

# **Beyond the Ruins of Embobut: Transforming Landscapes and Livelihoods in the Cherangani Hills, Kenya**

Sam Lunn-Rockliffe

School of Archaeology, University of Oxford, UK

samuel.lunn-rockliffe@st-hughs.ox.ac.uk

## **Abstract**

The Embobut Forest, western Kenya, can be described as an entanglement of ruins. These ruins are the materialisation of a series of contested ecological debates and political decisions pivoting on the questions of conservation and community rights to land that have resulted in the violent dislocation of local Sengwer and Marakwet communities. In the first instance, this paper aims to contextualise these debates by offering an analytic focus on the process of ruination, in order to offer a more nuanced narrative of landscape modification and changing human lives over the past century. Subsequently, I look beyond processes of ruination and towards notions of transformation, in an attempt expound how Embobut has not become a static world of passive ruins but rather is constantly changing as novel forms of dwelling and new ecological relationships continue to unfold in a manner not envisaged by conservation policy.

**Keywords:** conservation, Embobut, forests, landscape, multispecies. ruination, transformation

## **Introduction**

As one walks through the Embobut Forest in the Cherangani Hills of western Kenya, there is a distinct lack of mature woodland. Instead, the landscape is characterised by large expanses of grassland interspersed with small copses of stunted trees, areas of burnt vegetation and sprawling patches of bracken and shrubbery. Etched into the hills of these ruined forest landscapes are abandoned field systems, winding trackways and an assortment of empty housing platforms – small levelled terraces that once supported houses and the bustling daily activities of the Sengwer and Marakwet populations who historically resided in the forest. In many ways, these ruins are the materialisation of a series of contested ecological debates and political decisions that have resulted in the physical and often violent dislocation of local communities. These actions pivoted on questions of conservation, community rights to land and the abuse of human rights, ultimately resulting in both ruined forests and destroyed livelihoods (World Bank Inspection Panel 2014; Lynch 2016).

This history has often been perceived, imagined and described in contrasting ways as one of destruction and degradation. Conservationists have emphasised how ecological degradation has occurred at the hands of local populations, whilst to local community activists these are tales about the destruction of human livelihoods at the hands of conservationists. Building on archaeological and ethnographic data collected over nine months of fieldwork over 2016 and 2017, this paper aims to explore how an analytic focus on the process of ruination illuminates more nuanced narratives of landscape modification over the past century and sheds light on the diachronic relationship that the Sengwer and Marakwet communities have had with the forest. These populations are amongst several groups in western Kenya, collectively called the Kalenjin, descending from the Southern Nilotic-speaking populations and the associated Sirikwa archaeological tradition, who migrated into the Central Rift Valley no later than 1000 years ago (Davies 2013). Although

culturally and linguistically related, the Sengwer have historically had a more explicit relationship with the highland forests and are a much smaller population than their Marakwet neighbours, whose activities also extend down the steep slopes of the Elgeyo Escarpment and onto the semi-arid plains of the Kerio Valley to the east of the Cherangani Hills (Davies and Moore 2016).

The methodological foundations to the arguments presented in this paper stem from the employment of the archaeological mind-set, where the meticulous analysis of the material residues of former livelihoods has helped uncover narratives that have so far not been articulated in conventional historical accounts of the area. By means of surveying and mapping historic trackways, glades and terraces in conjunction with participant mapping sessions and interviews with local community members, I have explored how the temporal nature of quotidian life and contrasting understandings of place are materialised in the forest landscape. In turn, these diachronic investigations have helped foreground everyday lived realities that coalesce to reveal a different picture of gradual change across the region and to challenge overly reductive historical narratives that continue to inform political and conservationist rhetoric.

In light of this, I argue in this paper that to truly grasp the history of the forests and complexity of the ecological debates that have arisen in Embobut, ruins, both ecological and those of human livelihoods, need to be understood as an entangled multiplicity. I explore how a closer examination of the material traces of ruination offers a way to begin comprehending this multiplicity beyond the polarising discourses of conservation, national politics and local activism that have all too often viewed the forests and inhabitants as separate natural and cultural entities acting upon each other. From this discussion, however, I aim to look beyond processes of ruination and towards notions of transformation. The destruction of livelihoods and forests has not resulted in a static world or a regeneration of past environments, but rather

a set of reworked relationships that continue to play out. In the present-day landscape of Embobut, people still find ways of dwelling, constructing provisional shelters and creating new trade routes as they continue tending their cattle and rebuilding their lives after harrowing experiences of community displacement (Lynch 2016). Simultaneously, new ecological communities of plants and animals have emerged, but not necessarily in the ways that planners and policy makers envisaged. In this way, I explore how different groups of people, animals, plants and materials have been recursively transformative and emergent over the past century and beyond – a process that ultimately illuminates how landscape change in the Cherangani Hills cannot objectively be described as ruined but instead is always in the process of formation. This notion then opens space for more nuanced and realistic conversations surrounding the value judgements made of what constitutes a “good” set of ecological relationships between human and nonhuman species.

Before going further, however, I need to provide a point of clarity. Throughout this paper, I allude to how the ruins of forest vegetation in Embobut have led to the unfolding of different landscapes and the creation of alternative forms of engagement. These observations are not to be interpreted as justifications for deforestation and biodiversity loss, or as counterpoints to the pressing issues of sustainability and climate change. Rather, I am simply emphasising that, for some people, the processes of forest destruction opened up new possibilities of engaging with, and dwelling in, the landscape. Furthermore, in highlighting how processes of ruination are simultaneously destructive and creative, I hope to show how it may be possible to look towards a more collaborative future if the causes of ruination in Embobut are contemplated in their totality. Before this narrative is fully explored, however, it is important to address how scholars have explored the position and role of ruins within the contemporary world in order to contextualise the ruins of Embobut.

## **Conceptualising Ruins**

Given archaeology's unique understanding of diachronic change and its predilection for studying everyday objects and landscapes, it is well positioned to foreground, materialise or presence histories, memories and things that are otherwise obscured by the dominant narratives of contemporary society (Buchli and Lucas 2001). It is within this vein that González-Ruibal (2008) has called for the archaeological investigation of "supermodernity", in order to explore the characteristics of Western capitalism and neoliberalism that have become excessive, exacerbated and ultimately destructive during the twentieth century and into the twenty-first. Such a notion has contributed to the study of contemporary ruins, with examples ranging from the refuse of contemporary warfare to the remains of failed development projects and dilapidated industrial sites (Buchli and Lucas 2001; Olsen and Pétursdóttir 2014).

Ruins are typically understood as objects, structures and landscapes that have become redundant, abandoned or destroyed, and that have fallen into a state of disrepair, decay and deterioration. This conceptualisation not only refers to the ruin as a noun – a collapsed building for example – but also "to ruin", as a verb or process (Olsen and Pétursdóttir 2014). Studies focusing on the process of ruination have explored the materiality of modern ruins, their aesthetically unsettling forms and performative roles within wider social and environmental contexts. Whilst classical ruins are often presented as "clean" and "fossilized", modern ruins are in a process of becoming derelict, comparable to the rotting of a corpse, a situation that can be "disturbing" and "difficult to cope with" (Olsen and Pétursdóttir 2014, 7). These concepts are in part attributable to the shifting materiality associated with processes of ruination – previously clean surfaces start to accumulate thick layers of dust, mould grows in damp corners, once strong and sturdy floorboards begin to rot as walls flake and crumble. In other words, they are in a "fluid state of material becoming" (Edensor 2005, 16). The

aesthetically unsettling nature that such ruins take can also be attributed to their multiple temporalities – the “untimely” (Yablon 2009, 11) speeds at which the built environment falls into disrepair (see also Lucas 2013). Buildings and entire landscapes can be rapidly destroyed or abandoned due to natural disasters, war, financial crises or, as in the case of Embobut, the burning of houses and forceful removal of communities from the forest.

