⁹ A. Dale (ADC, North Kinangop) to Provincial Commissioner (Rift Valley Province), District Commissioner (Naivasha) and Brig. Dew (Naivasha), 20 November 1953.

¹⁰⁷⁰ Furedi, *Mau Mau War in Perspective*, 61-63. For Furedi's discussion on the radicalisation of squatters in general see, Furedi, 'The Social Composition of the Mau Mau Movement in the White Highlands'.

long-term policy of purging the forest workforce of what it considered troublemakers combined with the apparent willingness of forest squatters to rapidly concentrate their villages after the Declaration of the State of Emergency would seem to indicate a strong sense that forest squatters saw their lot of working in the forest as the more likely source of political and economic advancement than siding with Mau Mau. For many forest squatters, aiding Mau Mau, through the provision of food for example, was likely a temporary, pragmatic choice. Indeed, such an assessment fits with Branch's arguments concerning the important role of the concept of self-mastery in determining Kikuyu attitudes toward Mau Mau. At the heart of Kikuyu politics, self-mastery centred on the success of one's *shamba*, with the requisite hard work and large family which that implied. The achievement of self-mastery earned one the respect of other Kikuyu and allowed one to speak, and be listened to, on political matters.¹⁰⁷¹ As *ahoi*, many of those in the Forest Department's *shamba* system were victims of the erosion of this system in the Kikuyu reserves by the corrupting influence of the patron-client relationships that the colonial government built. Thus, the *shamba* system was probably not just seen as a way to survive physically but as a means to prosper morally and politically through hard work.

Those forest squatters who provided the most assistance to the government in its anti-Mau Mau operations no doubt expected to be rewarded for this loyalty, indeed they were told as much by the Forest Department and district administration.¹⁰⁷² In one case in 1953 the fears and hysteria generated among the European and African government staff by Mau Mau resulted in the wrongful eviction of approximately 190 families from South Kinangop forest. The incident was sparked by an inexperienced forest officer believing the absence of a few women and children from the squatter village was a precursor to an attack akin to the infamous massacre that had occurred at Lari some two weeks earlier.¹⁰⁷³ Lari had made the police nervous and they acted quickly and decisively to this erroneous information: the entire workforce was evicted and removed to a holding camp in Naivasha while their village, which had already been concentrated, was burnt to the ground on 16 April 1953. The provincial commissioner quickly blamed rampant fear within the police reserve while the Forest Department lamented:¹⁰⁷⁴

This operation might have been specially designed to alienate a body of men who had given every indication of wishing to keep in with us. During the past few months they had every opportunity of going against us, but they have remained loyal so far as can be judged.¹⁰⁷⁵

¹⁰⁷¹ Daniel Branch, 'The Enemy within: Loyalists and the War against Mau Mau in Kenya', *The Journal of African History* 48, no. 2 (1 January 2007): 294–95.

¹⁰⁷² A. Dale (ADC, North Kinangop) to Provincial Commissioner (Rift Valley Province), District Commissioner (Naivasha) and Brig. Dew (Naivasha), 20 November 1953.

¹⁰⁷³ For discussion of the Lari massacre, in which Mau Mau fighters slaughtered the occupants of a village because of long-running disputes over land grabbing, see Anderson, *Histories of the Hanged*.

¹⁰⁷⁴ C.M. Johnston (Provincial Commissioner, Rift Valley Province) to Chief Conservator of Forests, 27 April 1953, PC/NKU/2/17/18, KNA; S.S. Gill (for Conservator of Forests, East of Rift) to Provincial Commissioner (Rift Valley Province), 22 April 1953.

¹⁰⁷⁵ S.S. Gill (for Conservator of Forests, East of Rift) to Provincial Commissioner (Rift Valley Province), 22 April 1953.

By the end of 1953 the forest squatter population had been reduced to 3,548 families and of these nearly 1,000 lived in such proximity to Mau Mau operations that they were denied the ability to cultivate crops out of fear this would find its way into the hands of Mau Mau fighters. This was done despite protest from the Forest Department itself; within the context of the Emergency and the power of the District and Provincial Emergency Committees (DECs and PECS) dominated by settlers and security concerns all the department could do was pay such squatters casual labour rates.¹⁰⁷⁶ Such was the case with the loyal forest squatters of North Kinangop. Malnourished and on the brink of starvation, they were at the centre of a power struggle between the department and the emergency committees over the issue of forest squatter cultivation in 1954. The department had the support of both the Rift Valley Provincial Commissioner and the Chief Native Commissioner in the case, but at both the district (specifically Naivasha) and provincial level the emergency committees voted against allowing cultivation in North Kinangop on four separate occasions.¹⁰⁷⁷ The key issue was revealed in discussions of the PEC, where it voiced that “the policy [of residing and cultivating in forests] for the forest squatters will have to be reconsidered after the Emergency.”¹⁰⁷⁸

In other areas it appears opposition to forest squatting was less severe and that it increasingly became seen through 1954 and 1955 as an asset in operations against Mau Mau. This was shown by the return of forest squatters to areas that had previously been seen as too dangerous. The first such return appears to have been in Kinari, near Nakura, in mid-1954, where forest squatters were allowed back in a fortified and concentrated forest village under the protection of the Home Guard and a police post. Significantly, these squatters were allowed to cultivate. Mau Mau fighters did take a portion of this food, yet the district administration felt it a price worth paying as the women working in the *shambas* supplied valuable information that resulted in “many” Mau Mau being killed.¹⁰⁷⁹ This policy of denying a vacuum and therefore freedom in territory to Mau Mau by filling it with forest squatters who were at least willing to aid anti-Mau Mau operations seems to have been extended to other areas. Partly this seems to be because settler arguments about forest squatters being a security risk became increasingly nullified as supervision and security was increased. Although settlers continued to voice these concerns, by early 1955 they were even starting to be ignored by Blundell, the European Minister without Portfolio and effective

¹⁰⁷⁶ Kenya Forest Department, *Departmental Report 1951-1953*, 41.

¹⁰⁷⁷ C.C. Plum (Divisional Forest Officer, Nairobi Division) to District Commissioner (Naivasha), 8 April 1954, PC/NKU/2/17/18, KNA; E.H. Windley (Chief Native Commissioner) to R.E. Wainwright (Acting Provincial Commissioner, Rift Valley Province), 14 April 1954, PC/NKU/2/17/18, KNA; District Commissioner (Naivasha) to Provincial Commissioner (Rift Valley Province), 24 April 1954, PC/NKU/2/17/18, KNA; R.E. Wainwright (Acting Provincial Commissioner, Rift Valley Province) to E.H. Windley (Chief Native Commissioner), 3 May 1954, PC/NKU/2/17/18, KNA.

¹⁰⁷⁸ R.E. Wainwright (Acting Provincial Commissioner, Rift Valley Province) to E.H. Windley (Chief Native Commissioner), 3 May 1954.

¹⁰⁷⁹ F.A. Lloyd (District Commissioner, Kiambu) to A.C.C. Swann (Acting Provincial Commissioner, Rift Valley Province), 6 September 1954, PC/NKU/2/17/18, KNA; A.C.C. Swann (Acting Provincial Commissioner, Rift Valley Province) to F.A. Lloyd (District Commissioner, Kiambu), 15 September 1954, PC/NKU/2/17/18, KNA.

mouthpiece of the settlers in government.¹⁰⁸⁰ The expansion in the forest guard force employed by the Forest Department reflects this increasing security. In 1947 the ratio of forest guards to forest squatters was approximately 1 to 224, with each guard responsible (in theory) for 31,799 acres. This ratio rapidly decreased, with 1 guard for 51 squatters in 1951 and by 1955 had fallen to 1 to 28, with each guard covering 4,202 acres. Thereafter the ratio settled at approximately 1 guard for 50 squatters by the early 1960s, largely owing to the expansion in the forest squatter system.¹⁰⁸¹ By 1955, the highpoint of control, forest guards were conducting daily patrols of forest squatter villages.¹⁰⁸² The generally decreasing trend in recorded forest crimes after 1954, particularly in respect of the key crimes of theft of forest produce and illicit grazing, also reflect this escalation of security (Figure 3-14). However, the increase in forest guard numbers makes deciphering the crime data in terms of protest more difficult in comparison to the 1930s, when the level of Forest Department supervision was fairly static, as greater departmental presence would have deterred possible protests while simultaneously making the detection of crime easier. The spike in the crime of damage to trees in the later 1950s and early 1960s is most likely related to inexperience on the part of the large number of new recruits into the shamba system: the serious repercussions of incorrect planting to the plantation meant the department was particularly strict in its prosecution of inefficient workers.

If reservations did exist within the government over the trustworthiness of the forest squatters this was certainly not reflected in policies after the mid-1950s. From 1955 onwards, when the department exerted the highest level of control over its workers, the forest squatter population expanded dramatically. From a 1955 figure of 3,180 families, the population doubled by 1957 and reached its highest point of the colonial period in 1960 with 8,474 families (Figure 3-12). This huge increase in recruitment was a reflection of the department's newly formulated official policy that firmly put it on the path of creating protection forests and production forests (see section 3.3.3). Within African District Council areas the emphasis was firmly on the conservation or reafforestation of hilltops that served as water catchment areas for agricultural production. As Anderson has shown in his investigation of the struggle over development in Baringo, by the 1950s arguments concerning water conservation carried huge weight within the colonial administration

¹⁰⁸⁰ R.E. Wainwright (Provincial Commissioner, Rift Valley Province) to District Commissioner (Nakura), 25 March 1955, 25 March 1955, PC/NKU/2/17/18, KNA; G.C.M. Dowson (District Commissioner, Nakura) to Provincial Commissioner (Rift Valley Province), 29 March 1955, PC/NKU/2/17/18, KNA; Wainwright to M. Blundell (European Minister without Portfolio), 6 April 1955, PC/NKU/2/17/18, KNA; M. Blundell to Wainwright, 18 April 1955, PC/NKU/2/17/18, KNA.

¹⁰⁸¹ Data comes from Forest Department annual and triannual reports, 1947-1963. As the department only recorded adult males as forest squatters the numbers used here to calculate squatter population are based on the assumption of a family of five accompanying each adult male, an assumption also used by the department. The caveat concerning the acreage that each guard was responsible for is that departmental records do not indicate which forests were actually patrolled by forest guards. Rather than being precise acreages patrolled (indeed, they obviously could not patrol 30,000 acres), these figures rather serve to indicate the increasing ability of the department to extend its power over the forests it had previously only nominally controlled.

¹⁰⁸² M. Blundell to Wainwright, 18 April 1955.

