Sprucing Up Britain:
How Foresters Conquered the British Landscape with BC Trees

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Table of Contents

Introduction **1**

Part 1: British Woodlands **5**

Part 2: Imperial Forestry **14**

Part 3: Colonizing British Forests **21**

Part 4: Colonial Historians **31**

Conclusion **34**

Works Cited **36**

Appendix **45**

An intermittent drizzle fell as I walked through the woods, surrounded by towering evergreens. Fir, spruce, pine, and hemlock, planted close to encourage fast growth, shielded me from most of the rain. The gravel road crunched under my feet step after step until I reached a mossy promontory overlooking a lake. The water was still enough despite the rain that I could see a reflection of the Pacific Northwest shimmering in the water, even as the lake drained through a stone millrace towards the River Severn and the Bristol Channel.[1] *Here I stood between two worlds. Before me lay the forested landscape of Cascadia, with deep lakes, tall mountains, countless islands and dozens of Indigenous cultures, languages, and homelands – beautiful even after 120 years of colonial extraction. Behind me lay Britain: land of industry, class struggle, and the agricultural revolution. I walked further into this illusion of Cascadia, or was it the fabled Forest of Dean? The spell was broken only when a herd of wild boar burst from a thicket of Douglas fir right in front of me, raced across the road, and jumped back into the safety of the woods.*

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Britain is covered in trees from the Northwestern coast of North America. When I mention this, the general reaction is surprise, particularly from British people. Yet more than half of all trees in Scotland are Sitka spruce, accompanied by many Douglas firs, cedars, and Grand firs.[2] Scotland is not alone; Wales lists Sitka spruce as its most

[1] Department for Environmental Food and Rural Affairs, *Blackpool Bk - Source to Conf Cinderford Bk*, accessed January 28, 2023.
[2] Forestry Commission, *National Inventory of Woodland and Trees – Scotland* (Edinburgh, UK: Forestry Commission, 2001).

common tree, and England lists the species as the third most common.[3] This pattern is repeated across Europe, albeit on a smaller scale: up to one-third of French timber production is Douglas fir, which makes up 1/7th of all the conifers in France.[4] This British landscape of British Columbia conifers did not exist at scale before World War I. The Forestry Commission of the United Kingdom, a governmental body founded in 1919 and tasked with reforestation and afforestation, is behind the rapid coniferisation of the British landscape.[5] Surprisingly, the history of this body is relatively understudied and generally disconnected from a wider study of Empire forestry. In fact, the techniques, goals, and strategies employed by the Forestry Commission are nothing less than a product of the British Empire, and are a key example of how empires use colonies as sites of experimentation in governance.[6] Put simply, the British Empire changed the British landscape, and is still changing it, half a century after decolonization in British Africa and thirty years after the British departure from Hong Kong.[7]

Empire forestry's impact on Britain's landscape is understudied. Historians of British forestry even fail to mention the connection between state forestry and

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[3] Forestry Commission, "Standing Timber Volume for Coniferous Trees in Britain:National Forest Inventory Report," 2011; Forestry Commission, "NFI Preliminary Estimates of Quantities of Broadleaved Species in British Woodlands, with Special Focus on Ash," 2011.
[4] INSTITUT NATIONAL DE 'INFORMATION GÉOGRAPHIQUE ET FORESTIÈRE, "Growing-Stock Volume and Distribution," 2022;
[5] Ian Gambles, *British Forests: The Forestry Commission 1919-2019* (Profile Editions, 2019); Ian G. Simmons, *An Environmental History of Great Britain: From 10,000 Years Ago to the Present* (Edinburgh: Edinburgh Univ. Press, 2001).
[6] Jan Oosthoek, "The Colonial Origins of Scientific Forestry in Britain," *Environmental History Resources*;
[7] S.C. Smith, *British Imperialism 1750 - 1970*, Cambridge Perspectives in History / [Series Ed.: Richard Brown and David Smith] (Cambridge University Press, 1998)

colonialism entirely, despite the Forestry Commission's place as a product of empire. [8] Those who do mention state forestry do not discuss the origins of the Forestry Commission beyond developments within Britain.[9] For many scholars, the empire exists to be shaped by Britain, and Britain stands above and untouched.[10] The profound changes that the Forestry Commission wrought on the British landscape highlight the folly of this assumption. British historians have failed to synthesize the transformation of the British landscape in the context of an imperial legacy, despite large volumes of evidence linking the empire and the Forestry Commission.[11]

This thesis attempts to fill this historiographical gap by tying the Forestry Commission to empire forestry. I consider the Forestry Commission to be a direct extension of colonial practice within Britain. This stands as a form of "internal colonialism" that erased the values, knowledge, and experience of British rural

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[8] Note on usage: when I use "empire" throughout this essay, I also include the countries and histories of the Commonwealth, which I take to be fundamentally a successor of the British Empire.