Important for this discussion, however, is the idea that ruins are not only remnants of bygone times passively falling into disrepair, or symbols of failures of modernity and economic instability (c.f. DeSilvey and Edensor 2012). Rather, they can become significant in new ways as their performative roles change alongside their materiality and aesthetic form, stimulating fresh sensory experiences and facilitating novel forms of engagement. This point has been highlighted by Edensor (2005), who notes how former buildings can be used as new dwelling places for travellers or the homeless, abandoned sites can become areas of adventure and exploration and the materials of ruins can themselves be cannibalised and reclaimed for alternative purposes. This notion reveals an inherent paradox with ruination – the decay of an object, building or landscape can ultimately lead to the creation of something new. Even the entire demolition or removal of physical objects leads to the creation of absence, a multifaceted concept that in its own right has its own agency or affective presence in wider relational webs (Bille *et al.* 2010). Thus, as the materiality of different entities shifts away from intended, perceived or created form and function, new forms and possibilities of interaction are constantly coming into being. These processes suggest that ruins are to be considered as relative and contextual, existing as a ruin only to certain people at any given moment.

Derbyshire and Lowasa’s (forthcoming) study of the Norwegian Agency for Development’s (NORAD) failed fishing scheme in Turkana, northern Kenya, is a good example of such processes. Despite NORAD’s operational model having become

economically unviable just a few years after launching in the 1970s, its significant financial and infrastructural investment into commercial centres such as Kalokol meant that productive trade at these places nevertheless endured. Boats and fishing equipment originally introduced by NORAD were integrated into a more fluid and adaptive fishing industry that has subsequently thrived. Likewise, buildings constructed for the procurement and selling of fish but then abandoned were either repurposed or partially dismantled, with the materials used to rebuild structures elsewhere. Thus, the continued physical integration of NORAD infrastructure has prevented it “from serving purely as a symbol of failure, or a dysphoric opening to a different future, by virtue of its central location and its inadvertent metaphorical entanglement with Kalokol’s growth and success” (Derbyshire and Lowasa forthcoming). In this sense, the material correlates of NORAD’s fishing scheme are simultaneously a ruin of NORAD’s development goals as well as integral components of the expansion and sustaining of a flourishing fishing industry.

Pushing the creative and relative role of ruins further, Anna Tsing (2015) has described in her multispecies ethnography *The Mushroom at the End of the World* how ruins can, in fact, be life-giving. By way of example, she describes how specific nutrient-deficient landscapes have facilitated the growth of the rare yet highly valuable matsutake mushroom (*Tricholoma matsutake*). These landscapes are the remnants of capitalist ideologies and practices that, in this case, appear in the form of failed forest plantations such as those in the Cascade Mountains of Oregon (Tsing 2014, 97). As the global cost of timber dropped over the latter half of the twentieth century, the upkeep of these forest plantations became uneconomical and they ultimately fell into disrepair. Coupled with poor woodland management, this decline led to the continued growth of the monoculture of lodgepole pine (*Pinus contorta*), ultimately reducing the humus and nutrient content of the soil and leaving the ground dry and barren. Out of these nutrient-deficient industrial forests, however, grew

the matsutake mushrooms that provided a new livelihood for an array of populations, from individuals who rejected the liberal secularism of American cities to a wave of Laotian and Cambodian refugees who had fled Thai refugee camps in the 1980s.

An intriguing notion that emerges from Tsing's (2014, 2015) work is that ruins need not only refer to the decay of urban materialities, but can also describe the denigration of ecological networks, living organisms and organic materials. A focus on living entities and ecology is markedly different from much of the work conducted by archaeologists of the contemporary past who have imagined modern and post-industrial ruins as the decay of buildings and objects constructed from artificial materials in urban environments and "interstitial places" (Harrison and Schofield 2010). The idea that living entities can be envisaged as ruins goes further to dissolve age-old dualisms between nature and culture (Ingold 2000), postulating instead that the relationships between people and their environments are recursively involved in processes of creation and destruction as landscapes, livelihoods, ideologies, ecological and economic networks all unfold in different ways. Tsing's example illustrates this by highlighting how the very forest, constituted by living trees, plants, grasses and soils, has become a ruin of capitalist forestry practice. Perhaps more pertinently, however, is that this very place remains anything but a ruin for those people and other organisms, notably matsutake mushrooms, that are now dependant on it.

Whilst insightful, the question remains as to why it is useful to conceptualise ruination as simultaneously transformative within the context of this study? Is it not enough to explore ruination in its own right as a heuristic for unravelling the historical injustices suffered by indigenous populations and illuminating contested ecological histories in Embobut? Whilst to some extent this remains true (as I argue in the following section), the sole exploration of ruination does not sufficiently encapsulate how people continue to

establish new relationships with ever-shifting landscapes, and how communities look towards future possibilities of dwelling in these areas.

If we are to consider future prospects, hopes and desires of life in Embobut after instances of ruination, we need to contemplate the broader temporal processes behind how humans, animals and materials are recursively transformative as new environments come into being. Indeed, Tsing (2017, 52) has articulated how life during and after ruination may successfully occur through processes of “resurgence” – “the work of many organisms, negotiating across differences, to forge assemblages of multispecies livability in the midst of disturbance”. Possibilities of dwelling with transformed landscapes must acknowledge that ruination does not signal an end point, or signal the eventual return to a former, “natural” material state, but rather is a part of dynamic processes of material change that has the potential to create novel forms of multispecies engagement. Such a notion plays into broader anthropological discussions surrounding the temporality behind issues of sustainability, where it has been argued that sustainability should not aim to maintain a particular environmental or cultural state, but rather should be viewed as a process that “prepares us for an unpredictable future by supporting and encouraging diversity in all its forms” (Brightman and Lewis 2016, 3). In this way, the temporality of material change, of which ruination, transformation and resurgence are a part, remains a key to how we conceptualise the future of changing liveable landscapes, becoming the basis for the open and inclusive design of new ecologies in which different human groups and nonhuman species are given equal weight.

Before exploring the new relationships that have emerged in Embobut, however, I first unpack how people were evicted from the forest and the tensions that have surfaced surrounding the resulting ruined livelihoods and that of “ecological ruination” as understood from environmental/conservation epistemologies. Exploring the contemporary nature of these ruins as situated in complex contested historical narratives helps elucidate the ways in which