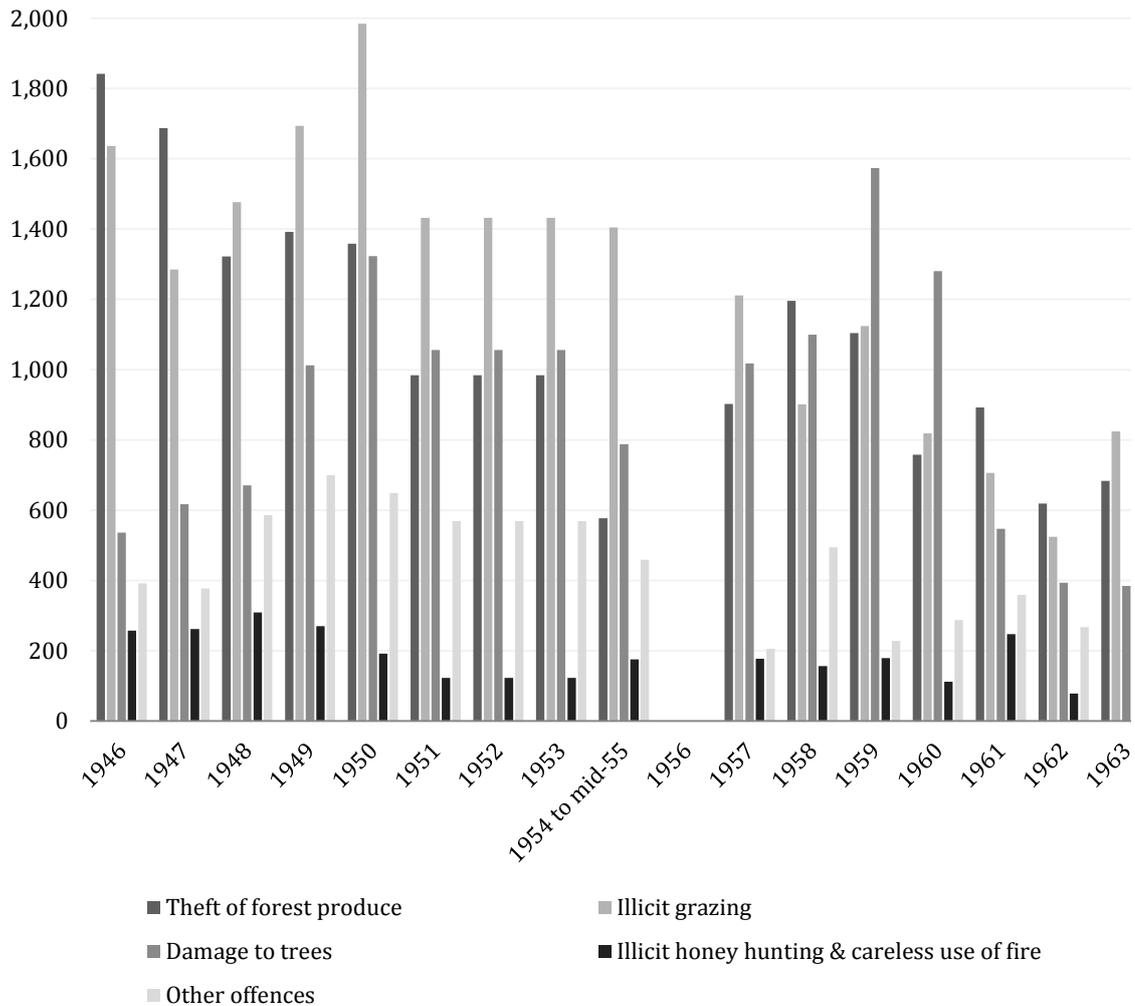


Figure 3-14. Recorded prosecutions of forest offences between 1946 and 1963. No data exist for the latter half of 1955 and 1956. *Source:* Forest Department Annual and Triannual Reports, 1946-1963.

because of concern over soil erosion destroying the productive potential of the colony.¹⁰⁸³ The African Land Development Board (ALDEV) was established in 1946 (as the African Land Development Organisation) but it was only under the Swynnerton Plan of 1954 that forestry would become a recipient of its funding, reflecting the official acceptance of the role of forest conservation in aiding agriculture.

Between 1954 and 1957 eight schemes were begun under ALDEV for the protection or afforestation (with exotic species) of hilltops. By 1958 two of these, at Kisian (Kisiani), close to Kisumu in Central Nyanza District and Lambwe Valley, South Nyanza District, were brought to a close because of opposition from the local African District Council and natural obstacles, respectively.¹⁰⁸⁴ Investigated in detail by Otieno, the case of Kisian illustrates how the Forest

¹⁰⁸³ Anderson, *Eroding the Commons*, 264.

¹⁰⁸⁴ Land Development Board, 'Report of the Land Development Board (Non-Scheduled Areas) for the Financial Year 1st July, 1958 to 30th June, 1959' (Nairobi: ALDEV, 1960), 70; Kenya Forest Department, *Annual Report of the Forest Department 1958* (Nairobi Government Printer, 1959), 9. At Lambwe Valley the department was thwarted by poor rainfall, poor soils, and termite attack. However, efforts did continue past 1958 to try to find a suitable tree species that could be grown in the area; notably the emphasis was on finding an exotic species that had both productive as well as protective potential.

Department and government were blind to local uses of the hill, being primarily focused on water conservation. This attitude was undermined when, in 1960, EAAFRO cast serious doubt on the significance of the hill to local hydrology. However, Otieno also shows how local African agency and factors such as energy provision influenced the negotiation and implementation process of afforestation on Kisian hill.¹⁰⁸⁵ Yet this argument does not preclude the overriding importance of the conservationist agenda espoused by the Forest Department; protection and production forests did not have to be mutually exclusive entities in the eyes of the department, a fact which is borne out by the department's policy to plant exotic species of potentially valuable softwoods in all ALDEV schemes rather than regenerating indigenous species.

Also analysed by Otieno was another of the eight schemes, that of Maragoli, North Nyanza District, begun in 1956/57 and the site of "attempts to sabotage afforestation work both by arson and by the uprooting of trees."¹⁰⁸⁶ The Maragoli case largely mirrored that of Kisian, with proposals for its afforestation originating with concern for local fuelwood supply in the 1940s; yet the project only made headway following the increased political weight of conservation discourse in the 1950s. Protest occurred not directly over afforestation but over the management of the forest, which lay in the hands of the Forest Department.¹⁰⁸⁷ Deliberate destruction of planting also occurred in the most easterly projects, Sagalla and Mbololo within the Taita hills of Coast Province, although it did not stop planting overall. This was possibly another case of opposition to government control, especially as the Forest Department had minimal involvement in these forests before the ALDEV schemes of the 1950s.¹⁰⁸⁸ Indeed, the level of government control and participation of local peoples in the management of the forests of these hills remain contentious to this day.¹⁰⁸⁹

Further ALDEV schemes were begun in Machakos and Kitui Districts, where the department reported "overwhelming" support and a great desire for the increased afforestation of already denuded hills.¹⁰⁹⁰ In 1957 schemes were begun in Rift Valley Province, covering the Tugen hills of

¹⁰⁸⁵ Otieno, 'Conjunction and Disjunction'; Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s'.

¹⁰⁸⁶ Kenya Forest Department, *Annual Report 1958*, 10.

¹⁰⁸⁷ Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s', 50-156, particularly 142-148.

¹⁰⁸⁸ Kenya Forest Department, *Annual Report 1958*, 10; Land Development Board, 'Report of the Land Development Board (Non-Scheduled Areas) for the Financial Year 1st July, 1958 to 30th June, 1959', 76. The continuation of the planting of exotic species is confirmed by recent surveys of the area that found plantations of pines and eucalypts of between 30 and 50 years in age, see Loice Omoro, Mike Starr, and Petri Pellikka, 'Tree Biomass and Soil Carbon Stocks in Indigenous Forests in Comparison to Plantations of Exotic Species in the Taita Hills of Kenya', *Silva Fennica* 47, no. 2 (2013).

¹⁰⁸⁹ Nina Himberg et al., 'The Benefits and Constraints of Participation in Forest Management. The Case of Taita Hills, Kenya', *Fennia-International Journal of Geography* 187, no. 1 (2009): 61-76. Himberg et al also reveal that state intervention and control over these forests usurped their role in sacred rituals that were acting to preserve the forests, although it is not clear when this process began. Himberg et al are clear advocates of the current mainstream forestry approach that favours the inclusion of local peoples within the power structures that govern forests; interestingly, writing nine years before Himberg, Rogo and Oguge (Lucie Rogo and Nicholas Oguge, 'The Taita Hills Forest Remnants: A Disappearing World Heritage', *AMBIO: A Journal of the Human Environment* 29, no. 8 (1 December 2000): 522-23.) advocate the strengthening of Forestry Department power over the Taita Hills in order to protect them from exploitation. Clearly the debates identified by Otieno concerning state and local governance in the colonial period are still very much alive today.

¹⁰⁹⁰ Kenya Forest Department, *Annual Report 1958*, 9.

Baringo as part of the wider Perkerra Catchment Scheme and Kamatira, Sekerr, and Lelan of West Suk District.¹⁰⁹¹ Afforestation of these areas proceeded more slowly with little actual forestry work being done during the colonial era, although the emphasis in Baringo and West Suk was firmly on protection of existing trees.¹⁰⁹² Departmental work in all ALDEV areas was hampered by drought in 1960-61 and further expansion of the ALDEV schemes. Nascent planning taking place for a scheme in Turkana in 1961, for example, stretched the resources of the department further, particularly in view of the need to develop an unprecedented number of working plans, although aerial surveys allowed more rapid demarcation than in decades past.¹⁰⁹³ Uncertainties over the transition to independence and staff shortages further slowed all the ALDEV schemes in 1962 and 1963.¹⁰⁹⁴

Notably, the Baringo and West Suk schemes both utilised Mau Mau detainee labour. The employment of such labour was intended as a final element in what was termed the 'pipeline' of rehabilitation that those accused and detained for association with Mau Mau had to undergo. In Baringo, where the labour was employed on the larger catchment scheme rather than forestry, this policy failed, with the majority of the detainee labour leaving the open village they were settled in to seek work across the Rift Valley.¹⁰⁹⁵ Further research is required into the use of detainee labour in West Suk, but the ALDEV report indicates it was used successfully for forestry operations.¹⁰⁹⁶ It was in this use of agricultural and forestry development as a means to rehabilitate supposed Mau Mau-supporters that links to the expansion in the Forest Department's forest squatter workforce can be found, for alongside the schemes falling under the Swynnerton Plan was the Forest Department's own Supplementary Forest Development Scheme.