[8] Victor Bonham-Carter, *The Survival of the English Countryside* (London: Hodder and Stoughton, 1971), 60, 178-81; Brian W. Clapp, *An Environmental History of Britain since the Industrial Revolution* (London: Longman, 1994); Roger Oliver Miles, *Forestry in the English Landscape: A Study of the Cultivation of Trees and Relationship to Natural Amenity and Plantation Design; with an Introduction by Victor Bonham-Carter* (London: Faber, 1967), 50- 61; Jan Oosthoek, "The Colonial Origins of Scientific Forestry in Britain," Environmental History Resources; Jan-Willem Oosthoek, "The Logic of British Forest Policy, 1919-1970," in *3rd Conference of the European Society for Ecological Economics* (Transitions Towards a Sustainable Europe. Ecology - Economy - Policy, Vienna, Austria, 2000). Oliver Rackham, *The History of the Countryside* (London: J.M. Dent and Sons, 1986); Oliver Rackham, *Woodlands* (London, UK: HarperCollins, 2006).; Ian G. Simmons, *An Environmental History of Great Britain: From 10,000 Years Ago to the Present* (Edinburgh: Edinburgh Univ. Press, 2001).

[9] Gambles, *British Forests,* Oliver Rackham, *Woodlands* (London, UK: HarperCollins, 2006); Oliver Rackham, *The History of the Countryside* (London: J.M. Dent and Sons, 1986).

[10] Gregory Allen Barton, *Empire Forestry and the Origins of Environmentalism*, Cambridge Studies in Historical Geography 34 (Cambridge (GB): Cambridge university press, 2002).

[11] George Ryle, *Forest Service : The First Forty-Five Years of the Forestry Commission of Great Britain* (Newton Abbot, UK, 1969).

people.[12] The Commission's empire roots are essential in understanding the Forestry Commission as a "high modernist" expansion of the modern state in Britain.[13] While scholars such as the British environmental historian Oliver Rackham argue that "it is not in the nature of tree plantations to become material for historical research," I propose that this lack of interest is fundamentally a failure of the historical discipline to assess the colonial nature of plantation forestry.[14] While British historians may find it an uncomfortable truth, the empire reshaped Britain.

I seek to address the intersection between the colonial development of British forestry and the effect of that forestry on the British landscape. I will start by briefly telling a story of how British and empire forestry developed in concert. This needs to be then connected with the history of a modernist scientific forestry in Germany and its transposition to Britain, via India.

Aspects of this topic have been covered in varying degrees of detail. Scholars such as Rackham have previously studied British forestry history in detail, particularly from the lens of historical ecology.[15] The intellectual development of German and then British scientific forestry has been tracked by a number of historians.[16] The economic

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[12] James Trafford, *The Empire at Home: Internal Colonies and the End of Britain* (London: Pluto Press, 2021).
[13] James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (Birminghamton, NY: Vail-Ballou Press, 1998).
[14] Oliver Rackham, *The History of the Countryside* (London: J.M. Dent and Sons, 1986), 153
[15] Oliver Rackham, *The History of the Countryside* (London: J.M. Dent and Sons, 1986); Oliver Rackham, *Woodlands* (London, UK: HarperCollins, 2006).
[16] Peder Anker, *Imperial Ecology: Environmental Order in the British Empire, 1895-1945* (Cambridge, UNITED STATES: Harvard University Press, 2002); Brian W. Clapp, *An Environmental History of Britain since the Industrial Revolution* (London: Longman, 1994); Kurt Jax, "'Organismic' Positions in Early German-Speaking Ecology and Its (Almost) Forgotten Dissidents," *History and Philosophy of the Life Sciences* 42, no. 4 (December 2020); Jan-Willem Oosthoek, "The Logic of British Forest Policy, 1919-1970," in *3rd Conference of the European Society for Ecological Economics* (Transitions Towards a Sustainable Europe.

history of medieval and early modern wood use is broad, and I have tried to consult as widely as possible.[17] I have reviewed primary sources from a broad suite of collections, notably imperial journals such as the *Empire Forestry Journal*, as well as government documents, forestry publications, and academic debates on the nature of British forests.

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Ecology - Economy - Policy, Vienna, Austria, 2000); Harold K. Steen, Forest History Society, and International Union of Forestry Research Organizations, eds., *History of Sustained-Yield Forestry: A Symposium: Western Forestry Center, Portland, Oregon, October 18-19, 1983* (Santa Cruz, CA: Forestry History Society, 1984); Jeffrey K. Wilson, *The German Forest: Nature, Identity, and the Contestation of a National Symbol, 1871-1914* (Toronto ; Buffalo: University of Toronto Press, 2012).