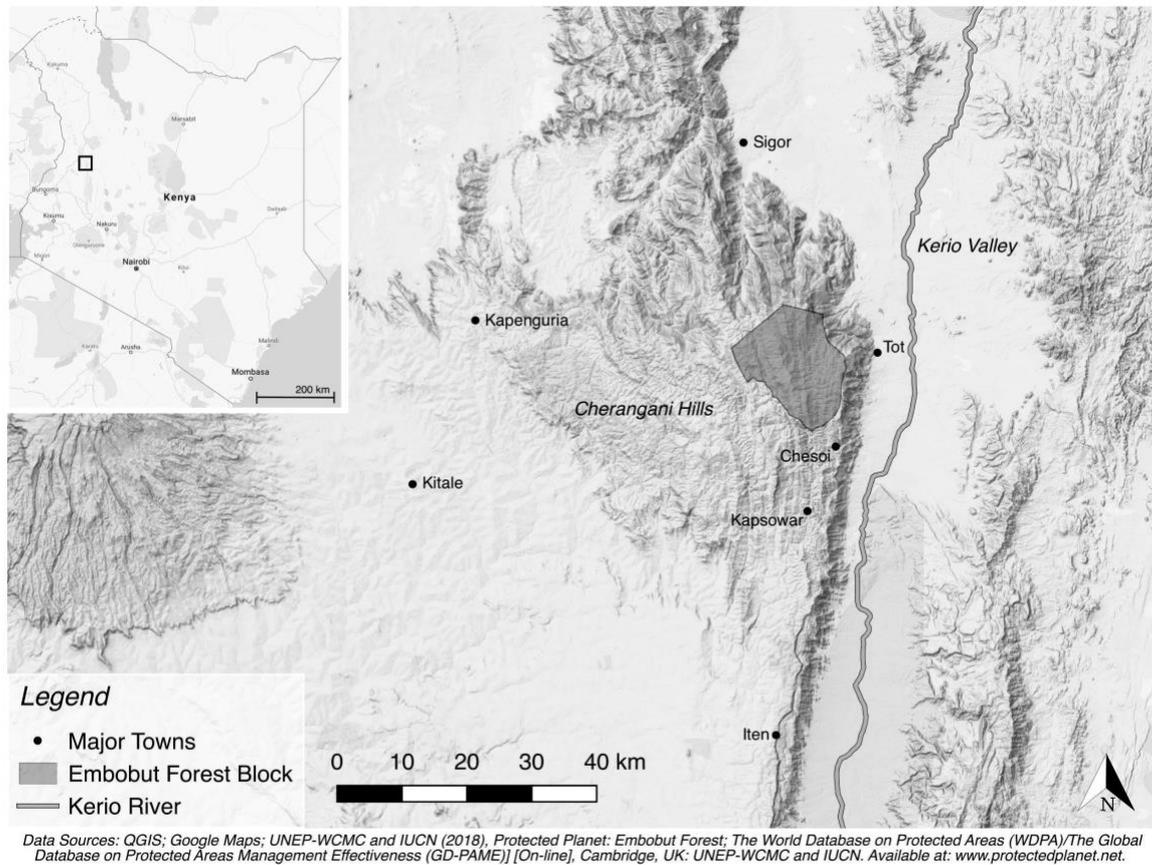
the inhabitants of Embobut are both entwined with the physical landscape and with larger geopolitical forces.

### **The Embobut Evictions**

Located in the western highlands of Kenya, the Embobut Forest is one of twelve forest blocks that constitute the montane forests of the Cherangani Hills (Figure 1). With an average annual rainfall of 1200 mm in the east to 1500 mm in the west, these forests collectively play a pivotal role in the region's hydrology, facilitating high levels of water retention in an area that has been labelled one of Kenya's five water towers (Akotsi *et al.* 2006). The forests are managed by the Kenya Forest Service in compliance with the Forest Conservation and Management Act 2016 (Section 64), which prohibits anyone from occupying or using the forest blocks to erect buildings or enclosures, engage in cultivation, graze livestock, collect honey or keep bees, cut and take forest produce or hunt wild animals. Despite a concerted effort to move towards a more inclusive conservation policy that incorporates local communities into woodland management (Luukkanen 1996), the conservation strategies employed in the Embobut Forest still recall the "fortress conservation" or "fences and fines" approach first implemented by the British Colonial Office in the first half of the twentieth century (Neumann 1998, 2002). This process involved the political capturing of resources, and was facilitated by deep-seated power dynamics between indigenous populations and the British colonists who claimed land for their own economic and political purposes (see below).

Since Embobut's demarcation in the first half of the twentieth century, the region has experienced significant landscape change, most noticeably in the loss of forest vegetation (Akotsi *et al.* 2006; Hansen *et al.* 2013). This results from a multitude of factors, including the introduction of new cultivars into the highlands in the 1960s, the gradual establishment of

a road network that has increased commerce with larger towns to the south and the growth of the overall population – a complex narrative in its own right that is knotted with nuanced stories of localised migrations and land use patterns (Lunn-Rockcliffe 2019).



**FIGURE 1:** *Location of the Embobut Forest Block in the Cherangani Hills, western Kenya.*

Local informants testify as to how they resided in Embobut relatively peacefully before the 1980s, with little disturbance from the then Forest Department. In fact, there appears to have been a collaborative relationship between the locals and the department, with community elders monitoring the condition of woodland and reporting instances of deforestation. This was reinforced by a set of local community bylaws that prohibited tree-cutting without an elder’s permission, an important practice to observe given that forest resources were paramount for hunting and gathering food and medicine as well as for

beekeeping for honey production. However, as deforestation accelerated towards the end of the twentieth century with a shift from beekeeping to cultivation and the gradual migration of communities living at lower elevations to the highland forests (see below; also Lunn-Rockliffe 2019), the Forest Department started to actively discourage people from living in Embobut through impromptu raids and repeated harassment. The long-term narrative of these raids is poorly documented, and it is only within the context of a World Bank Resource Management Project that started in 2008 that a clearer picture has emerged as to how a more enduring set of evictions unfolded (see Lynch 2016 for an in-depth discussion). Indeed, in an investigation into the Bank's actions in light of a series of particularly forceful evictions, it was revealed that raids were being carried out yearly, with houses being burnt and personal possessions such as clothes, bedding, utensils and textbooks destroyed, alongside maize granaries and portions of maize fields. As a result, food insecurity became acute and children dropped out of school (World Bank Inspection Panel 2014).

On 15 November, 2013, President Uhuru Kenyatta, Deputy President William Ruto and Senator Kipchumba Murkomen, who had himself been born in the Embobut Forest, visited the region together and promised to pay KSh 400,000 (approximately £2800) to every family residing there in an attempt to tackle the crisis (*Daily Nation* 2013; World Bank Inspection Panel 2014). The Government stated that it handed over a total of KSh 1.149 billion (£8,100,450) to 2874 families, with President Kenyatta quoted as stating: "All former regimes have been chasing you out of the forest while armed with guns and matchboxes to burn your houses, but my government has approached you differently with money to help you acquire land elsewhere as you move out of the forest" (*Daily Nation* 2013). Whilst this scheme went ahead, it by no means provided a long-term solution to the situation, with many people later complaining that they never received money to which they were entitled and others claiming that they had only received it on the basis that it was a form of compensation

for damages suffered in the past. As I go on to explore later, these evictions resulted in the abandonment of houses and field systems – but first, it is important to note how processes of forest ruination can be conceptualised in Embobut.

### **Ruined Conservation Landscapes**

From the perspective of the conservationist, the forest ecosystem in Embobut is a ruin of its former self, existing as a patchwork of depleted forest vegetation, stunted trees and open grassland (Hansen *et al.* 2013 – Figure 2). Walking through the hills today reveals the extent of this deforestation, where the clearance of vegetation caused by human activity has been rife. Informants point to open grassland or shrub land with the occasional tree, withered or completely dead due to burning or partial cutting, and describe how these areas used to be mature forest for keeping beehives and foraging. Occasionally, open grassy slopes display the sheer planes of small landslides, likely caused by the lack of forest vegetation that would otherwise have held the topsoil together. As well as this, huge patches of freshly burnt vegetation leave black blemishes on hillsides, some still smouldering with large plumes of smoke billowing into the sky. In this sense, “ruined” may seem like an extremely apt adjective to describe what meets the eye when walking through the region.