What became the Supplementary Forest Development Scheme began in 1954 as the 'Scheme for the reabsorption of Kikuyu, Embu and Meru displaced as a result of the Emergency'. Initiative for this plan actually originated outside of the department, with the Resettlement Committee that sought to deal with the repatriation of Kikuyu, Embu, and Meru who had been either forcibly or voluntarily displaced by the outbreak of Mau Mau hostilities.¹⁰⁹⁷ It was a scheme founded on the success of the *shamba* system and represented belief within the government, beyond the Forest Department, that forest squatting was an effective means to both conduct forest development and allow Africans to live in close proximity to or within forests, despite the obvious danger of this at that time. Commenting on the proposal, the Forestry Adviser to the Secretary of State for the

¹⁰⁹¹ Anderson, *Eroding the Commons*, 268; Land Development Board, 'Report of the Land Development Board (Non-Scheduled Areas) for the Financial Year 1st July, 1958 to 30th June, 1959', 60.

¹⁰⁹² Kenya Forest Department, *Annual Report 1961*, 10-11.

¹⁰⁹³ Kenya Forest Department, *Annual Report 1960*, 1-12.

¹⁰⁹⁴ Kenya Forest Department, *Annual Report 1963*, 6-7.

¹⁰⁹⁵ Anderson, *Eroding the Commons*, 276.

¹⁰⁹⁶ Land Development Board, 'Report of the Land Development Board (Non-Scheduled Areas) for the Financial Year 1st July, 1958 to 30th June, 1959', 60.

¹⁰⁹⁷ Ministry of Forest Development, Game and Fisheries, 'Scheme for Reabsorption of Kikuyu, Embu and Meru Displaced as a Result of the Emergency', 8 December 1954, CO 822/797/6, TNA.

Colonies, F.S. Collier emphasised this was a “politically important scheme for controlling and employing large numbers of Kikuyu” rather than a profit-generating project.¹⁰⁹⁸ In late 1954 the Council of Ministers referred the plan to an outside expert, Dr Ian Craib, formerly a research officer of the Union Forestry Department and by 1954 the manager of a timber company in South Africa. In commenting on Craib’s extensive report into the prospects of the timber industry in Kenya and the proposed scheme, which was only completed in mid-1956, the Ministry of Forest Development, Game and Fisheries did consider the security implications of allowing “the most dangerous people in Kenya” back into the forests.¹⁰⁹⁹ This danger, it quickly established, could be easily overcome by the concentration of workers into villages and close European supervision; in other words, a continuation of the Forest Department’s current practices. There were not, then, any major security hurdles blocking the way for the return of Kikuyu to the forests. Indeed, it may have been considered that increasing the number of forest villages increased security if they were filled with loyalists or Mau Mau detainees who could be ‘reformed’ by the Forest Department’s apparently effective welfare and supervisory strategies into loyal, hardworking servants of the Crown.

Craib’s report gave full support to an extension of afforestation of economically viable softwood species, going as far as to say the combination of high rainfall in the highlands of Kenya and the cost-effectiveness of the Kikuyu *shamba* workforce, “a forest worker par excellence”, meant the country had perhaps the greatest potential of any in Africa for softwood timber.¹¹⁰⁰ Based on Craib’s suggestions, which were fully endorsed by F.S. Collier, and the Forest Department’s own 1954 plans drawn up by Davis, the working plans officer, a revised plan was put into action in 1957 for the establishment of 300,000 acres of softwood plantations over a 25-year period, which included the afforestation targets set in 1946, with the first of the new plantations being exploitable within 10 years.¹¹⁰¹

To achieve this, it was estimated the Forest Department needed a forest squatter labour force of 14,000 families or labourers, including those it already employed.¹¹⁰² It was this that explained

¹⁰⁹⁸ Collier, ‘Comment on “Scheme for Reabsorption of Kikuyu, Embu and Meru Displaced as a Result of the Emergency”’.

¹⁰⁹⁹ Ministry of Forest Development, Game and Fisheries, ‘Memorandum on Dr. Ian Craib’s Report entitled “A Scrutiny of the Programme of Afforestation by the State in Kenya”, Dated 11/7/56’, 7 January 1957, 4.

¹¹⁰⁰ Ian Craib, ‘A Scrutiny of the Programme of Afforestation by the State in Kenya’ (Pretoria, 11 July 1956), 8–9.

¹¹⁰¹ Minister for Forest Development, Game and Fisheries, ‘Monthly Report for February/March 1957’, 11 April 1957, VF/2/3, KNA; Kenya Forest Department, *Departmental Report 1955-1957*, 2.

¹¹⁰² Curiously, the material covering this point is unclear whether the requirement was for families or labourers. Craib considered that 6,250 additional families were needed in the system to fulfil his annual planting targets, while the government stated that 6,500 labourers would be required; its figures, moreover, suggest that a figure for ‘labourers’ was reached by increasing the figure for families by approximately one third (presumably representing the labour of women and children). Using this government estimate the department was 3,882 labourers short of the 14,000 target by 1963, whereas if we use the assumption that 14,000 is a reference to families the department was short by 6,560 in 1963. Nevertheless, it is clear that the annual acreages being established by the early 1960s meant the department was well on track to meet the 300,000 acre target within the 25-year timeframe of the scheme despite this apparent shortfall in labour. Craib, ‘A Scrutiny of the Programme of Afforestation by the State in Kenya’, 18; Ministry of Forest Development, Game and Fisheries, ‘Memorandum on Dr. Ian Craib’s Report entitled “A Scrutiny of the Programme of Afforestation by the State in Kenya”, Dated 11/7/56’, 4–5; Minister for Forest Development, Game and Fisheries, ‘Monthly Report for February/March 1957’.

the almost doubling in the number of forest squatters after 1957 and the vastly increased annual acreages of plantations the department was able to achieve. By the early 1960s annual acreages varied between 12,000 and 15,000, which indicated that the department would have no trouble meeting the 300,000 acre target of the project. The identities of this new intake of forest squatters are more difficult to detect than the work they accomplished. Certainly they were overwhelmingly Kikuyu from the inception of the project, with lower numbers of Embu and Meru.¹¹⁰³ In her assessment of the wider rehabilitation schemes employed during the Mau Mau emergency and based on a 1954 statement by L.R. Maconochie-Welwood (Minister for Forest Development, Game and Fisheries), Elkins has argued that the Supplementary Forest Development Scheme (SFDS) was used to reward Kikuyu loyal to the government, whom she considers the 'haves' of the pre-Emergency period, rather than the landless Kikuyu, the Mau-Mau sympathising 'have-nots' who had been displaced by the Emergency.¹¹⁰⁴ This is a powerful argument, especially when considered in light of the capacity of the *shamba* system to accommodate Kikuyu families. Between 1955 and 1960 the Supplementary Forest Development Scheme took on 4,835 families, while the number of displaced families in Nyeri District, for example, was estimated to be 4,000 out of a total of 20,000 families across Kiambu, Fort Hall, and Nyeri in February 1955.¹¹⁰⁵ Clearly the forest scheme had the potential to have a large impact on the problem of accommodating displaced Kikuyu, yet if Elkins is correct and the 4,835 families that became forest squatters were from, as she implies, the 'landed' loyal it represents strong support for her argument of the failure of the wider rehabilitation project.

The division made by Elkins here between the displaced and the loyal, however, appears to be too absolute. The 'landed' loyalists of Central Province certainly benefitted in the wake of Mau Mau, dominating the land consolidation process and the transforming national political arena, yet the government gained much support against Mau Mau from poorer, landless Kikuyu who largely sought work in the white highlands after the cessation of counter-insurgency measures.¹¹⁰⁶ Branch's study of loyalism highlights a case of a landless loyalist who sought forestry work in 1956; indeed, with the obvious restrictions that forest squatting brought, this pool of landless loyalist

¹¹⁰³ 'Press Office Handout No.716. Forest Squatter Policy' (Press Officer, Department of Information, 8 June 1954), CS/2/8/231, KNA. The policy as articulated in this press office handout was presented by L.R. Maconochie-Welwood (Minister for Forest Development, Game and Fisheries) to a meeting of European organisations in Kenya. He emphasised that the Forest Department had no policy against recruiting forest squatters from other ethnic groups beside those from Central Province but that is was largely the hostility displayed by those other ethnic groups to working with Kikuyu that prevented their recruitment. As the Supplementary Forest Development Scheme was of course expressly designed to cater for Kikuyu the accuracy of this statement is in some doubt; it is more likely that Maconochie-Welwood was entertaining the idea of other ethnic groups in the forests only to placate European concerns about the return of Kikuyu to forest areas.

¹¹⁰⁴ Elkins, *Britain's Gulag*, 267.

¹¹⁰⁵ Council of Ministers Resettlement Committee, 'Long Term Absorption of Displaced Kikuyu - Absorption in Kikuyu Districts', 15 February 1955, CO 822/797/8, TNA. The same source equates this number of families to a total displaced Kikuyu population in these districts of 150,000, implying notably larger families than any Forest Department documents concerning the average size of forest squatter families. The figure for the number of forest squatters recruited comes from the Forest Department's Annual Reports, 1955 to 1960.

¹¹⁰⁶ Branch, *Defeating Mau Mau, Creating Kenya*, 122-24, 129; Daniel Branch, 'Loyalists, Mau Mau, and Elections in Kenya: The First Triumph of the System, 1957-1958', *Africa Today* 53, no. 2 (2006): 27-50.

labour seemed the ideal source for recruitment into the Supplementary Forest Development Scheme.¹¹⁰⁷ It is also not entirely clear that the figure of 20,000 displaced persons, from which the SFDS would draw, were indeed all classified as 'loyal' by the government. The same memorandum that produced this figure, for example, talked of resettling 3,090 Kikuyu *in addition to* 325 confirmed loyalists in the same scheme, surely suggesting that the 20,000 displaced were not all 'loyal' in the eyes of the Resettlement Committee at least.¹¹⁰⁸ Thus, while Elkins is correct that the scheme as outlined by the Ministry for Forest Development, Game and Fisheries was one of "reward' for loyal Kikuyu, Meru and Embu", what was meant by 'loyal' was never clearly defined.¹¹⁰⁹ Indeed, the same plan even considered that those in work camps who displayed "good behaviour" but fell outside their vague criteria for loyalty could also be included as potential candidates for the SFDS.¹¹¹⁰ Statements made by Sydney Draper, a forester heavily involved with several sites of afforestation under the scheme indicate that such work camp detainees did enter the system, as he recalled that some forest squatters had indeed been ex-Mau Mau, a point supported by the department's own official history.¹¹¹¹ Rewards, however, were certainly on offer within this scheme, as of the few surviving agreements between the Forest Department and squatter recruits, some clearly indicate the department was making concessions by allowing five head of cattle per squatter in 1959, two decades after the ban on cattle ownership among the forest squatters had been established.¹¹¹² Clearly the system was now open to more than just the poorest, livestock-less *ahoi* and it seems likely that this represented the return of Kikuyu from higher social classes into forest squatting; a process that lay at the heart of the collapse of the *shamba* system in the post-colonial era.¹¹¹³ Overall, the narrative of rewarding the loyal should also be seen within the context of the Forest Department's own high standards that it set for its forest squatters. As the department reported in 1958 in relation to recruitment to the scheme:

Care is exercised in the selection of these new employees, but on arrival at their destination not all are found to be acceptable. None are attested until they have served a trial period. At some stations a high proportion of some of the batches of new recruits have been sent back to their Reserve as being unsatisfactory.¹¹¹⁴

¹¹⁰⁷ Branch, *Defeating Mau Mau, Creating Kenya*, 126.