[17] Sources include: Jean R. Birrell, "The Medieval English Forest," *Journal of Forest History* 24, no. 2 (1980): 78–85; Keith Pluymers, *No Wood, No Kingdom: Political Ecology in the English Atlantic*, The Early Modern Americas (Philadelphia: University of Pennsylvania Press, 2021); Stephen L. Stover, "Silviculture and Grazing in the New Forest: Rival Land Uses over Nine Centuries," *Journal of Forest History* 29, no. 1 (1985): 32–42; T.C. Smout, Alan R. MacDonald, and Fiona Watson, *A History of the Native Woodlands of Scotland, 1500-1920* (Edinburgh, UK: Edinburgh University Press, 2005); Paul Warde, *Energy Consumption in England and Wales: 1560-2000* (Rome: Consiglio Nazionale delle Ricerche, 2007); Elizabeth Cox Wright, "Common Law in the Thirteenth-Century English Royal Forest," *Speculum* 3, no. 2 (1928): 166–91.

Part 1: British Woodlands

To understand the scale of the change to the British landscape after World War I, we need a historic understanding of British arboriculture. We need to establish what traditional woodland management in Britain looked like and how it was connected to the wider Empire, as it was deeply intertwined with British colonialism from the 1600s onward.

Woodlands in Britain defy easy definition. The term can encompass treed pasture and browsing land (silvopasture), land where the Crown (King or Queen) possesses exclusive rights (forests or "kingswood"), hedgerows, dedicated woodlands managed for fuel or building materials production, as well as modern tree plantations. Silvopasture (a modern term) spans a wide spectrum from pasture with intermittent trees to open canopy forest, and can be managed to maximize browse, for timber production, fruit orchards, or building materials in the form of poles or wattle.[18] Forests refer to areas where the Crown had exclusive rights defined by the "Forest Laws." While these rights often focussed on the rights to hunt game animals (boar, deer, foxes, etc.) Crown rights extended to control over usufruct rights in general. Confusingly to North Americans, "forests" in Britain can refer to areas where there are few or no trees,

[18] Sandrine Petit and Charles Watkins, "Pollarding Trees: Changing Attitudes to a Traditional Land Management Practice in Britain 1600–1900," *Rural History* 14, no. 2 (October 2003): 157–76; Oliver Rackham, *Woodlands* (London, UK: HarperCollins, 2006); Google Research, "Google Books Ngram Viewer—Silvopasture" (Alphabet Inc), accessed March 21, 2023

although in some cases this is because the trees have been removed, while the legal "forest" remains, meaning that British forests do not necessarily possess trees.[19]

Prior to the nineteenth century, hardwood woodlands that were managed with techniques such as coppicing or pollarding dominated British woodlands. These techniques minimized the need to kill trees through repeatedly chopping back the tree and allowing it to regrow. This keeps hardwood trees in their maximally productive stage and allows the production of a great variety of sizes of wood, useful for animal feed, burning, charcoal-making, staves, wattle, posts, and rough timbers. Over time, coppices increase in productivity as their root systems develop. While coppices are cut back to ground level, pollards are cut back to around 1.7m, or just higher than grazing animals can reach, allowing wood production to coexist with animals. After cutting, coppices and pollards are then allowed to regrow to the desired diameter and height. Both coppices and pollards can be accompanied by timber trees (standards) that are allowed to grow unharvested. In fact, this practice was required by law for many years, leading to the practice of "coppice with standards."[20] The thick "underwood" created by the vigorous growth of coppice and pollards encourages straight and tall growth of both coppices and timber trees. This kind of forest management allowed management

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[19] Oliver Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 1. publ (London: Arnold, 1980); Elizabeth Cox Wright, "Common Law in the Thirteenth-Century English Royal Forest," *Speculum* 3, no. 2 (1928): 166–91; Charles R. Young, "English Royal Forests under the Angevin Kings," *Journal of British Studies* 12, no. 1 (1972): 1–14; Charles R. Young, "Conservation Policies in the Royal Forests of Medieval England," *Albion: A Quarterly Journal Concerned with British Studies* 10, no. 2 (1978): 95–103; Charles R. Young, *The Royal Forests of Medieval England* (Philadelphia: University of Pennsylvania Press, 1979).

[20] Brian W. Clapp, *An Environmental History of Britain since the Industrial Revolution* (London: Longman, 1994), 106; Sarah Johnson, ed., *Trees: Themes in Environmental History* (Cambridge, UK: White Horse Press, 2015).

for a diverse set of uses as well as productivity in many areas: food, browse, fuel, and building materials.[21] These forms of British woodland management played an important role in a large wood and timber trade. Woodlands were stores of wealth and stocks for industry, and provided key materials for heating, cooking, and building. People from every part of British society were involved in the management and regulation of this trade, from kings to commoners (users of common land).[22]

Commoners conducted traditional woodland management through the exercise of usufruct rights or in the service of landowners. They managed common woodlands with the provision and enforcement of common rights, relying on these woodlands for food, fuel, and building materials. For landowners, woodlands were an important store of capital in the absence of banks that could either store great value that improved each year (timber woods) or provide steady revenue (in the form of silvopasture rents or coppice products income).[23] The Norwich Cathedral Priory, for example, cut £230 of timber in 1272 (around £185,000 in 2023 values) in a single year to pay for the repair of their holdings after a Viking raid, an amount that totaled more than seven years of gross income for their whole estate.[24] Commoners and landowners often came into conflict over ownership or the holding of rights. These conflicts could usually be resolved in courts, but sometimes came to blows. Landowners would often seek to