**FIGURE 2:** *Images of the ruined forest landscape of Embobut.*

Yet this conceptualisation relies on a certain set of presuppositions orientated on the status of a forest as understood via conservation epistemologies created through Western scientific method and practice. Such practice includes the systematic recording and documenting of geology, topography and soil quality, the surveying of fauna and flora, including their relative populations and their importance in wider ecological webs, and the analysis of hydrological processes and climatic conditions. From these practices emerge an understanding of a forest as “a biotic community dominated by trees and woody vegetation

that covers a large area” (Chang 2012, 2). A forest supports complex ecosystem of flora and fauna, and the density of its vegetation, the height of its trees and the depth of its roots allows it to perform unique environmental functions. Precipitation rates reaching ground level are reduced due to canopy interception, and large amounts of water are transpired into the atmosphere through the roots-steam-leaf system. The root system and litter floor increase the infiltration rate and soil moisture-holding capacity. The consequence of these processes is a slower and reduced overland runoff, resulting in a lower water yield than that found in non-forested watersheds. In turn, these mechanisms help reduce soil and wind erosion by increasing soil porosity, preventing fast overland runoff and acting as an effective windbreak, thereby reducing the displacement of soil particles. The preservation of forests and the planting of trees, particularly on steep slopes, can thus help to reduce the risk of landslides and to mitigate flood damage (Sakals *et al.* 2006). Furthermore, on a macroscale, forests also act as an important carbon sink through the process of carbon sequestration (Chang 2012). Forests, then, are “ruined” when ruin is measured in certain forms of quantitative analysis such as decrease in species diversity and/or density, reduction of biomass and loss of certain ecosystem function.

Prioritising the protection of biodiversity and particular hydrological and carbon sequestration functions supports the idea that a particular state of the forest must be maintained for these processes to operate correctly. In fortress conservation, then, this state is envisaged as a kind of “natural” baseline that needs to be protected from human activity, ultimately leading to the separation of conservation areas through the physical demarcation of spaces by the establishment of concrete beacons, fences, gates, roads and ranger outposts. Such activities and interpositions were in part developed over a century ago in Kenya by David Hutchins in his *Report on the Forests of Kenia* (Hutchins 1907). In this work, Hutchins proposed a policy of boundary demarcation with better policing of reserved forest, the

establishment of tree nurseries, planting to assist natural regeneration and selective cutting to replace indiscriminate logging, leading to the establishment of the first major forest blocks by 1908 (Ofcansky 1984; Wass 1995). In this way, the surveying, demarcating and gazetting of forest areas became the backbone of forest management, with the number of designated Forest Reserves gradually increasing over the course of the twentieth century, including forest areas in the Cherangani Hills. Forest Reserves were legally owned by the government and were managed and policed directly by the Forest Department (Wass 1995, 11). The access that local populations had to these reserves was limited, but there appears to have been a case-by-case negotiation between local populations and the Forest Department, with the latter granting grazing permits if they deemed it would not be destructive to do so (e.g. Kenya Land Commission 1934, 265).

These strategies of fortress conservation existed as part of a broad suite of policies across the British Empire that aimed to maintain environmental stasis across a range of ecosystems for a variety of political and economic reasons. In Kenya, initial instances of land conservation were driven by the early locomotive industry, which needed wood for fuel and construction, and elsewhere by British aristocrats who were worried about losing access to hunting grounds (Neumann 2002). After World War II, a more structured approach to conservation was adopted by the British Colonial Office. With notions of “modernisation” and “development” becoming the dominant precedents for colonialism in the so-called “second colonial occupation” (Low and Lonsdale 1976), experts in different academic fields were employed by the expanding technical branches of the Colonial Office in order to bring greater scientific rigour to a reinvigorated development agenda (Anderson 1984).

Fortress conservation continued to prevail as the predominant conservation strategy throughout the twentieth century, with many post-colonial governments inheriting and continuing it after independence. By the 1990s, however, a widespread disillusionment with

exclusively protectionist approaches had developed. This was not only because of injustices suffered by those local communities who deemed their exclusions from national parks to be unfair or illegal (Neumann 1998), but also because such interventions have in their own right had many unforeseen social and ecological consequences (c.f. Larsen and Brockington 2018). This is clearly illustrated by recent archaeological work in eastern Africa that has explored different landscape histories over broad temporal scales, documenting the long-term impacts of pastoralist livelihoods and their role in shaping savannah ecosystems (Boles and Lane 2016; Boles *et al.* 2019). In particular, the formation of “anthropogenic glades”, patches of land created from abandoned livestock enclosures, generate instances of habitat heterogeneity with important consequences for biodiversity. Thus, in conservation areas such as Amboselli National Park, the restriction of pastoral mobility due to conservation narratives of overgrazing may have in fact had a negative consequence on the biodiversity of the region as a whole (Boles *et al.* 2019).

In an attempt to move away from fortress conservation and start actively involving local community members in landscape management, new conservation paradigms began to emerge in the 1990s. Often termed “new conservation” or “community conservation”, such frameworks involved a complex suite of approaches involving collaboration between numerous participants with multifaceted aims (Hulme and Murphree 1999; Adams and Hulme 2001; Barrow and Murphree 2001; Adams and Mulligan 2012). With regard to the forest environments in Kenya, these ideas filtered into governmental legislation in 1994 when the Ministry of Environment and Natural Resources prepared the Kenya Forestry Master Plan (KFMP) in an attempt to shift Kenya’s natural resource management strategy away from a preservationist stance to a more participatory approach (Luukkanen 1996). These trends eventually contributed to the re-writing of the Forest Act in 2005, the replacement of the Forest Department with the semi-autonomous Kenya Forest Service and an emphasis on the

co-management of gazetted forests by this service and the adjacent communities (World Bank 2007).

The fortress conservation and community conservation strategies employed throughout the twentieth century and into the twenty-first have both proven unsuccessful in Embobut. This narrative is written in the ruins of mature woodland that scar the landscape in the form of stunted trees, burnt vegetation and open grassland that I have already described. However, this is not simply a landscape of ecological ruination, but also the ruins of both colonial and contemporary conservation practice and its failure to take into account local human livelihoods. This process is materialised in the ruins of burnt houses and collapsed structures that testify to how the Kenya Forest Service has failed to incorporate local communities into woodland management. In the next section, I explore these ruins in more depth in order to elucidate how the forest has been imagined and experienced by Embobut's inhabitants.

### **Ruined Homesteads**

Whilst there are incredibly important environmental reasons for protecting woodland areas as discussed above, many fortress conservation paradigms have left little room for conceptualising how humans have been entwined in more nuanced ways with forest landscapes over the *longue durée*. Indeed, the notion of a “forest reserve” that protected forest vegetation for larger environmental or economic reasons would have been an alien concept to precolonial communities dwelling in Embobut. These new landscapes were projected onto local ways of experiencing Embobut through body, memory and dwelling (c.f. Ingold 2011). For the Sengwer and Marakwet, twentieth-century conservation philosophies of protecting particular areas of land signified a radical *onset*, rather than the intended *halting*, of landscape change within the forests, with very material consequences. This came