¹¹⁰⁸ Council of Ministers Resettlement Committee, 'Long Term Absorption of Displaced Kikuyu - Absorption in Kikuyu Districts', 5.

¹¹⁰⁹ Ministry of Forest Development, Game and Fisheries, 'Scheme for Reabsorption of Kikuyu, Embu and Meru Displaced as a Result of the Emergency', 1.

¹¹¹⁰ Ibid. Kikuyu who had been sent to detention camps (those classified as 'black', that is suspected of closest Mau Mau affiliation) but were subsequently labelled as 'white' were the only group explicitly excluded from the scheme, largely because it was seen as too dangerous to allow them into the forests.

¹¹¹¹ 'Press Office Handout No.716. Forest Squatter Policy'; Draper, interview; Logie and Dyson, *Forestry in Kenya*, 9.

¹¹¹² 'Memorandum of Agreement between Kindi S/o Keter and Forest Department' 18 March 1959, DC/KMGA/1/5/2, KNA.

¹¹¹³ For an examination of the *shamba* system since 1963 and the impacts of its colonial origin on the collapse of the system and then reinstatement (as of 2016) see Fanstone, 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?'

¹¹¹⁴ Kenya Forest Department, *Annual Report 1958*, 28.

No matter any particular forest squatter's attitude toward Mau Mau, what the department sought above all was good workers. Any disobedience or political protest would, the department no doubt felt, be adequately dealt with directly by the expansion in supervision and policing and indirectly by development initiatives that went along with the concentration of the forest workers into villages.

Closer governance over the forest squatters developed as their numbers increased in the late 1950s and through the early 1960s, when the department began recruiting a further 1,000 squatters as part of the Accelerated Reafforestation Scheme designed to alleviate unemployment.¹¹¹⁵ In itself, this further expansion of the system reiterated the acceptance that forestry had gained in Kenya since 1945, not only in terms of its revenue potential but also as a form of social policy. By 1963 the department was operating 71 concentrated forest villages from the coast to Lake Victoria, although not in the Southern or Northern Provinces. Serving these villages were 103 schools, 123 shops, and 142 water schemes, as well as numerous facilities such as granaries and market centres.¹¹¹⁶ To manage this expansion in population and development while also maintaining a high level of security, the Forest Department furthered its delegation of powers to Africans. From 1958 onwards and beginning in those areas where security was most paramount – that is, where white settlers resided – headmen were installed in each village. How these headmen affected the existing power dynamics of forest village life is unknown. The headmen selection process is also unclear, although it is apparent that they were chosen by the district administration not the Forest Department, which could indicate the department was again willing to allow administrative oversight that would aid in its arguments against critics of the forest squatters.¹¹¹⁷

3.4.4 Localisation and Independence

Accompanying the process of closer governance was an overall expansion in staff levels across the department. The number of front-line positions, that is those involved in running forest villages, plantation work and overseeing forest reserves, doubled in the post-war period (see Table 3-3). This was not surprising given the department's greatly expanded functions in this time period; what was remarkable was the persistence of European domination of the department at both the

¹¹¹⁵ Kenya Forest Department, *Annual Report 1963*, 18.

¹¹¹⁶ *Ibid.*, 11. The breakdown of forest villages (recorded as 'Labour villages') per forest district was: Nairobi, 13; Nyeri, 16; Thomson's Falls, 4; Southern, 0; Coast, 2; Londiani, 10; Elburgon, 12; Eldoret, 9; Kitale, 3; Nyanza, 2. Note that the same annual report also provides resident labour figures for each forest district and states that there were no forest squatters in Coast District, suggesting that either the two villages there were not yet occupied (unlikely as squatters constructed their own villages) or used for casual labour (80 casual labourers were reported to work in Coast). Numbers of forest squatter families in each forest district in 1963 were: Nairobi, 1,697; Nyeri, 1,348; Thomson's Falls, 349; Southern, 0; Coast, 0; Londiani, 1,423; Elburgon, 1,346; and Eldoret, 1,277. The absence of Kitale and Nyanza from the labour returns is unexplained, as despite having three and two forest villages, respectively, they had no recorded casual labour or squatters.

¹¹¹⁷ Kenya Forest Department, *Annual Report 1958*, 28.

senior and junior level. By independence less than half of the department's foresters were African, many of whom were rapidly promoted in 1963 to compensate for the resignation of one Asian and 22 European foresters. Eleven Africans were studying forestry at university level abroad by 1963, yet the first of these did not take up a senior position (assistant conservator) until 1964.¹¹¹⁸ The Forest Department's lacklustre efforts at the Africanisation of its staff during the 1950s and early 1960s are highlighted through comparison with its counterpart in neighbouring Uganda. A much smaller department than Kenya's, with revenues during the 1950s being as low as a third of those in Kenya, the Uganda Forest Department was considerably more advanced in its Africanisation programme by the time of independence in 1962.¹¹¹⁹ In contrast to Kenya's training of 11 Africans abroad, by 1963 the Uganda Forest Department was already employing five Africans who had received university-level forestry education abroad while a further 13 were studying for degrees in forestry.¹¹²⁰ By the late 1940s the Uganda Forest Department had decreed that it would recruit no more Europeans as foresters, a position it could take because of its very early commitment to formal forestry education for Africans: it opened its first forestry school for African rangers, and later for African foresters, in 1932 (at Kityerera).¹¹²¹ This commitment to forestry schooling led to the Uganda Forest Department having a pool of trained African rangers and foresters from which the most able could be selected for further education. Sustained support for African forestry

¹¹¹⁸ Kenya Forest Department, *Annual Report 1963*, i, 14. The majority of the 11 Africans to receive university-level training abroad began this in October 1962. None were funded from by the department but instead by UK sources and the United Nation's Food and Agriculture Organisation. The majority attended courses at Edinburgh University, but Syracuse and New Hampshire in the USA also featured, as did Ibadan in Nigeria.

¹¹¹⁹ Webster and Osmaston, *A History of the Uganda Forest Department 1951-1965*, 97. Uganda is chosen here because of its proximity to Kenya, suggesting that the two respective forest departments would have been broadly aware of developments in their neighbouring colony, especially after co-operation increased during the 1950s. Comparisons with other colonies can also be drawn. For example, Tanganyika opened its own African Forest Rangers School at Olmotonyi (subsequently Forestry Training School and today the Forestry Training Institute) in 1937 and was training African foresters there by the early 1960s ('Eighth British Commonwealth Forestry Conference Report. Tanganyika Main Tour', *Commonwealth Forestry Review* 41 (4), no. 110 (December 1962): 317. Nigeria's training regime was also more advanced, with the Ibadan Forestry School opening in 1941, and senior training in operation by the 1950s with, for example, A.J.K.G. Imam (Malam Kalli) of Northern Nigeria gaining his BSc in forestry from Aberdeen University in the 1950s and going on to become Chief Conservator of Forests (Northern Nigeria). Imam also represented Northern Nigeria at the 1962 Eighth Empire Forestry Conference. Indeed, by 1962 Nigeria was leading the way in the training of local officers in the African Commonwealth, with 29 out of a total of 85 professional positions being held by Africans. This low figure underscores the overall sorry state of professional forestry education for Africans in the early 1960s. 'Eighth British Commonwealth Forestry Conference Report. Introductions to the Discussions in Plenary Session of the Main Items of the Agenda', *Commonwealth Forestry Review* 41 (4), no. 110 (December 1962): 348; F.S. Collier and R.W.J. Kay, 'Regional Training of Forest Staff in Nigeria', Prepared for Fifth Empire Forestry Conference, 1947; 'AJKG Imam: Memories of a Great Pioneer', accessed 25 April 2016, <http://www.dailytrust.com.ng//news/tribute/ajkg-imam-memories-of-a-great-pioneer/21530.html>.

¹¹²⁰ Webster and Osmaston, *A History of the Uganda Forest Department 1951-1965*, 85-86. Martin Rukuba was the first Ugandan to complete degree-level training in forestry, graduating from the University of Aberdeen in 1959. In July 1965 Rukuba became the colony's first black Chief Conservator of Forests. Significantly, Rukuba rose through the ranks of the Uganda Forest Department, initially receiving forest training as a ranger in Uganda's forest school before progressing to the position of forester. F.C.H., 'N. V. Brasnett', 3.

¹¹²¹ Webster and Osmaston, *A History of the Uganda Forest Department 1951-1965*, 82. The Kityerera forest school (in south Busoga, Uganda) operated from 1932 to 1941, being shut due to staff shortage during the Second World War. Its successor, sited at Budongo forest, was opened in 1951 and still operates as a forestry school today. In 1959 the school also accepted students from Nyasaland and Tanganyika (although those from Tanganyika never arrived); there is no indication that any students came from Kenya.

<i>Year</i>	<i>Forest Guards</i>	<i>Forest Rangersⁿ¹</i>	<i>Assistant Forestersⁿ²</i>	<i>Forestersⁿ³</i>	<i>Assistant Conservatorsⁿ⁴</i>
1951	597	69	14	46	15
1952	597	69	7	46	14
1953	603	74	7	48	14
1954	693				
1955	693	82	4	46	14
1956					
1957	687	86	3	70	21
1958	801	134	4	83	24
1959	850	148	5	99	25
1960	880	148		104	25
1961	886	161		96	25
1962	885	160		96	24
1963	885	160		108	21

ⁿ¹ Forest Rangers were predominantly African and were often listed as 'African Forest Rangers' although a minority were Asian. Before 1951 this position was listed as 'African Assistant Forester'.

ⁿ² Assistant Foresters were predominantly Asian (with this being explicit in the job title before 1951), although a minority were European. This position seems to have been phased out in preference to employing full foresters.