[21] William Schlich, *Schlich's Manual of Forestry: Forest Protection*, 1st ed., vol. 4 (London and Tonbridge: Bradbury, Agnew & Co. LD, 1895); William Schlich, *Schlich's Manual of Forestry: Sylviculture*, 3rd ed., vol. 2 (London and Tonbridge: Bradbury, Agnew & Co. LD, 1904).
[22] Oliver Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 1. publ (London: Arnold, 1980).
[23] Rackham, *Woodlands*
[24] Rackham, *Ancient Woodland*, 157-8

decommonize land, and in their turn, commoners would resist or even try to commonize private land. Landowners sometimes hired mercenaries to enforce their claims, leading to small-scale battles (or occasionally larger revolts) over ownership and rights.[25] The production of tree products played an important part in the social history of rural British history.

As the use of woodlands as a store of wealth suggests, commercial exploitation was a core aspect of historic British forestry as far back as we have written records. This commercial exploitation produced a far-reaching timber trade servicing industrial, construction, and energy needs. Such use goes back at least to Roman Britain. By 120 CE Roman industries such as iron production, glassmaking, brickmaking, and tile production demanded for extensive wood harvests. By 1200 CE, urban centres such as London depended on their hinterlands to provide a steady supply of firewood for heating, cooking, and industrial needs, creating a bustling local wood trade. Firewood was viewed as a safe and clean fuel, and its use was encouraged by a series of laws seeking to limit air pollution and reduce fire hazard.[26] The trade in wood also extended to a rural fuel and timber market, as many populated regions of Britain did not possess productive woodlands.[27]

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[25] E. C. K. Gonner and G. E. Mingay, *Common Land and Inclosure*, [2d ed.], Reprints of Economic Classics (New York: A.M. Kelley, 1966); Richard Charles Hoffmann, *An Environmental History of Medieval Europe*, Cambridge Medieval Textbooks (Cambridge: Cambridge University Press, 2014), 187-8.

[26] JAMES A. GALLOWAY, DEREK KEENE, and MARGARET MURPHY, "Fuelling the City: Production and Distribution of Firewood and Fuel in London's Region, 1290-14001," *The Economic History Review* 49, no. 3 (1996): 447–72,

[27] Rackham, *Woodlands*

The use of woodlands for firewood production for home use came into direct conflict with industrial uses. Ironworks by the mid eighteenth century used the wood production of up to a quarter of a million acres in England and Wales. Warnings of the impact of ironworks were being heard at the court by the late seventeenth century.[28] While ironworks came into conflict with local needs for energy and the large scale of production required raised concerns that they were destroying British woodlands, the real threat was viewed by several contemporary authors as clearance for agriculture, as woodlands were generally managed to produce a consistent and sustainable yield over a timescale of centuries. While there is disagreement over the exact proportion of woodland devoted to ironworks, Warde calculates that over one-third of British woodland was used for iron production, in a country producing well below the northern European per-capita average of firewood.[29] The only areas left unaffected by the demand produced by ironworks were areas far from navigable rivers and the coast, such as the Midlands.

Faced with wood shortages, merchants began to source from North America, as well as Estonia and Norway. This integration with Atlantic markets for timber also provided reliable access to timber uncommon to Britain, such as straight and tall conifers. This access shaped how the empire and the British landscape were deeply interconnected in terms of economic reliance and military demands. Economically,

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[28] John Evelyn and John Nisbet, *Sylva: Or, a Discourse of Forest Trees*, 4th ed., vol. 1 (London: Doubleday & Co, 1908), https://doi.org/10.5962/bhl.title.23777.
[29] Paul Warde, *Energy Consumption in England and Wales: 1560-2000* (Rome: Consiglio Nazionale delle Ricerche, 2007), 34-40.

timber shortages were a driving factor in seventeenth and eighteenth century experiments with industry in the Americas, such as repeated attempts to establish ironworks in Eastern American forests, where they would not compete with British fuelwood consumption. These attempts were accompanied by numerous efforts to limit exploitation caused by ironworks in Britain, including restrictions on land acquisition and harvesting schedules.[30] These early forestry experiments preceded a wider British plantation forestry policy, but provide a valuable context for British views on wood and timber shortages and the importance of the empire in providing these needed resources.