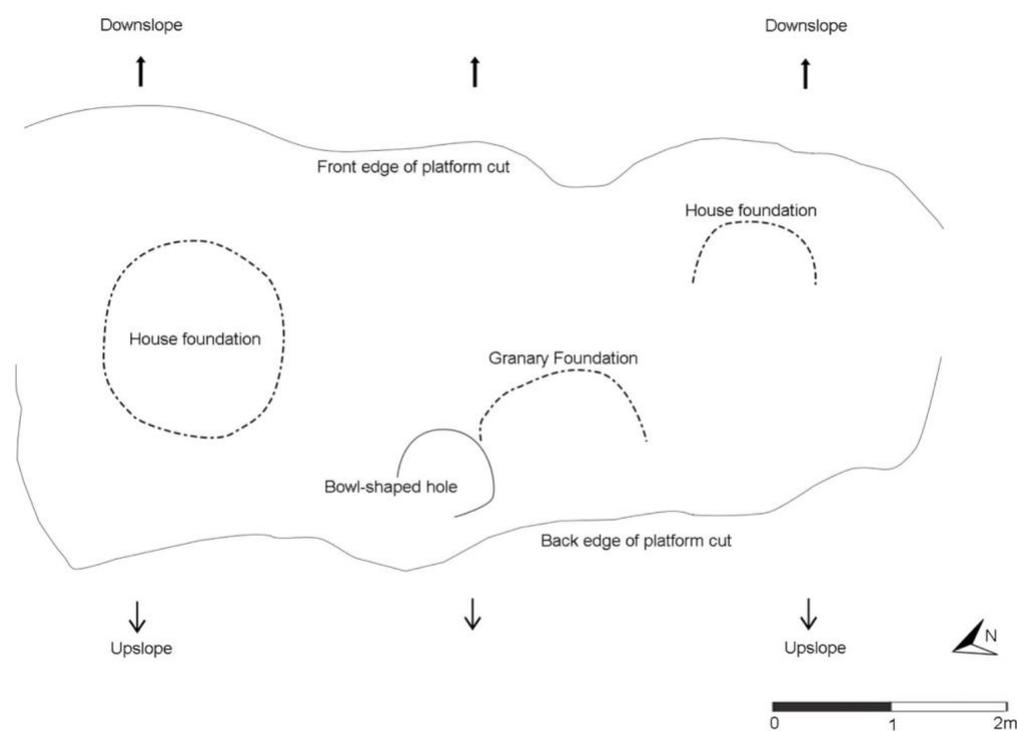
in the form of the aforementioned concrete beacons, roads and outposts, as well as tree plantations, that ultimately paved the way for community displacement (Lynch 2016). Thus, a more nuanced way of comprehending processes of ruination in Embobut – and one that is articulated strongly by community activists (Forests People Programme 2013) – is that it was the concerted effort to *remove humans* from the overall ecosystem that has resulted in the real destruction of the forests. The irony from this point of view is thus that it is the act of displacing people in an attempt to protect a separate and “natural” ecosystem that has produced the contemporary ruins of a degraded forest environment. This is to say that people have, at the hands of the Kenya Forest Service, had their houses burnt and their possessions demolished in the exact same way that trees have been cut and vegetation destroyed (Figure 3). Given that the community activists in particular have presented themselves as integrally bound to the Embobut landscape, in destroying their livelihoods the Kenya Forest Service has, by extension, destroyed parts of the very forest it was seeking to protect.



**FIGURE 3:** *Collapsed and burnt structures in western Embobut after a series of raids by the Kenya Forest Service.*

The numerous abandoned housing platforms observable in Embobut today are a testament to this drawn-out process. The lack of standing structures in the forest block is in part due to the fact that buildings were built from organic materials such as African redwood, cedar and bamboo for structures, compacted soil for weather proofing and smearing, and grasses for thatch. Many of these materials have perished since the evictions, partly due to

their flammable nature, which the Kenya Forest Service took advantage of by burning them to the ground. Items that were of value, such as corrugated iron sheets or durable building posts, were cannibalised and removed when people relocated to neighbouring commercial centres outside of the forest block. The remaining components of former structures rapidly collapsed and became overgrown with vegetation or trampled on by livestock still kept in the forest (see below). Consequently, there is now only a faint archaeological footprint left of some of these buildings, with the foundations of stilted granaries, walls of collapsed houses and the relative location of hearthstones only sporadically visible (Figure 4). It is thus the levelled terrace itself that has become the main indicator of where people were living prior to the evictions. These platforms appear in a variety of shapes and sizes, measuring anything between 5 and 15 m from the back of the terrace to the front edge of the platform and 5 to 20 m across. In one sense, their very presence represents the land right struggles that people faced in the light of conservation policy, displaying the residues of former lives that were disrupted by repeated harassment and impromptu raids.



**FIGURE 4:** *Abandoned housing platform in eastern Embobut.*

The remains described here are the material residues of a patrilineal system of land tenure where different areas of land belong to different family lineages or clans. Typically named after the founding elder who first laid claim to an area, these territories are defined by topographical features such as hill ridges and gullies, a practice that is common across the broader region (Davies 2012; Lunn-Rockliffe 2019). Oral histories describe how the earliest of these platforms were constructed by the ancestors of contemporary populations who migrated into the area approximately 250 years ago (Davies and Moore 2016), predominantly from the plains of Uasin Gishu to the west. Having established homesteads in small forest clearings, or glades, people kept herds of cattle that grazed on the open grassland near the Embobut River. This activity was complemented by beekeeping for honey production and foraging for wild game and plant resources in the surrounding forests.

Historically, the glades (*tirich* in both the Sengwer and Marakwet vernaculars) were characterised by a grassy opening in the otherwise thick, dark and dense forests (Figure 5). The contrast between the forest and the glade locations is a result of the properties of the organic matter of plant and animal life, with leaves lowering light levels in the forest, tree trunks obscuring visibility and thick vegetation hindering movement. The open glade, by comparison, comprised various grasses that allow greater visibility across the hills, increased light levels and warmth during the day and easier means of travelling to resources. The transformative material configuration of this landscape, or what Ingold (2013) has called the “weather world”, was shaped by, and was influential of, human agency. Where people chose to live, how they moved through the landscape, the materials they used to build their houses and the trees in which beehives were erected were all influenced by the fluctuating material properties of the forest and glades themselves. In turn, the construction of houses, the formation of arterial pathways between settlements, the encouragement of pollination through beekeeping and the protection of forested areas through community bylaws and foraging for plants and animals together resulted in humans, animals and forest environments recursively constructing each other, as lifeways and landscapes mutually unfolded and came into being.



**FIGURE 5:** *Image looking into Kokwo Lombenwo Glade, eastern Embobut.*

A major factor contributing to landscape change over the latter half of the twentieth century was the introduction of a new variety of maize, locally called *chebolos*, that proved to be highly productive at higher elevations. Experimenting with these new cultivars, younger men started expanding the glades, clearing virgin forest and establishing homesteads on higher slopes where there was more space to create field systems. The clearance of vegetation was necessary in the transition from an economy orientated around honey production and foraging towards one more focused on cultivation. This unfolding of new landscapes in the form of more agriculture was further exacerbated by the roughly coterminous introduction of a new road network by Catholic missionaries and the subsequent establishment of infrastructure in the form of schools, dispensaries and churches. Local informants stated that, whilst there was a certain amount of concern from community elders at the loss of forest vegetation, people were generally content, as the quality of life was improving with easier access to healthcare and an abundance of locally grown food.

Considering conservation perspectives of the functional form of forests, it is not surprising that the Forest Department started to evict people from the region in the 1980s given the acceleration of deforestation. Yet these actions involved little consideration as to how people are intimately entwined with the landscape and how conservation practice itself was, and continues to be, an agent of change rather than preservation. This point plays into much larger, volatile debates surrounding the entangled issues of community rights to land, group identity, power dynamics between state and people and who is truly responsible for the loss of tree life (World Bank Inspection Panel 2014; Lynch 2016). These debates and conflicting views are now materialised in the entangled ruins of forest vegetation and former livelihoods in Embobut today. However, as I now explore, this landscape is not simply the remains of past lives, but one that is continually unfolding and actively involved in the creation of place and dwelling activities in the present day.