ⁿ³ Foresters were predominantly European with a minority Asian. By 1962 the department was promoting African Forest Rangers to forester positions, with 21 promoted in 1963. The figures for Foresters also includes Senior Foresters (these represented approximately 10-15 per cent of the total figure and were positions usually held by Europeans). Foresters were in charge of forest districts.

ⁿ⁴ Assistant Conservators of Forest were all European, with forestry training at degree level. They were in charge of forest divisions or had ad hoc specialist duties.

Table 3-3. Annual Forest Department personnel figures. Blanks indicate an absence of data. Senior and specialised positions are excluded. *Source:* Forest Department Annual and Triannual Reports, 1951 to 1963.

education within the leadership of the Uganda Forest Department itself made this possible. In particular, the Chief Conservator of Forests, N.V. Brasnett, who had moved to Uganda from Kenya in 1929, strongly backed African education. He considered it the "most important contribution" to the safeguarding of Uganda's forest estate and this view was reinforced by his successor, W.J. Eggeling who published on the subject.¹¹²²

Concurrent to Uganda's developments, the 1947 Empire Forestry Conference highlighted Nigeria's moves toward establishing a forestry school for African rangers.¹¹²³ Kenya's Forest Department was clearly aware of its shortcomings in terms of forestry education for Africans in relation to other African colonies, publically stating in its 1949-50 report that the absence of training in Kenya was "really very serious."¹¹²⁴ Subsequently a three-week experimental training course was run for African rangers in 1952. It was considered a success but plans for expansion

¹¹²² Eggeling and Sangster, *Elementary Forestry*, ix.

¹¹²³ Collier and Kay, 'Regional Training of Forest Staff in Nigeria', 2, 5.

¹¹²⁴ Kenya Forest Department, *Departmental Report 1948-1950*, 38.

were shelved with a lack of funds and manpower as well as the unfolding Mau Mau crisis cited as explanation for this.¹¹²⁵ Uganda suffered more seriously than Kenya from underfunding and staff shortages, but still it pushed on with its commitment to forestry education. In 1957 Kenya did gain its own Forest Training School for African rangers, with a course for junior foresters following the next year.¹¹²⁶ Located in Londiani, this school still operates today. In the wake of Mau Mau, the department initially sought recruits for its ranger force not from its forest squatters, despite their obvious familiarity with forestry and increasing although primary levels of literacy, but from the Kings African Rifles, the well-established source of its forest guards. However, it was considered that recruits would probably have to be sought from Central Province, and the low numbers of applicants and successful graduates of the school in its first several years suggests that the emphasis on KAR recruits was probably quickly dropped.¹¹²⁷

The consequence of the late development of a forest ranger school was the deficiency in the department's preparations for independence in terms of having African staff educated to degree level. There simply was not enough time for the forest school to develop and for promising students to be identified and passed up to higher institutions of learning. Compounding this situation was the department's insistence on recruiting only European, or in a small minority of cases Asian, foresters. Africans were effectively barred from even the intermediate position of forester until 1962 and so promising candidates could not progress through the department. This situation undoubtedly must have acted as a strong deterrent to many Africans who had the potential to rise to the highest, most technically demanding positions in the department. This was a reality that had been realised two decades earlier in Uganda and acted upon by the late 1940s, partly of course because there was no large white settler community to draw upon. Conversely, the Kenya Forest Department had a long history of recruiting settlers, an approach that was intensified through the 1950s and reaffirmed by the Craib report in 1957 for the specific role of forester in preference to recruiting men from Britain.¹¹²⁸ Turning settlers or the sons of settlers into foresters was to short-

¹¹²⁵ 1952 *Education Department Report*, 28; Kenya Forest Department, *Departmental Report 1951-1953*, 44.

¹¹²⁶ Kenya Forest Department, *Annual Report 1958*, 30-31.

¹¹²⁷ 'Minutes of Liaison Meeting No.2/57' (Forest Department, Kenya, 30 January 1957), VF/2/3, KNA; 'Minutes of Liaison Meeting No.7/57' (Forest Department, Kenya, 28 June 1957), VF/2/3, KNA; Kenya Forest Department, *Annual Report 1958*, 30; Kenya Forest Department, *Annual Report of the Forest Department 1959* (Nairobi Government Printer, 1960), 24. In its first two years of operation the department complained of the low standard of candidates enrolled on its rangers' course, with a particular point that many were illiterate. Of the 56 candidates in the first two years only 36 received certificates of competency. Given that 34 of the 56 were already serving rangers, this indicated general educational deficiency among the department's forest rangers and also that the school was attracting few candidates from outside the Forest Department. Because of these issues the initial two-year course was changed to a one-year course in 1958. In addition to recruiting from the KAR and Central Province, potential rangers could be found in families that already had connections with the department. This was demonstrated by the case of a Tugen candidate, Peter A. Rotich, who was a Lembus-rights holder (the site, of course, of a long-standing dispute between Tugen and the Forest Department) who was apparently attracted to a career with the Forest Department because his father was a forest guard. Recruiting people like Rotich was no doubt seen by the department as a way to increase support for forestry in African areas. T.A.M. Gardner (Divisional Forest Officer, Londiani) to District Officer (Ravine), 16 May 1956, DO/ER/2/10/2, KNA.

¹¹²⁸ Craib, 'A Scrutiny of the Programme of Afforestation by the State in Kenya', 31. There was no formal training regime for local European foresters in Kenya prior to 1945. After this "local boys" were sent for a forestry course at Saarsveld Forest School in South Africa, a practice which ended by 1953 because the school switched to providing

term advantage for the department as, of course, the settlers had represented the stubborn thorn in the side of the department for decades. The perceived necessity of increasing European oversight of the forests in the context of Mau Mau only increased this trend. This placatory atmosphere suffused through a colonial government that had of course been hostile to any African education outside the missions prior to the Second World War and resisted higher education after this. If there was any will within the Forest Department to Africanise, it withered within this environment, only beginning to properly take hold as independence loomed.

The department's newly found willingness to accept localisation in the early 1960s was less to do with the department itself, of course, and more the prevailing winds of change. Actions such as Tom Mboya's 1960 African airlift programme were a manifestation of African demands for higher education, while the Administration rapidly Africanised between 1960 and 1963.¹¹²⁹ These developments must have brought fears to the Forest Department that rapid localisation would occur outside of its control, that forestry might be jeopardised by Africans with no formal forestry education at all. There was a clear double-standard here as the department had been recruiting settlers for decades who held no qualification other than an appetite for outdoor life. Overall, however, the Forest Department was successful in controlling the localisation process, although it is notable that a handful of officers were appointed through the 1960s with agricultural rather than forestry training due to a lack of adequately trained candidates. The absence of urgency which characterised this change did, however, result in interference from above the department, although the precise origin of this is unclear. In 1964 all European senior foresters were given notice of the end of their contracts that became effective in 1965, resulting in a rapid changeover to Africans. Of great assistance to the department was the beginning, in 1962, of a two-year forestry diploma at Egerton Agricultural College in Njoro. This institution provided training for foresters while the department's own Forest Training School trained rangers and forest guards.¹¹³⁰

The cumulative effect of the localisation initiatives was the replacement of white Europeans within the department with Africans through the 1960s. Yet it would be 1966 before an African attained the rank of conservator of forests, and the decade finished with J.P.W. Logie as Chief Conservator. The first Kenyan to study forestry abroad, Onesimus Mbruru, would go to become the

instruction purely in Afrikaans. The restarting of formal education was then paused until the Junior Forest Training Scheme was launched in early 1958 (the first graduates of which were European) and even then the scheme was heavily dependent on what had become the accepted practice of shadowing more senior officers for approximately 12 months. Kenya Forest Department, *Departmental Report 1948-1950*, 37; Kenya Forest Department, *Departmental Report 1951-1953*, 44; 1950 Education Department Report, 23; Kenya Forest Department, *Annual Report 1958*, 31; Holman, *Inside Safari Hunting, with Eric Rundgren*, 60.

¹¹²⁹ David Goldsworthy, *Tom Mboya: The Man Kenya Wanted to Forget* (East African Publishers, 1982), 166–67; Anthony Hamilton Millard Kirk-Greene, *Britain's Imperial Administrators, 1858-1966* (St. Martin's Press, 2000), 256.

¹¹³⁰ Forest Department, *Forest Department Annual Report 1969* (Republic of Kenya, 1974), i; Forest Department, *Forest Department Annual Report 1964* (Republic of Kenya, 1967), 11; Forest Department, *Forest Department Annual Report 1965* (Republic of Kenya, 1967), 13–16; Forest Department, *Forest Department Annual Report 1966* (Republic of Kenya, 1968), 17–18; Forest Department, *Forest Department Annual Report 1967* (Republic of Kenya, 1969), 23–26; Forest Department, *Forest Department Annual Report 1968* (Republic of Kenya, 1970), 33–35; Forest Department, *Forest Department Annual Report 1969*, 16–17.

department's first African chief conservator of forests, but this did not happen in the 1960s.¹¹³¹ The department also made extensive use of Commonwealth personnel, particularly Canadians and New Zealanders, during this decade – itself a reflection of the inadequacies of African education - and many of the Kenyans who travelled overseas to study forestry did so in North America.¹¹³² The continued presence of expatriates within the professional positions in the Forest Department was by no means unique within the government of course, as Kenyatta's regime favoured stability. Four years after independence, there were still 1,700 Britons spread across Kenya's civil service.¹¹³³

As Kenya transitioned to independence, the continuity of forestry in Kenya - the persistent presence of European influence and leadership, and the central role of the state in forest governance - was underlined by the decision to hold the Eighth Commonwealth Forestry Conference in Kenya in 1962. The conference primarily focused on technical matters but the general policy direction it followed was well-reflected in Kenya: an emphasis on state-controlled exotic softwood establishment because of its greater economic and technical viability than regenerating indigenous forests.¹¹³⁴ Reflected also was the continued dominance of expatriates within the forest departments of the Commonwealth countries.¹¹³⁵ Indeed, of the 30 delegates from the African Commonwealth members, only six were not expatriates. Two of these were in fact Asian representatives of the sawmill industry while the other four were senior members of Nigeria's

¹¹³¹ Through the 1960s the structure of the Forest Department remained the same as that established in the 1950s. A chief conservator of forests headed the department and was assisted by a deputy chief conservator of forests. Completing the executive level of management were the conservators of forests, who had a large body of delegated powers to enable them to run the two major geographic divisions: west of Rift and east of Rift. Following independence, conservators were also created for forest industry (reflecting the importance of this in Kenyan forestry's focus on softwood plantations) and research (again, crucial when forestry was relying on alien species that had proved vulnerable to disease in the past). More local control was provided by the assistant conservators of forests and foresters. See Appendices for an overview of departmental organisation. Forest Department, *Forest Department Annual Report 1966*, 18; Forest Department, *Forest Department Annual Report 1969*, 17.