Military demands for lumber can also be seen in a wider imperial context. The British navy from the 1600s onwards was a truly trans-Atlantic institution, with supply chains that relied on materials from Britain and all over the Americas. Such connections would only increase as the Navy expanded and became reliant on coal. Up until the advent of iron and steel masts in the late 1800s, the Navy depended on a supply of tall and straight timbers for masts, as well as on a supply of prime timber for hulls and decks. Because of the growing habits of native British trees, these trees grown for even small masts were rare or nonexistent in Britain. As naval ships rapidly grew in size, the use of American white pine (*Pinus strobus*) and longleaf pine (*Pinus palustris)* became essential to British military power on the seas, marking the beginning of British reliance on imported American conifers that could reach heights in excess of 200 feet:[31] "For

[30] Keith Pluymers, "Atlantic Iron: Wood Scarcity and the Political Ecology of Early English Expansion," *The William and Mary Quarterly* 73, no. 3 (2016): 389–426; Keith Pluymers, *No Wood, No Kingdom: Political Ecology in the English Atlantic*, The Early Modern Americas (Philadelphia: University of Pennsylvania Press, 2021).

[31] Robert Greenhalgh Albion, *Forests and Sea Power* (Cambridge: Harvard University Press, 1926).

want of sound masts," observed Robert Albion, "a whole squadron sent on an important mission might be rendered useless, while weak ships, resulting from bad timber, often hampered admirals in their operations."[32]

Colonial shipbuilders and the Navy quickly depleted accessible "mast trees" leading to state efforts to protect the supply.[33] The enforcement of these efforts often led to conflict with colonists, who saw pines as a valuable economic resource. For example, the White Pine Acts in New Hampshire, passed by the General Court in 1691, 1711, 1722, and 1729, granted the Crown ownership of any large white pine. They contributed to social conflict in New England, resulting in armed fighting, heated rhetoric, and uprisings, including the 1772 Pine Tree Riot. Twenty-odd New Hampshire locals blackened their faces with soot and ran the county sheriff out of the town of Weare for trying to enforce the legal ownership of the Crown, causing historians to draw parallels to the Boston Tea Party some 20 months later. This was far from the only instance of eighteenth-century violence related to the Pine Acts. Resistance to the "Pine Acts" built on the extant symbolic meaning of the pine tree as a symbol of New England.[34] From the Pine Tree Riot, it was only three short years before flags bearing the pine tree flew above a new Continental army and Massachusetts navy.[35]

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[32] Albion, *Forests and Sea Power*, ix
[33] Albion, *Forests and Sea Power*
[34] Steven Laurence Danver, ed., *Revolts, Protests, Demonstrations, and Rebellions in American History: An Encyclopedia* (Santa Barbara, Calif: ABC-CLIO, 2011), 183-185; Strother E. Roberts, "Pines, Profits, and Popular Politics: Responses to the White Pine Acts in the Colonial Connecticut River Valley," *The New England Quarterly* 83, no. 1 (March 2010): 73–101
[35] William Rea Furlong, Byron McCandless, and Harold D. Langley, *So Proudly We Hail: The History of the United States Flag* (Washington, D.C: Smithsonian Institution Press, 1981); 40,

Military needs were arguably *the* central component of British expenditures in the nineteenth century. The Royal Navy alone accounted for more than fifth of all government expenditures during the Napoleonic Wars (1803-1815) and rarely sank below 10% of government expenses throughout the rest of the century.[36] This level of spending was accompanied by a complex set of demands that shaped imperial forestry policy. While American conifers made excellent masts, the required timber for hulls still relied on the overharvested British oak. American longleaf pine could bear some of the burden, but the Revolution and the War of 1812 restricted access to North American timber even as Britain required ever more timber in the service of the French Revolutionary and Napoleonic Wars. Attention turned to the plantation of foreign species within Britain such as the European larch (*Larix decidua*), as well as sourcing teak and other tropical hardwoods from South Asia. The wide variety species and phenotypes of trees such as teak made sure that timber was available in India and Burma for almost every aspect of ship construction. As a result, more and more shipyards opened in independent jurisdictions across Burma and India, as well as within British Indian territories, threatening the primacy of shipbuilding on the shores of Great Britain.[37]

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[36] B. R. Mitchell, *Abstract of British Historical Statistics*, Monographs (University of Cambridge. Department of Applied Economics) (Cambridge: Cambridge University Press, 1962), 389-391

[37] Raymond Bryant, "Burma and the Politics of Teak," in *A History of Natural Resources in Asia*, ed. Greg Bankoff and Peter Boomgaard (New York: Palgrave Macmillan US, 2007), 143–61.