### **Beyond Ruination: The Transforming Landscapes of Embobut**

As discussed above, processes of ruination are as much about transformation as destruction. Take, for example, the numerous ruined forests that have been documented across parts of Kenya, where recent studies have demonstrated how continued and increased agricultural activity has resulted in the loss of millions of hectares of forested areas across the country (e.g. Akotsi *et al.* 2006; Baldyga *et al.* 2008). These landscapes may indeed be envisaged as ruined forests when understood from purely environmental perspectives that imagine forest ecosystems as the land in its “natural state”. Ecological ruination in this context, however, is only really quantified through epistemologies that prioritise the loss of hydrological and carbon sequestration functions over and above the unfolding of new landscapes and lifeways in the form of cultivated fields and open pasture. Thus, the ruination of previously forested landscapes allows for the creation of different ecosystems and the growth of cultivars, grass

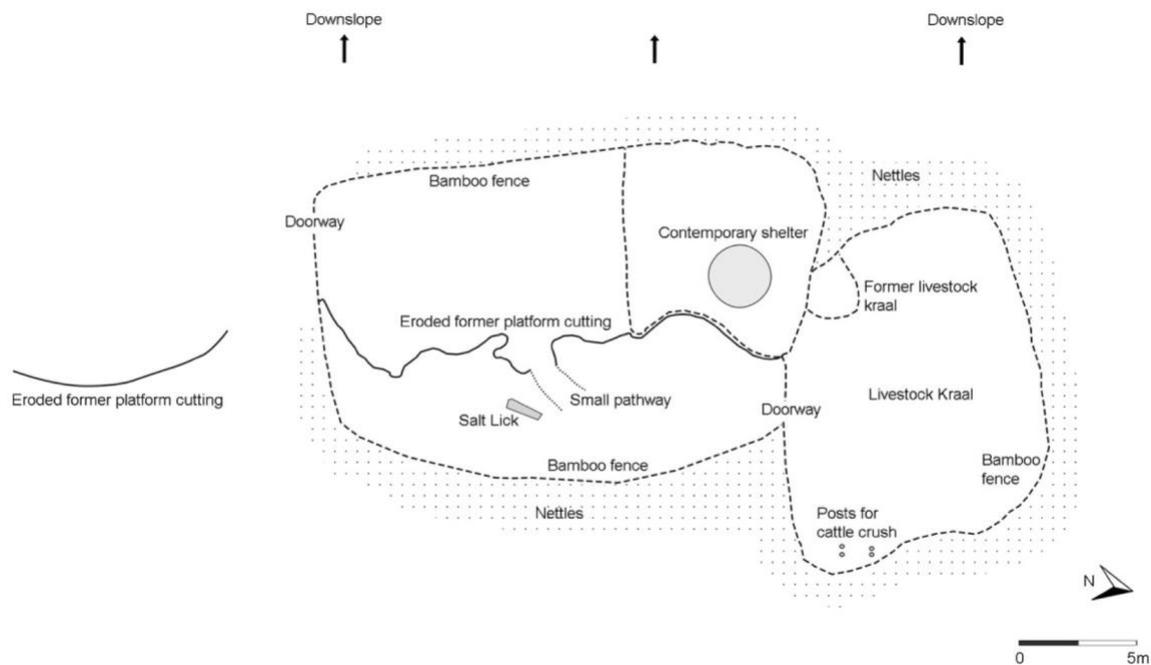
types, livestock herds and human population. These new landscapes, then, may not necessarily be considered as ruined by the thriving new grass species, the livestock that graze upon them or the people whose wealth and quality of life increases with the size of their herd. This observation does not mean forest loss is to be endorsed, but simply that forest conservation is wrapped in a series of value judgements that prioritise particular ecosystems and ways of life over others.

Interestingly, the set of formalised evictions in 2013 has not halted this narrative of landscape change in Embobut, let alone reverted it to a “natural” forest baseline. Instead, the destruction of former livelihoods has facilitated the creation of new landscapes and novel possibilities for dwelling. The abandonment of permanent livelihoods inside the forest block has resulted in old field systems becoming neglected and transformed into large expanses of open grassland, creating increased space and opportunity to graze cattle – an activity that continues despite its prohibition by the 2005 Forest Act. This enduring practice is in part due to the fact that land outside the forest block has become overcrowded from large-scale community displacement. The now more open forest block has thus become the preferred location where people can find space to graze livestock in order to rebuild their lives, a process that in turn has hindered the re-growth of certain plant species and prevented opportunities to restore the forest.



**FIGURE 6:** *Semi-permanent dwellings in eastern Embobut.*

The materiality of these shifting landscapes clearly shows that people have continued to create new ways of dwelling with Embobut. Although not living in the forest block on a permanent basis, they do build small structures there in order to shelter from the rain and sleep at night, keeping watch over their livestock to ensure that none of it is stolen. Smaller than a permanent house, these shelters are crudely constructed, some having only flimsy bamboo walls, and others without walls at all. Makeshift materials such as tarpaulin and scraps of corrugated iron are also used as protection from the wind and rain (Figure 6). These dwellings are often built within or nearby the individual's pre-eviction compound, occasionally hidden amongst vegetation in order to stay out of view of the Kenya Forest Service which periodically carries out raids and burns the structures. As a result, the bare minimum of possessions is taken to the shelter: mugs for *chai*, aluminium pans, a small makeshift bed made from bamboo and some containers for collecting and storing milk. Outside, the compound is often divided into different segments in order to separate the sheep and cattle (Figure 7).



**FIGURE 7:** *Survey of a reoccupied homestead in eastern Embobut.*

The placing of these shelters on or adjacent to the occupant’s former housing platform suggests that notions of territory are still important inside the forest block and that one cannot simply build a shelter or keep cattle anywhere. If a piece of land that does not belong to you seems suitable for grazing, permission has to be asked from community elders who used to live in a desired location. Thus, in a similar manner to the field systems that are covered with grass for cattle to graze upon, many observable housing platforms in the present day are not mere ruins of past lives. Instead, their very presence is imbued with past practices that persist in actively structuring contemporary places in which people continue to dwell. In other words, these are not sites of absence and memory. They are clear instances of a continued, albeit transformed, living relation between individual, clan and the land itself.

Living in these locations on a semi-permanent basis in the present day is predominantly orientated towards looking after livestock, which for many people is their

main asset. One informant described his daily routine as involving waking up and letting his sheep out to graze for the day before rounding up the cattle for milking. Some of this milk is kept for personal consumption (either boiled as *chai*, drunk fresh or stored to produce sour milk). The rest is poured into a container and walked to a commercial centre outside the forest block approximately an hour and a half away. Here, provisions such as maize flour and sugar can be bought for consumption back at the shelter. When the occupant has to leave for a longer period of time, his father, who took financial compensation from the government in 2013 allowing him to purchase a small plot of land in to the west of the Embobut Forest Block, stays in the shelter to take over duties.