¹¹³² Forest Department, *Forest Department Annual Report 1964*, 13. In 1964 six Canadians and three Kiwis worked within the department and this continued at the approximate same level for the rest of the decade. Their expertise was particularly deployed in survey and mapping work but also in exploitation. Although it falls outside of the research bounds of this thesis, the presence of these personnel and the numbers of Africans heading to North American universities may indicate a greater focus being placed on exploitation in the early post-colonial period. For example, Forest Department revenues rose through the 1960s to a record high of £431,087 in 1969, although this can of course be attributed to the beginning of the exploitation of plantations founded in the 1950s. Rising expenditure (the department had an annual deficit of £1,319,201 in 1968 for example) no doubt resulted in political pressure being placed on the department to pay its way. Indeed, by the 1980s this dynamic was seriously hindering the ability of the department to function; see D. K. Mbugua, 'The Forest Revenue System and Government Expenditure on Forestry in Kenya', *Forest Finance: Working Paper (FAO)*, 2003, <http://agris.fao.org/agris-search/search.do?recordID=XF2006425929>. For discussion of the *shamba* system after independence in this context see Fanstone, 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?'

¹¹³³ William Robert Ochieng', 'Structural and Political Changes', in *Decolonization and Independence in Kenya 1940-93*, ed. Bethwell A. Ogot and William Robert Ochieng' (Ohio State University Press, 1995), 97.

¹¹³⁴ 'Eighth British Commonwealth Forestry Conference Report. Silviculture.', *Commonwealth Forestry Review* 41 (4), no. 110 (December 1962): 356, 360. The natural and artificial regeneration of indigenous forests was dealt with by nine papers at the conference, significantly more than the three papers that dealt with exotic planting. This was a reflection of the comparative difficulty (but of course interest in) of regenerating indigenous forests and debate over to what stage an indigenous forest should be allowed or coaxed into regeneration.

¹¹³⁵ The Food and Agriculture Organization of the United Nations also used the conference to recruit colonial foresters whose careers in the former colonies were coming to an end. In doing so, the hegemony of the status quo in forestry was preserved. See Gold, 'The Reconfiguration of Scientific Career Networks in the Late Colonial Period'.

Forest Department.¹¹³⁶ At a panel on future staffing in the Commonwealth this very issue was raised. Nigeria was praised for having the most advanced programme of professional training for Africans, but even so with 29 out of 85 professional-grade officers being African (two years after independence) this represented less than half. East and Central Africa were highlighted as being particularly far behind in localisation; Kenya's situation was conspicuous by the absence of any mention of it. R.J. Dewar, Chief Conservator of Forests for Nyasaland, was forthright when he complained of "the complete lack of foresight in the building up of indigenous cadre or professional and sub-professional officers to take over from the expatriate cadre at the time of independence."¹¹³⁷ Kenya was thus not alone in its sluggish realisation of the importance of localisation, but it was one of the worst. Dewar continued by speaking of the fear that now permeated through the ranks of expatriate foresters that the transitions to independence would bring inexperienced personnel and a general collapse in forest departments. This was a fear, as Dewar rightly stressed, that was a product of its own making: if proper training programmes had been instigated for Africans at an earlier date it would never have arisen.¹¹³⁸

Despite the trepidation that European foresters held about the future of forestry in Kenya during the transitional period, also of course connected to the vagaries now exposed in their future careers, appearances indicated that the Forest Department that became a part of the Republic of Kenya was better placed than it ever had been before to play a role in the economic and social development of the country. Kenyatta's government favoured the preservation of many colonial departments. While the forest reserves were eaten into by settlement schemes and (to a greater extent) by the transfer of land to national parks, they were now permanent features of the landscape; the forests were one of the essential resources that would remain under government control.¹¹³⁹ State centralisation even increased in 1964 when African District Council control over forests in the former African reserves was ceded to central control.¹¹⁴⁰ Yet cracks soon began to form in the bough of this colonial institution. Even before Britain relinquished control, the political enfranchisement of Kenyans allowed a much greater degree of scrutiny to fall upon the Forest

¹¹³⁶ 'Eighth British Commonwealth Forestry Conference Report. Delegates, Associate Delegates, Observers and Persons in Attendance', *Commonwealth Forestry Review* 41 (4), no. 110 (December 1962): 399–403. The dry official accounts of the conference hide what must have surely been fascinating and possibly discriminatory social dynamics within this event. The interpersonal communication between delegates, probably unrecorded and now lost, would have provided insight into just how the minority African delegates were treated. When one conference tour was at risk of collapse, for example, because delegates were too engaged in games of cricket and rounds of golf, were the African delegates excluded? 'Eighth British Commonwealth Forestry Conference Report. Kenya Main Tour', *Commonwealth Forestry Review* 41 (4), no. 110 (December 1962): 328–29.

¹¹³⁷ 'Eighth British Commonwealth Forestry Conference Report. Introductions to the Discussions in Plenary Session of the Main Items of the Agenda', 346.

¹¹³⁸ At an executive level, the Commonwealth Forestry Association recognised this situation and the need to reorient its focus away from Britain by increasing the representation of Commonwealth members on its executive board, which began by the inclusion of members from Nigeria, Ghana, India, and Pakistan. 'Eighth British Commonwealth Forestry Conference Report.', *Commonwealth Forestry Review* 41 (4), no. 110 (December 1962): 98.

¹¹³⁹ For discussion of the perceived importance of maintaining resources and services under state control in the immediate post-colonial state, see Ochieng', 'Structural and Political Changes', 93, 83–109.

¹¹⁴⁰ Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s', 157.

Department. The *shamba* system and the department's overall recruitment practices were accused of ethnic favouritism as they were, of course, largely dominated by Kikuyu. This was a serious accusation as at least the rhetoric of independence, if not the reality, called for ethnic egalitarianism.¹¹⁴¹ The lot of the forest squatters themselves was also questioned. In particular, criticism was levelled at their low wages, poorly managed pensions, and lack of land tenure: all factors that contributed to an increasing number of forest squatters abandoning the system in favour of more secure settlement schemes during the 1960s.¹¹⁴² Indeed, just as the Forest Department had struggled to assert itself within the colonial state against the pressures of the private sphere, in the decades after Kenya's independence forestry would be challenged because of the colonial inequalities that manifested themselves within the postcolonial state.¹¹⁴³

¹¹⁴¹ Ochieng', 'Structural and Political Changes', 91–92.

¹¹⁴² Colony and Protectorate of Kenya, 'Legislative Council Debates Official Report' (Vol. LXXXIX. Second Session. Hansard, Nairobi, 8 July 1962), 1170–73. Concerns over the ethnic favouritism of the Forest Department were raised by W.C. Murgor, Member for Elgeyo-Suk, and supported by Tom Mboya in his capacity as Minister for Labour. In particular, Murgor stated that 20 African rangers who were made foresters in that year (out of a total of 21) were all Kikuyu. Forest Department records cannot confirm or disprove this. J.J.M. Nyagah, Member for Embu, raised concerns in the same debate over some forest squatters suffering from poor harvests over several years with little help from the Forest Department. After 1962, meetings of the Ministerial Joint Industrial Committee provided a forum for the discussion of the working conditions of the forest squatters, however little improvement in their condition seems to have been affected and from 1965 onwards the Forest Department's annual reports openly report large numbers of desertions from the *shamba* system because of low wages, poor working conditions, and lack of security of land tenure. As the decade closed the department was beginning to attempt to stem this flow by allowing greater livestock ownership within the system. As I have argued elsewhere, this overturning of a central, yet of course draconian, aspect of the *shamba* system is likely to have increased the appeal of forest squatting to wealthier segments of society that had previously been largely deterred from the *shamba* system. Kenya Forest Department, *Annual Report 1963*, 18; Forest Department, *Forest Department Annual Report 1965*; Forest Department, *Forest Department Annual Report 1966*; Forest Department, *Forest Department Annual Report 1967*; Forest Department, *Forest Department Annual Report 1968*; Forest Department, *Forest Department Annual Report 1969*; Fanstone, 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?'

¹¹⁴³ For a detailed account of the decolonization process in terms of forestry and forest policy see Otieno, 'Forest Politics in Colonial and Postcolonial Kenya, 1940-1990s', 157–221. Otieno, whose account is focused on several case studies of forests in eastern Kenya, emphasizes the local influence on the Forest Department and how the Africanisation of the department led to ambiguities in its policies as some newly trained officers followed the established mantra of colonial forestry while others displayed greater sympathy to local peoples and their forest needs.

Evaluation

On the eve of Kenya's independence from British rule in 1962 the colony's Forest Department stood on firmer ground than it ever had before in its 60-year existence. With a budget approaching £1 million annually, government commitment to long-term forest development was demonstrably strong. Moreover, despite cracks emanating from emerging inequalities in the department's *shamba* system, this agroforestry regime undoubtedly underpinned the department's strength with its promise of being able to supply timber and fuel to support the modernisation of the economy, while also representing a seemingly stable system that could sustainably allow tens of thousands of people to live and work in the forests. European officers might have feared that the influx of Africans into the department in the 1960s and Kenyatta's government would throw forestry off course, but initially they were wrong; forestry, that is scientific management of forests by the state, was as much a part of the authoritarian postcolonial state as it was the authoritarian colonial state. From the 1970s to the early 2000s, the elite-heavy character of the postcolonial state would see literal encroachments on forestry's ability to control the forests as lucrative and fertile land was creamed off the forest estate and funding reduced. Yet, forestry remains today a core institution of the state, with all the environmental protection, economic benefits, and socio-economic controversies that comes with that in evidence.¹¹⁴⁴