Growing consumption of South Asian forest products started a pattern of rapid deforestation characteristic of woodlands colonized by Anglophones.[38] Prime timber would be taken, with most of the rest burned to allow for crop production. In contrast to much of New England, where the deforested land would be transformed into pasture, or annual crop production, Burmese and Indian forests were often replanted with teak.[39] Control of Burmese teak supplies was a driving force behind British colonial expansion in the region and became a key component of colonial revenues. Back in Britain, plantation forestry was also used by private landowners as a tool to try and address timber supply shortages, often at the expense of common rights. While in the 1700s Pacific trees had not yet reached Britain, Welsh and Scottish experimented with Scots pine plantations. These conifer plantations were often developed specifically to supply masts for the Navy as well as building timbers.[40]

Teak and other high-value tropical timbers were deemed impossible to grow in Britain, and so focus turned to trees from other parts of the world. While the Russians were the first Europeans to collect Sitka spruce seeds for replanting, Sitka spruce seeds arrived to Britain as early as 1831, collected by the botanist David Douglas in Puget Sound. Other specimens soon arrived from botanical expeditions such as those sponsored by the Veitch family of Exeter. By 1884, the first Douglas fir plantation had

[38] William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England*, 1st rev. ed., twentieth-anniversary ed (New York: Hill and Wang, 2003).
[39] Bryant, "Burma and the Politics of Teak"
[40] William Linnard, "The History of Forests and Forestry in Wales up to the Formation of the Forestry Commission" (PhD Thesis, Cardiff, University of Wales, 1979).

been established in Wales.[41] We should not, however, overstate the position of plantation forestry by the end of the 1800s. Overall coppice area declined from the 1600s, and as Peterken reports "the retreat from Scotland, north Wales and north-east England was already well advanced," but "in 1905, coppice woods were still present virtually throughout Britain."[42] The most drastic change was yet to come, as a result of state forestry in the twentieth century.

As we have seen, British woodland management from 1600 onward was part of a greater Atlantic network of trade, consumption, and even identity. Variations in British wood supply drove colonial experimentation in the Americas, as well as a greater reliance on Atlantic trade for military and economic purposes and private experimentation of alternative modes of timber production. The loss of the American colonies pushed the British towards further timber extraction in other colonies, including India. Major timber consumers, most notably the Royal Navy, rapidly diversified their timber sources across the new British Empire, but what terrified British administrators was the prospect of total deforestation. Faced with this prospect, British administrators felt the need for a survey of available timber resources, and a unified forest policy.

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[41] Ruth Tittensor, *Shades of Green: An Environmental and Cultural History of Sitka Spruce* (Oxford ; Havertown, PA: Oxbow Books, 2016).
[42] G. F. Peterken, *Woodland Conservation and Management* (London ; New York: Chapman and Hall, 1981), 27

On an exhausting weekend at the end of March 2023, I completed the Three Peaks challenge of conquering the highest peak in each nation on the island of Great Britain – Ben Nevis, Scafell Pike, and Snowden – within as short a time as possible. In my pack travelled two packages of Romney's Kendal Mint Cake: "the first Mint Cake to be successfully carried to the top of MOUNT EVEREST on 29th May 1953…. Sir Edmund Hilary and Sirdar Tensing [Norgay] ate this Mint Cake on top of Everest as they gazed at the countryside far below them."[43] *Our group's view from the top of each of the three peaks may have been less historically significant, but there is one key similarity to the one from Everest in 1953: each view was of a landscape deeply shaped by the British Empire. While Hilary and Tenzing had a lot farther to look before they could see the nearest forestry plantation, the landscape of the Himalayan foothills had been transformed by a century of imperial forestry, just as in contemporary Britain.*

Part 2: Imperial Forestry

Professional scientific forestry came to Britain from Germany via India. Colonial administrators hired professional Germans who had been taught in German forestry schools, to survey and manage Indian and Burmese forestry resources. These professionals helped start key institutions such as the Indian Forestry Service, the Indian Forest School, and the Royal Engineering College. The priority placed on Indian forestry and colonial management helps explain why it was twenty-seven years between the establishment of the first forestry school for Indian foresters and the establishment of the first forestry school for foresters on Great Britain.

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[43] George Romney Limited, *Romney's Kendal Mint Cake*, March 20, 2023, Packaging, March 20, 2023.

Germany forestry in the late eighteenth century arose from widespread wood shortages and land management changes that drove a desire to maximize timber production in German forests. This was closely associated with the evolution of the modern bureaucratic state in Germany, as well as with the German industrial revolution. Despite German forests' history of communal property and the forests' place as a crucial symbol in this era of new nationalisms, the German peasantry faced a rapid privatization of forests.[44] Germany, as a modern capitalist state, attempted to strengthen private property rights wherever possible, and saw the remaining communal spaces of the forest as a barrier to progress. Bismarck, despite using the freedom of the forest as a symbolic tool in his political and diplomatic work, complained that private property rights across Prussia were only laxly enforced in the forest.[45]

It was in this environment that German states opened the first forestry schools. While their students often sought to rationalize and standardize forests with fast-growing conifer species planted in neat rows, these foresters remained aware of the complex social dynamics of forest enclosure and the place of the forest within German identity—foresters played an active role in the symbolic construction of the *German* forest. German foresters were raised and trained among fundamental debates about the

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[44] Over time the only communal right commonly upheld was the right of access, now still used in Germany by many hikers.