Other individuals who are sheltering more centrally in the forest block find themselves at least a three hour walk away from the nearest commercial centres. As such, arrangements to meet half way with a friend or family member are usually in place to hand over fresh milk to be sold outside the forest block. In exchange, various depleted necessary provisions such as maize flour and sugar are received, a flat mobile phone battery is swapped for a freshly charged one and the full milk container exchanged with an empty one so that the routine may be repeated the next day. In areas located closer to the edge of the forest block, individuals need not stay for such long periods without leaving the forest. Instead, they carry their milk on a daily basis to and from their respective livestock herds. Those who choose to reside here at night set up local arrangements with friends or family in order to rotate who sleeps in the forest. On a macro level, the numerous temporary shelters dotted around the conservation area and livestock herds have resulted in a constant flow of people moving in and out of the region throughout the day, carrying and exchanging fresh milk and provisions. Despite the opportunities these new landscapes create for tending cattle, living in these locations on a semi-permanent basis is by no means an easy experience. Indeed, informants

stated that they sleep in fear due to the constant raids from the Kenya Forest Service, with one individual having had his house burnt to the ground 17 times.

The accounts of contemporary dwelling are told here not only to illustrate how people have negotiated the change brought about by the evictions, but because they exist as part of a continually unfolding relationship that people have had with living landscapes that are constantly transforming. Living in partially constructed shelters that offer little protection from the elements, often away from family for days, weeks or months at a time and at risk of further eviction, destruction and possible legal action, clearly requires individual will, perseverance and an enduring attachment to the land itself. This relationship is not the product of a mere political land claim, but rather draws upon the individual habitual practice and community ties to local histories, identities and memories that are rooted in the materiality of the constructed landscape itself. In light of this discussion, I draw this paper to a close by reflecting on how, in recognising the multiple ruins and living landscapes of Embobut, their enmeshed histories and emergent presence, there still remains hope for possibilities of future collaboration.

### **Conclusions: Contemplating Transformations and Embobut's Futures**

Before weaving together some of the observations and more nuanced theoretical threads spun throughout this paper, it is first important to return to its introductory premise. Embobut is a messy entanglement of ruins. These ruins are the materialisation of the political tensions surrounding issues of conservation (as indexed by the ruined forests) and community rights to land (as evidenced by ruined houses). The historical processes that culminated in these ruins have been contested and fraught, often including harrowing narratives of violent arrests, the destruction of personal possessions and even the terrible deaths of individuals (Forest Peoples Programme 2018). The historical injustices experienced by the Sengwer and Marakwet

populations, who continue to campaign for access to the land from which they have become marginalised, is thus a pressing issue that has yet to be resolved. So too is the loss of highland forest and biodiversity, particularly in light of global discourses surrounding sustainability and climate change. With this in mind, the situation in Embobut should not be trivialised or lost in academic theorising.

That said, the causes of ruination should not be reduced to a finger-pointing exercise, but should instead acknowledge that all groups of people, including the Kenya Forest Service (through their introduction of forest boundaries and repeated evictions), have been agents of change across the region. In adopting a materially centred approach, this paper has offered a nuanced contemplation of these processes by emphasising how ruined forest ecologies and livelihoods are inseparably enmeshed. Central to my argument, however, is the idea that ruination is interwoven with processes of transformation and the resurgence of new material regimes, environments and possibilities of engagement. This is most clearly illustrated through the continued dwelling activities of people inside the conservation area who shelter in semi-permanent structures and graze cattle on the now open grassy landscapes – transformed ecologies that do not constitute the mature forest re-growth envisaged by conservationists.

It is evident from this discussion, however, that we are left with serious challenges surrounding the future possibilities of producing sustainable multispecies assemblages and liveable environments in Embobut. As I have illustrated throughout this paper, this task is difficult, not least because different engagements with the forest and perceptions of ruination have so far taken place in anticipation of contrasting futures. Conservationists envisage a future where humans are absent from the region in order to protect biodiversity and ecosystem functions, in the process realising the pristine imaginary of the forest that prompted its initial gazettement and management (which ironically is an entirely novel state for

the forest to exist in). Whilst perhaps well intentioned in light of the pressing issues of sustainability and climate change, this future leaves little space for the human, ultimately echoing its colonial antecedents. For the Sengwer and Marakwet communities, the future of Embobut is one where the forest continues to provide for individuals and the wider community, existing as a resource to be continually engaged with as part of an ongoing set of relationships. Rather than being comprised of ecological or material stasis, this future could well mean more change across the forest as the dynamic connection between people and land continues to unfold. Thus, recognising the endurance of this relationship rather than attempting to preserve environmental equilibrium may be paramount for producing liveable environments.

Either way, when engaging with these contrasting visions, it is important that we move beyond a view of ruination purely as loss and destruction and instead move towards one that recognises transformation. This emphasis adds a much-needed temporal dimension to the current ecological and political debates, highlighting that the region has not historically existed as a static landscape that then became a set of passive ruins. In turn, such a perspective helps to avoid reductionist narratives that emphasise a *return* to a “natural” forest baseline devoid of human habitation in order to halt processes of ecological ruination at the expense of human livelihoods. In light of this, I do not pretend to offer a set of robust solutions here – such a task remains well beyond the scope of this paper. Rather, I am simply suggesting that in acknowledging the temporality of material and social change, we can begin to imagine and design new future relationships that may be quite different from those of the past, but that nevertheless allow humans and other species to thrive sustainably and resiliently. These observations provoke us into considering a far more collaborative future where Embobut continues to be transformed with the responsible management of ecosystem functions and species diversity by both the communities who are enmeshed with forest

landscapes and conservationists. I hope that this paper might serve as one foundation for opening such dialogues and stimulating future collaborative engagements.

### **Acknowledgements**

Research was carried out under the permit number NACOSTI/P/16/42758/9561 allocated by the National Commission for Science, Technology and Innovation in Kenya.

Acknowledgment is due to the British Institute in Eastern Africa for its funding and overall support throughout my time in Kenya. Likewise, gratitude goes to the Wenner-Gren Foundation and the Arts and Humanities Research Council for funding my fieldwork, without which this project would not have been possible. Thanks is due to Dr Matt Davies and Prof. Peter Mitchell for their insightful comments on early drafts of this paper. I am also grateful to Mr. Joseph Kimutai and Ms Dorcas Jebet for their dedication and hard work in hosting me and assisting with my research, as well as the numerous community members who took part in the interviews. Thanks is also due to Mr. Timothy Kipkeu and the members of the Marakwet research station who continually aided me with my field work.

### **References**

- Adams, W.M. and D. Hulme. 2001. "If Community Conservation is the Answer in Africa, What is the Question?" *Oryx* 35 (3): 193–200.
- Adams, W. M. and M. Mulligan. 2012. *Decolonizing Nature: Strategies for Conservation in a Post-Colonial Era*. London: Earthscan.
- Akotsi E., M. Gachanja and J. K. Ndirangu. 2006. *Changes in Forest Cover in Kenya's Five "Water Towers", 2003–2005*. Nairobi: Kenya Forests Working Group.

- Anderson, D. 1984. "Depression, Dust Bowl, Demography, and Drought: The Colonial State and Soil Conservation in East Africa during the 1930s." *African Affairs* 83 (332): 321–343.
- Barrow, E. H. and M. Murphree. 2001. "Community Conservation: From Concept to Practice." In *African Wildlife and Livelihoods: The Promise and Performance of Community Conservation*, edited by D. Hulme and M. Murphree, 24–37. Portsmouth, NH: Heinemann.
- Baldyga, T. J., S. N. Miller, K. L. Driese and C. M. Gichaba. 2008. "Assessing Land Cover Change in Kenya's Mau Forest Region Using Remotely Sensed Data." *African Journal of Ecology* 46 (1): 46–54.
- Bille, M., F. Hastrup and T. F. Soerensen, eds. 2010. *An Anthropology of Absence: Materializations of Transcendence and Loss*. New York: Springer
- Boles, O. and P. Lane. 2016 "The Green, Green Grass of Home: An Archaeological Approach to Pastoralist Settlement in Central Kenya." *Azania* 51 (4): 507–530.
- Boles, O., A. Shoemaker, C. Mustaphi, N. Petek, A. Ekblom and P. Lane. 2019. "Historical Ecologies of Pastoralist Overgrazing in Kenya: Long-Term Perspectives on Cause and Effect." *Human Ecology* 47 (3): 419–434.
- Brightman, M. and J. Lewis. 2017. "Introduction: The Anthropology of Sustainability: Beyond Development and Progress." In *The Anthropology of Sustainability: Beyond Development and Progress*, edited by M. Brightman and J. Lewis, 1–34. New York: Palgrave Macmillan.
- Buchli, V. and G. Lucas, eds. 2001. *Archaeologies of the Contemporary Past*. London: Routledge.
- Chang, M. 2012. *Forest Hydrology* (3rd edition). Boca Raton, FL: CRC Press.