¹¹⁴⁴ For example, Justin Kenrick of the Forest Peoples Programme NGO has stated that as of 2016 the Kenya Forest Service still follows a "colonial approach" in its assertion of control over forest land to which Ogiek people claim ancestral rights, Rachel Savage, 'Kenya's Ogiek People Are Seeing Their Land Rights "brutalised"', *The Guardian*, 18 August 2016, sec. Global development, https://www.theguardian.com/global-development/2016/aug/18/kenyas-ogiek-people-are-seeing-their-land-rights-brutalised?CMP=tw_t_a-environment/2016/aug/18/kenyas-ogiek-people-are-seeing-their-land-rights-brutalised?CMP=tw_t_a-environment_b-gdneco. Further examples of conflict over forest land in Kenya, as well as the environmental and economic benefits of state forestry in the country can be found in: Celeb Kemboi, 'Kenya Forest Evictees Camp on Roadside, Officials Deny Burning Homes', *News.trust.org*, 31 January 2014, <http://news.trust.org/item/20140131134214-zvr04/>; Peter Kitelo, 'Does Burning Homes Save the Water Towers? Quite the Opposite', *The Star, Kenya*, 12 July 2016, http://www.the-star.co.ke/news/2016/07/12/does-burning-homes-save-the-water-towers-quite-the-opposite_c1384027; Miyuki Iiyama et al., 'The Potential of Agroforestry in the Provision of Sustainable Woodfuel in Sub-Saharan Africa', *Current Opinion in Environmental Sustainability*, Sustainability challenges, 6 (February 2014): 138–47, doi:10.1016/j.cosust.2013.12.003; Eric Koech, Eliud Kireger, and Joel Laigong, 'Forest Resources as a Source of Energy and Food Security: Two Contradictory Issues or Two Sides of the Same Challenge?', in *Forest Landscape and Kenya's Vision 2030. Proceedings of the 3rd Annual Forestry Society of Kenya (FSK) Conference and Annual General Meeting Held at the Sunset Hotel, Kisumu. 30th September-3rd October, 2008*, ed. D. O. Ogweni, P. S. Opanga, and A. O. Obara (Kisumu: Forestry Society of Kenya, 2009), 77–80; Francine Hughes, 'Conflicting Uses for Forest Resources in the Lower Tana River Basin of Kenya', in *Conservation in Africa*, ed. David Anderson et al. (Cambridge: Cambridge University Press, 1989), 211–28; Charles Ngunjiri, 'PELIS Now Halted In Kimondi 2c Forest' (Kenya Forest Service, August 2011), http://www.kenyaforestservice.org/index.php?option=com_content&view=category&layout=blog&id=228&Itemid=168&limitstart=5; Paul Okelo Odwori, Philip M. Nyangweso, and Mark O. Odhiambo, 'Alleviating Food Insecurity and Landlessness Through Pelis in Kenya' (4th International Conference of the African Association of Agricultural Economists, Hammamet, Tunisia, 2013), <http://ageconsearch.umn.edu/bitstream/161634/2/Paul%20Okelo%20Odwori,%20Philip%20M.%20Nyangweso>

The colonial occupation of Kenya ensured that forestry was both introduced to the country and achieved its status as being a core institution of the colonial state imposed there. The expansion of Forest Department control over almost two million hectares of land, approximately 20 per cent of the fertile, central highland lands of Kenya where the majority of the indigenous and European settler population lived, represented a massive strengthening of state sovereignty within Kenya. This sovereignty was contested, of course; a fact most clearly demonstrated by the use of the forests by Mau Mau fighters in the 1950s. Within the colonial period the Forest Department's goal of complete overlordship of the forests was not fully achieved and neither is it complete today, yet the fact that the present-day Kenya Forest Service still pursues this goal of eliminating the 'non-state spaces'¹¹⁴⁵ within the forests by upholding the principle of state-ownership and evicting those accused of illegally occupying forest land demonstrates that the ideology of full state ownership and control of forests is fully engrained within the Republic of Kenya. Sovereignty does not have to go uncontested to be considered legally and practically valid by the state, thus the development of forestry through Kenya's colonial occupation is ultimately a tale of state power, both territorially and in intensity. The intricate links between the state and modern, scientific forestry have been too easily overlooked. The history of the development of scientific forestry within Kenya reminds us that forestry must be considered as a part of the state while also an independent force in its own right if we are to fully understand how forestry has operated and how states have made sovereign claims to forested land.

State supremacy over the forests, however, was never a foregone conclusion under colonial rule. Indeed, the development of scientific forestry within Kenya was just one of the competing visions of who should control the forests of Kenya and to what uses they should be put. Differing conceptions of the 'good forest' were put forward by foresters, both within Kenya and outside, others within the colonial government, white settlers, and Africans. The Forest Department never had any doubt that, within its vision, no matter the use a forest was put to, it should be managed by the department, by the state. In Kenya, just as in those other nations that adopted scientific forest management, Benthamite rhetoric guided actions. As the Oxford professor of forestry Robert Troup expressed it in 1938, "where the welfare of the general community is affected, restrictions should

o%20and%20Mark%20.%20Odhiambo.pdf; A.N. Okono, 'Farming the Forest: Towards a New Shamba System', *Ecoforum* 27, no. 2 (2005): 45–48; Mark Witcomb and Peter Dorward, 'An Assessment of the Benefits and Limitations of the Shamba Agroforestry System in Kenya and of Management and Policy Requirements for Its Successful and Sustainable Reintroduction', *Agroforestry Systems* 75, no. 3 (1 March 2009): 261–74, doi:10.1007/s10457-008-9200-z; Ben Fanstone, 'Shamba Forestry in Colonial Kenya: Colonial Dominance or African Opportunity?', in *Environmental Change and African Societies – Past, Present, Future*, ed. Julia Tischler and Ingo Haltermann, Climate and Culture (forthcoming, Brill, 2016). The characterisation of the postcolonial state as 'elite heavy', indicating the reliance of the state on an elite bureaucracy and the ability of those elites to extract benefits from this relationship is based on, Daniel Branch and Nicholas Cheeseman, 'The Politics of Control in Kenya: Understanding the Bureaucratic-Executive State, 1952–78', *Review of African Political Economy* 33, no. 107 (1 March 2006): 11–31, doi:10.1080/03056240600671183.

¹¹⁴⁵ James C. Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (Yale University Press, 1999).

be placed on the rights of the few."¹¹⁴⁶ Guided by this principle, the department saw the forests as under threat from every angle, from the fires of allegedly primitive African agriculture *and* the overexploitation of capitalist white settlers.

The alignment of the Forest Department and its policies with the needs of the Uganda railway through the establishment of plantations of exotic *Eucalypts* in the first two decades of the twentieth century was linked to this utilitarian principle, as it sought to end the indiscriminate clearing of native forest by creating a stable fuel supply for the railway. Here, the needs of the many were translated as the needs of the colonial state and the wider empire as the economic development and exploitation of both Kenya and Uganda relied on the railway. While it is possible to argue that these early plantations safeguarded the native forests for use by Africans, the reality was that Africans were often forcefully removed from forests that were accessible and potentially profitable in timber. These evictions went hand-in-hand with the elimination of indigenous systems of forest management, sweeping away precolonial African visions of the 'good forest' before they had the chance to develop any further. Conservationist rhetoric of the destructiveness of African agriculture on the forests was used to justify such actions, but it is clear that these arguments were based on, at best, received wisdom rather than any attempt to properly determine the ecological and the wider environmental role of forests within Kenya. Indeed, it seems clear that the encroachment of African farms onto the Aberdare and Mount Kenya forests of central Kenya was often not a case of expansion onto virgin land within the forests but a reclamation of land from the forests that had been lost following the disease and famine-induced population decline of the 1890s. The "welfare of the general community" was never really considered by the Forest Department until the 1950s, when the conservation of Crown forests as, to use the modern terminology, Kenya's 'water towers' received official sanction through a published forest policy.

The Forest Department's vision of a good forest was therefore distinctly alien to Kenya, as rather than encompassing the myriad uses that forests had to Africans it was one in which a single core product was being produced - typically timber or fuel. The plantations as homogenous orderly ranks of alien tree species superimposed atop the native forest were the ultimate expressions of this. However, the fiscal realities of colonialism in Kenya, emphasised by the limited profit potential of forestry in the colony, the Great Depression, and criticisms levelled at the Forest Department by politically powerful European settlers hindered the progression of this vision until after the Second World War. Pre-war development of plantations, enabled by the economic and social viability of the *shamba* agroforestry system, did however serve as a strong foundation to rural development that became obvious to policy makers in Britain and Kenya in the early stages of the second colonial occupation. Upon this foundation the vision of extensive plantation establishment, again with exotic softwoods intended to meet the local needs of economic development, grew through the 1950s.

¹¹⁴⁶ R.S. Troup, *Forestry and State Control* (Oxford: Oxford University Press, 1938), 12.

Science was a vital enabler of this vision. Compared to the engagement with scientific research locally and internationally by the Forest Department in the 1950s, before this decade the department devoted only slight financial and manpower resources to researching the silviculture of native or exotic trees within the colony. Partly this was simply because it was allowed only a very limited expenditure, but also it was because the department had quickly found eucalyptus and cypress to grow well in Kenya's climate and was almost utterly focused on these exotics in an attempt to prove that the colony could develop to have a profitable and sustainable timber industry. Thus, before the Second World War Kenya's Forest Department engaged with the wider network of empire forestry to only a limited extent. It only, for example, published on its remarkably successful *shamba* system once, and was evidently unaware of developments in the silviculture of pine that it could have benefitted from; and knowledge exchange between Kenya, Uganda, and Tanganyika was minimal, mainly occurring when an officer was transferred to another territory. Knowledge and, more particularly, advice and direction, was received in Kenya after it was filtered through representatives of Oxford's Imperial Forestry Institute. Men such as Troup, who reported on Kenya in 1922 after a tour of East Africa, carried with them inoculations of metropolitan wisdom against embedded local ignorance. Yet the efficacy of these inoculations relied on local personnel and funding, as well as their regularity.

Under Harold Gardner's almost 20-year guidance (1926-1945), the department was seemingly expertly equipped to handle the political problems of forestry development but not the technical ones, as greater focus on science quickly came with the ascendancy of his successor, James Rammell, and then Ralph Waterer. Of course, Rammell's and Waterer's respective leaderships coincided with the massive injection of metropolitan capital and development interest into the tropical possessions. However, the replacement of the 'old guard' of forestry generalists, of which Rammell considered himself the last, with the new wave of ambitious and more specialised officers must be seen as essential in facilitating the scientific development of forestry in Kenya after the Second World War. In this regard, much scope exists for further investigation into the roles of individual officers in aspects of forestry development in Kenya. For example, it is unclear how significant or extensive knowledge exchange between officers was when they proceeded on lengthy periods of leave outside the colony.

The major force of opposition against forestry development in Kenya did not come from Africans. Although localised visions of the good forest meant that Africans were able to pressure or use the Forest Department, these visions were engulfed by the department's grand, colony-wide vision. Instead, major and largely united opposition came from European settlers, who used their political sway to reduce the Forest Department's budget and influence its policies, most notably the programmes of livestock reduction among its African employees. In the eyes of the foresters, the settlers represented capitalism unleashed. The acquisition of stretches of forest by settlers during the first two decades of the Forest Department's existence confirmed this to the department and galvanized its defences against future alienation of Crown forest to private, European hands.