[45] Jeffrey K. Wilson, *The German Forest: Nature, Identity, and the Contestation of a National Symbol, 1871-1914* (Toronto ; Buffalo: University of Toronto Press, 2012); Kurt Jax, "'Organismic' Positions in Early German-Speaking Ecology and Its (Almost) Forgotten Dissidents," *History and Philosophy of the Life Sciences* 42, no. 4 (December 2020): 44.

nature and purpose of forests within the state and could see the difficulties of trying to limit peasant and public access to woodlands viewed as common resources.[46]

William Schilch, Dietrich Brandis, Berthold Ribbentrop, and the other German professionals hired to work in British India approached the creation of an Indian forestry service and policy from this background, and immediately began pushing for more state involvement in forests. Under company rule, rapid deforestation was the order of the day in service of local fuel needs, railway construction, and high-quality timber export. Teak in Southern India was among the first timber to be seriously threatened, pushing the empire to purchase from the Burmese. The increasing presence of the French in Burma pushed the British to conquer Burma, but this conquest did not alleviate concerns of long-term supply due to continuing rapid deforestation. To address the problem, the German managers needed to understand the available forestry resources and then institute a long-term management strategy. Initially, surveys and forestry controls were instituted at the local level, such as the implementation of state management of forests in the Madras Presidency, the first example of state forestry implemented under a European power. These local controls did not adequately address the scale of the problem; continued deforestation motivated the Government of India to initiate a wider forest resources survey in the 1870s which formed the basis of a Raj-wide forestry policy, implemented by the new Indian Forestry Service.[47]

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[46] Wilson, *The German Forest*

[47] . S. Eardley-Wilmot, "Forests," in *The Indian Empire: Economic*, New Edition, The Imperial Gazetteer of India (Oxford, UK: Clarendon Press, 1907), 102–27; Gregory Allen Barton, *Empire Forestry and the Origins of Environmentalism*;

The place of German foresters in the development of British Empire forestry is important but should not be overstated. The vast majority of foresters in India, for example, were native Indians, and the Indian Forestry Service and the Colonial Forestry Service sought to hire native Brits as colonial administrators. "The officers of the controlling branch" of the forest service, wrote Brandis in 1897, "should be Englishmen, who received their professional training in the forests of France or Germany." Those who served under them, "The Officers of the protective and executive Branch of the forest service[,] should all be natives of India."[48] The pursuit of this goal can show us a lot about how forestry developed in the context of empire.

To adequately train native foresters to implement scientific forestry practices, Brandis pushed for the establishment of a training school for Indian foresters. Senior foresters could continue receiving training at the French forestry school in Nancy or in one of the several schools Germany. Brandis did not find the creation of a school for Indian foresters easy: "by many [in 1875] the professional training of young Englishmen for Forest Service, was still regarded as a needless... attempt at over-refinement.... To establish a Forest School, in order to give a professional training to Native Forest Rangers seemed an Utopian beginning."[49] But by 1878 Brandis had managed to convince the Government of India to fund his idea.

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[48] Dietrich Brandis, "Indian Forestry," *The Imperial and Asiatic Quarterly Review and Oriental and Colonial Record* 3, no. 3 (April 1897): 245–46.
[49] E.E. Fernandez, *Notes on the Utilization of Forests, Being a Course of Lectures Delivered at the Imperial Forest School, Dehra Dun, India* (Roorkee: THOMASON CIVIL ENGINEERING COLLEGE PRESS, 1891), 247

The Imperial Forestry School at Dehra Dun (later the Imperial Forest Research Institute and College) was created with Brandis at its head. The school faced many challenges, not least a complete lack of textbooks and a student population possessing little English and educational experience; for many years, students had to make do with a printed and published set of class notes prepared by their professor. [50] It educated Indian foresters in English and Hindi, preparing them for work in the Indian Forest Service with classes on a wide variety of topics including felling techniques, charcoal-making, and the uses of woodland animal products. Importantly, it was the first forestry school in the entire British Empire.

While the Indian Forestry School proved a success in training native foresters, many of Brandis' subordinates disagreed with the idea of relying on French and German schools to train most British foresters. Most anglophone students took the program at Nancy, in France. George Pearson, the Director of Studies for the British students in that program and an Army officer who had joined the Indian service during Company rule, campaigned for the establishment of a British forestry school for administrators. He was joined in his campaign by William Schlich, Brandis' successor as the top forester in India; as well as the Society of Arts, an important social institution for British intellectual elites. Their campaign noted that forestry was "a department of education in which there seems no question but that this country is behind other nations.... it is hoped that such representations may be made to the Government as will

[50] Fernandez, *Notes on the Utilization of Forests*, iii-iv.

result in the removal of a disability which certainly appears to exist.[51] The result of their efforts was the establishment of a forestry department at the Royal Indian Forestry College at Cooper's Hill in the south of England, supervised by Schlich.