- Davies, M. I. J. 2012. "Some Thoughts on a 'Useable' African Archaeology: Settlement, Population and Intensive Farming among the Pokot of Northwest Kenya." *African Archaeological Review* 29 (4): 319–353.
- \_\_\_\_\_. 2013. "The Archaeology of Clan- and Lineage-Based Societies in Africa." In *The Oxford Handbook of African Archaeology*, edited by P. Mitchell and P. Lane, 723-736. Oxford: Oxford University Press.
- \_\_\_\_\_. and H. L. Moore. 2016. "Landscape, Time and Cultural Resilience: A Brief History of Agriculture in Pokot and Marakwet, Kenya." *Journal of Eastern African Studies* 10 (1): 67–87.
- Daily Nation*. 2013. "How Embobut Evictees Agreed to Leave the Forest." [online article]. Available online: <https://www.nation.co.ke/news/politics/How-Embobut-evictees-agreed-to-leave-the-forest-/1064-2076128-14jeobr/index.html>
- Derbyshire, S. and L. Lowasa. Forthcoming. "The Ruins of Turkana: An Archaeology of Failed Development." In *Forms of Freedom: Legacies of African Modernism*, edited by N. Berre, N. Hoyum, P. Geissler and J. Lagae. Bristol, UK: Intellect.
- DeSilvey, C. and T. Edensor. 2012. "Reckoning with Ruins." *Progress in Human Geography* 37 (4): 465–485.
- Edensor, T. 2005. *Industrial Ruins: Space, Aesthetics and Materiality*. Oxford: Berg.
- Forest Peoples Programme. 2013. "Urgent Appeal Against the Forced Eviction of Sengwer Communities in Kenya." Forest Peoples Programme website, 23 December. Available online: <https://www.forestpeoples.org/en/topics/rights-land-natural-resources/news/2013/12/urgent-appeal-against-forced-eviction-sengwercher>
- Gonzalez-Ruibal, A. 2008. "Time to Destroy: An Archaeology of Supermodernity." *Current Anthropology* 49 (2): 247–279.

- Hansen, M. C., P.V. Potapov, R. Moore, M. Hancher, S. A. A. Turubanova, A. Tyukavina, D. Thau, S. V. Stehman, S. J. Goetz, T. R. Loveland and A. Kommareddy. 2013. “High-Resolution Global Maps of 21st-Century Forest Cover Change.” *Science* 342 (6160): 850–853.
- Harrison, R. and Schofield, J., 2010. *After Modernity: Archaeological Approaches to the Contemporary Past*. Oxford: Oxford University Press.
- Hulme, D. and M. Murphree. 1999. “Communities, Wildlife and the ‘New Conservation’ in Africa.” *Journal of International Development* 11 (2): 277–286.
- Hutchins, D.E 1907. *Report on the Forests of Kenia*. London: HMSO.
- Ingold, T. 2000. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. London: Routledge.
- \_\_\_\_\_. 2011. *Being Alive: Essays on Movement, Knowledge and Description*. London: Routledge.
- \_\_\_\_\_. 2013. *Making: Anthropology, Archaeology, Art and Architecture*. London: Routledge.
- Kenya Land Commission 1934. *Report of the Kenya Land Commission, September 1933 and Evidence and Memoranda*. London: H.M Stationery
- Larsen, P.B. and D. Brockington, eds. 2018. *Anthropology of Conservation NGOs*. Cham, Switzerland: Palgrave Macmillan.
- Lucas, G., 2013. “Ruins.” In *The Oxford Handbook of the Archaeology of the Contemporary World*, edited by P. Graves-Brown, R. Harrison and A. Piccini, 193–203. Oxford: Oxford University Press.
- Lunn-Rockliffe, S. 2019. “Connecting Past and Present: Changing Landscapes in the Embobut Forest, Western Kenya.” *Nyame Akuma* 89: 21–28.

- Luukkanen, O. 1996. "Kenya Forestry Master Plan". In *Sustainable Forestry Challenges for Developing Countries*, edited by M. Palo. and G. Mery, 359–369. Dordrecht: Springer.
- Low, D. A. and J. M. Lonsdale. 1976. "Introduction: Towards a New Order 1945–1963." In *History of East Africa, Volume 3*, edited by D. A. Low and A. Smith, 1–63. Oxford: Clarendon Press.
- Lynch, G. 2016. "What's in a Name? The Politics of Naming Ethnic Groups in Kenya's Cherangany Hills." *Journal of Eastern African Studies* 10 (1): 208–227.
- Neumann, R. P. 1998. *Imposing Wilderness: Struggles Over Livelihood and Nature Preservation in Africa*. Berkeley: University of California Press.
- \_\_\_\_\_. 2002. "The Postwar Conservation Boom in British Colonial Africa." *Environmental History* 7 (1): 22–47.
- Ofcansky, T. P. 1984. "Kenya Forestry under British Colonial Administration, 1895–1963." *Journal of Forest History* 28 (3): 136–143.
- Olsen, B. and Þ. Pétursdóttir. 2014. *Ruin Memories: Materialities, Aesthetics and the Archaeology of the Recent Past*. London: Routledge.
- Sakals, M.E., J. L. Innes, D. J. Wilford, R. C. Sidle and G. E. Grant. 2006. "The Role of Forests in Reducing Hydrogeomorphic Hazards." *Forest Snow Landscape Research* 80 (1): 11–22.
- Tsing, A. L. 2014. "Blasted Landscapes (and the Gentle Arts of Mushroom Picking)." In *The Multispecies Salon*, edited by E. Kirksey, 87–109. Durham, NC: Duke University Press.
- Tsing, A.L. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton, NJ: Princeton University Press.

Tsing, A.L. 2017. “A Threat to Holocene Resurgence Is a Threat to Livability.” In *The Anthropology of Sustainability: Beyond Development and Progress*, edited by M. Brightman and J. Lewis, 51–66. New York: Palgrave Macmillan.

Wass, P. 1995. *Kenya’s Indigenous Forests*. Gland, Switzerland: IUCN.

World Bank 2007a. *Strategic Environmental Assessment of the Kenya Forests Act 2005*.

[online document] Available at:

<http://siteresources.worldbank.org/INTRANETENVIRONMENT/Resources/244351-1222272730742/KenyaForestESWFullReportWeb.pdf> [date accessed 21.11.2019].

World Bank Inspection Panel 2014. *Kenya Natural Resource Management Project:*

*Investigation Report, May, 22 2014*. Available online:

<http://ewebapps.worldbank.org/apps/ip/Pages/ViewCase.aspx?CaseId=89>

Yablon, N. 2009. *Untimely Ruins: An Archaeology of American Urban Modernity 1819–1919*. Chicago: University of Chicago Press.