Indeed, these defences were strong, as a 1922 report on the state of forestry in the empire reveals that in Kenya the state retained ownership of 98 per cent of the (then known) forests in the country; a situation that largely remained unaltered at independence.¹¹⁴⁷ The settler vision of the good forest was a private forest, managed perhaps but definitely exploited to aid what they perceived to be the greater good: the development of Kenya as a white man's country. The coupling of forestry to the railway cleared a path for the Forest Department to high ground through the contradictions of a colonial state that paradoxically sought to create this white man's country while protecting Africans from modernity. Yet, forestry in Kenya should also be seen as an important check on the progression of European settler power, as it literally prevented the expansion of land alienation to whites. The Forest Department also allowed the weakest within the settler-dominated timber industry to wither, preferring only the most modern and efficient mills with a viable future of being able to compete on the world market to remain. The department was not enthralled to settler capital by any means, rather it was remarkably successful in directing it toward a future of sustainable, high-quality production.

Within the Forest Department's vision of the future good forest, such sustainability relied almost totally on its *shamba* system. Through its ability to enable the cheap establishment of forest plantations while providing farmland for its African workers, *shamba* was the defining feature of forestry in Kenya; and while such agroforestry systems appeared elsewhere in British Africa, notably Tanganyika and Nigeria, none were as widespread and successful as that in Kenya. It was a system whose success relied on the very inequalities in Kikuyu society that had been exacerbated by colonialism, for as it emerged in the 1950s as a viable method of rural development by enabling tens of thousands of Kikuyu to live and work in the forests, it should be understood that this was a success that resulted from the prior economic underdevelopment of those same landless Africans. *Shamba* flourished in Kenya, while it often withered in Tanganyika, because of the readiness of the landless *ahoi* to tolerate the harsh realities of the system only because those realities were preferable to the even worse life within the African reserves. *Shamba* was draconian; its workers had few rights and were evicted with ease if they did not meet the Forest Department's expectations of hard work. Most significantly, the workers lacked any claim to the land they farmed and experienced strict limitations on the livestock they could keep. They were, essentially, locked into the system as it could not provide them with the means to accrue wealth that would enable them to buy back into the reserves unless they violated colonial law. Yet, these workers were not powerless, they did not lack aspiration. By embracing education they were creating opportunities for a minority to break free of *shamba*. By the 1950s this was an aspect of the system the Forest Department itself was fostering as it had come to learn that by giving access to the gateway of modernity through education and healthcare it could create a loyal and sustainable workforce. This,

¹¹⁴⁷ R.L. Robinson, 'Forestry in the Empire', *Empire Forestry* 1 (March 1922): 23.

then, was why *shamba* became an element of development, because in doing so the Forest Department was ensuring that its grander vision of the good forest could be achieved.

The rhetoric of *shamba's* modern successor, PELIS (Plantation Establishment for Livelihood Improvement Scheme) takes this important aspect of development into account, but modern foresters would be well-advised to remember that *shamba* was a stable system for so long partly because it relied on poverty and strict administration, a fact that bred crime and corruption. For PELIS to be successful in the long term it seems clear that it must embrace the vision of the good forest put forward by its workers, not just that of the forestry establishment. More historical research is required into the *shamba* ancestor of PELIS, particularly in regards to the decades falling outside the scope of this project, precisely because of its importance to rural development along with the wider use of forestry to aid economic development in tropical countries.

The legacy of the system of scientific forestry established in Kenya during the colonial period was long. By the 1950s forestry was embracing its role as a possible way to alleviate rural poverty through providing employment in its forest plantation schemes. However, the grander narrative of forestry in Kenya is one that reveals the ascendancy of a singular vision of the good forest. This vision did incorporate the economic development of the colony, but only in so far as managing forests for the production of timber and fuel which mostly did not benefit the majority of the colony's population. The Forest Department was ultimately fixating on trying to service a developed capitalist country that in reality did not exist in Kenya. While foresters may have defended this by arguing they were looking to the future, it seems clear that they themselves could have helped to create that future if the rural development aspects of *shamba* had been embraced decades earlier. Ultimately, the Forest Department and the forestry that was practised within colonial Kenya should be seen not as serving the needs of settlers or Africans, rather forestry served its own agenda, an agenda of the colonial state, at the expense of the majority.

Appendices

1. Forest Department organisation, pre-1951.

Nb. This list does include clerical staff, such as accountants and typists. Clerical staff were typically recorded as being Asian with a minority of Europeans (including women). There appears to have been fewer African clerical staff before the 1950s, although African telephone operators and typists are sometimes mentioned in correspondence and reports.

<i>Conservator of Forests</i>	Head of department, stationed in Nairobi. Styled as 'Chief Conservator of Forests' under Hutchins' leadership only. Conservators were: Charles Frederick Elliot (1902-1905) A.A. Linton (1905-1906) Temporary; Linton was Commissioner of Agriculture. Edward B. Battiscombe (1906-1907) Acting Conservator in interim before Hutchins was appointed. Sir David Hutchins (1907-1911) Edward B. Battiscombe (1911-1925) Harold Mence Gardner, OBE (1926-1945) Was in charge as Senior Assistant Conservator of Forests from 1926, was officially made Conservator 1 st January 1928. James Cuthbert Rammell (1945-1950)
<i>Senior Assistant Conservator of Forests</i>	Deputy head of department. Assumed leadership duties while Conservator was on leave of absence and typically stationed in Nairobi. Gardner and Rammell held this position before becoming Conservator. N.V. Brasnett held this position (1928-1929) before becoming Conservator of Forests for the Uganda Forest Department.
<i>Assistant Conservator of Forests</i>	Typically held degrees in forestry and placed in charge of forest divisions. Were also given ad hoc specialised roles such as utilisation officer or silviculture.
<i>Surveyor or Survey Officer</i>	Position sporadically filled.
<i>Senior Forester</i> <i>Forester</i> <i>Junior Forester</i> <i>Learner Forester</i>	Positions all held by Europeans. Chief duty was to run forest districts and associated forest stations. Sometimes referred to as verderers. Degree-level education in forestry or sciences not required although some had agricultural qualifications earned in the UK or elsewhere. Learner Foresters typically engaged locally in Kenya and were often the sons of settlers. Foresters could also be appointed on a temporary basis.
<i>Asian Assistant Forester</i>	Highest position attainable by Asian members of the department. Acted as assistants to Foresters and in some cases took on the full duties of Foresters.
<i>African Assistant Forester</i>	Highest position attainable by African members of the department. Assisted Foresters. Literacy was a requirement.
<i>Forest Guard</i>	Recruited from the police and army. Often illiterate. Were responsible for daily patrols and general policing duties.
<i>Spearman</i>	No clear information on recruitment or duties available. Spearman were sometimes also referred to as Forest Guards and it seems they had general policing duties and could be promoted to the position of Forest Guard.

2. Forest Department organisation, post-1952

The Forest Department underwent modernisation at the beginning of 1952 to cope with the expansion of its activities during the 1950s. Power was delegated further, in particular through the division of the colony's forests along the Rift Valley and placing of each of these conservancies in the hands of a Conservator of Forests. The department was divided into the 'technical staff' (all trained conservators), 'specialists' (including a multitude of new positions along with the forester positions), and 'clerical staff' (expanded but little changed from before 1952, with an assortment of senior clerk and accountant positions held by Europeans and Asian and African subordinates). Educational requirements continued as before 1952, with the technical and scientific staff holding degrees in forestry or relevant subjects, but the foresters below them not necessarily so. See chapter 3 for discussion of the creation of the scientific arm of the department and the eventual Africanisation of forestry in Kenya, and table 3-3 in particular for staff levels.

<i>Chief Conservator of Forests</i>	Head of department, stationed in Nairobi. Position effective from 1 st January 1952. Specialist staff stationed in Nairobi and at EAAFRO reported to him, as did the two Conservators of Forest. Chiefs were: Ralph Ronald Waterer CBE (1952-1957) Edward Joseph Honorè (1957-1962) Maurice Campbell Argyle (1963-1969)
<i>Conservator of Forests (East of Rift)</i>	In charge of forestry operations east of the Rift Valley and stationed in Nairobi. All staff within the East of Rift conservancy reported to him. Divisions within this conservancy were: Nyeri, Fort Hall, Nairobi, Thomson's Falls, Southern, and Coast.
<i>Conservator of Forests (West of Rift)</i>	In charge of forestry operations west of the Rift Valley and stationed in Londiani. All staff within the West of Rift conservancy reported to him. Divisions within this conservancy were: Londiani, Eldoret, Nyanza, and Elburgon.
<i>Assistant Conservator of Forests</i>	Placed in charge of forest divisions or important forest districts and oversaw particular projects.
<i>'Specialist' staff: Working Plans Officer Silviculturist Entomologist Mycologist Utilization Officer Staff Surveyor Road Engineer</i>	These positions were all held by Europeans with university-level education. There was typically only one of each officer.
<i>Senior Forester Forester (Grades I and II) Temporary Forester Trainee Forester</i>	Positions typically held by Europeans although Asians began to be promoted to these ranks in the 1950s. In charge of forest districts and associated forest stations. As before 1952, were often recruited locally. Forest stations in East of Rift Conservancy: Nairobi, North Kinangop, South Kinangop, Uplands, Ngong, Kerita, Machakos, Karura, Mombasa, Lamu, Kwale, Jilori, Nyeri, Kiandongoro, Kabage, Ragati, Ontulili, Meru, Embu, Nanyuki, Thompson's Falls, Bahati, Maralal. Forest stations in West of Rift Conservancy: Elburgon, Mariashoni, Shapalदारakwa, Maji Mazuri, Narasha, Nessuit, Sorget, Eldoret, Kaptagat, Nabkoi, Mount Elgon, Kimothan, Elgeyo, Timboroa, Maseno, Kakamega, Nandi.
<i>Senior Assistant Forester Assistant Forester</i>	Mostly held by Asians although there were some Europeans. Acted as assistants to Foresters and in some cases took on the full duties of Foresters. By the end of the 1950s this position was being phased out in preference to creating more foresters.
<i>Rangers</i>	Formerly known as African Assistant Foresters. Positions exclusively held by Africans and was the highest rank an African could attain in the department before 1962.
<i>Forest Guard Assistant Forest Guard</i>	As before 1952, Forest Guards were Africans drawn from the police and King's African Rifles although from the late-1930s onwards more Africans were recruited from within the department's own <i>shamba</i> system. Assistant Forest Guards were equivalent to the pre-1952 position of Spearman.
Other racially defined positions in the department were: Seedsman (Asian), Draughtsman (Asian), Surveyors (Asian), Lorry Drivers (African), and Medical Dressers (African).	

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