The Cooper's Hill program was small, with only 5-10 graduates each year, but each student was guaranteed a position in the Indian or Colonial Forestry Service. As the only graduate forestry program in the British Empire, its alumni had outsize influence in directing empire forestry policy and educating empire foresters. Its alumni include Edward Stebbing, one of the first authors to warn about increasing desertification and a prolific policy commenter; Robert Troup, Schlich's successor in forestry education and a forestry economist; and Peter Clutterbuck, the Inspector General of Forests to India; among a multitude of other foresters dispatched to South Africa, Australia, Sudan, Sierra Leone, Uganda, Malaya, and the rest of the British Empire.[52] They worked alongside the many foresters who had graduated from the program at Nancy such as Charles Lane Poole, the founder of the Australian Forest School and the Western Australian Forestry Service, and David Hutchins, the founding Professor of South Africa's first forestry school.[53] The programs and their professors also heavily influenced foreign foresters such as Gifford Pinchot, a key figure in the development of American scientific forestry, and institutions such as the Canadian

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[51] "Proceedings of the Society: Annual General Meeting," *The Journal of the Society of Arts* 30, no. 1545 (1882): 853–70.
[52] E. W. March and A. E. Osmaston, "Coopers Hill," *The Commonwealth Forestry Review* 50, no. 3 (145) (1971): 243–46; Edward Percy Stebbing, *British Forestry: Its Present Position and Outlook After the War* (London: John Murray, 1916).
[53] BRETT M. BENNETT, "The Rise and Demise of South Africa's First School of Forestry," *Environment and History* 19, no. 1 (2013): 63–85.

Institute of Forestry.[54] In 1905, Parliament forced the Cooper's Hill forestry department to move to Oxford, where the program expanded to a general forestry program rather than one specifically for foresters destined for India. Schlich remained chair of the department, and many of the professors were Cooper's Hill graduates, ensuring an enduring colonial lineage; in fact, much of the funding for the department continued to come from the Government of India for several decades.[55] The program continued to give degrees in forestry until 2002.[56] Forestry educational institutions in Britain derive directly from the colonization and administration of the Empire's forests, and served to educate foresters for work in colonies and in Britain.

In addition to educational institutions, empire foresters formed international professional organizations that served as forums for networking, professional development, and the publication of research, such as the Empire Forestry Association, later renamed the Commonwealth Forestry Association. Their journal featured articles from foresters throughout the empire, and their meetings feature conference speakers from across the world, including senior foresters from the United States, Canada, India, and across Africa. Their membership, journal, and governing directors serve as a key resource for examining the interconnectedness of Empire forestry after 1920. Their founding Director was none other than Lord Lovat, a key member of the Acland

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[54] Emily Katherine Brock, *Money Trees: The Douglas Fir and American Forestry, 1900-1944* (Corvallis, OR: Oregon State University Press, 2015).

[55] Richard Hornsey, *Imperial Engineers: The Royal Indian Engineering College, Coopers Hill* (Toronto ; Buffalo ; London: University of Toronto Press, 2022).

[56] Jeffery Burley et al., "A History of Forestry at Oxford University," *British Scholar* 1, no. 2 (March 2009): 236–61, https://doi.org/10.3366/brs.2009.0007.

Committee and the founding Chairman of the Forestry Commission: the institution that, in 1920, was about to transform the British landscape.

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Part 3: Colonizing British Forests

We have established the colonial origins of British Empire scientific forestry, as well as the development of Atlantic forestry markets alongside the colonization of the Americas. We must now examine how these colonial origins influenced the creation and development of the Forestry Commission in Britain. The creation of the Forestry Commission in many ways looked like the creation of other colonial forest services such as those in India and Australia. The rise of the Commonwealth and the decline of the British Empire could not change the colonial origins of the Forestry Commission, which became a participant in ongoing colonial projects through organizations such as the Empire Forestry Association. The Forestry Commission also engaged in internal colonialism through their countryside settlement schemes and assertive implementation of a modern forestry on the British landscape.

The creation of the Forestry Commission in 1919 resulted of the 1918 Forestry Sub-Committee Report (or the Acland Report), which sits within an important colonial context. Parliament attempted to centralize British timber resources under regional Boards of Agriculture in 1889 and hired administrators to take on this work, a process only hastened by the outbreak of war. The staff hired for this task were colonial administrators and foresters: the President of the English Board of Agriculture, William Palmer, was the former High Commissioner of South Africa and was known for possessing "a practical experience, second only to that of Lord Milner, of British imperialism in successful operation"; Roy Robinson, an Australian protegé and student of William Schlich, was hired to organize the management of the New Forest and

multiple other crown woodlands in England and Scotland; F. C. Osmaston, an Indian Forest Officer, was brought in to manage the Forest of Dean; and Clarence Hansen, a graduate of the Royal Indian Engineering College forestry program, was hired to start a forestry training school in the New Forest, among many others.[57] Robinson, Osmaston, and Hansen would all go on to play important roles in the Forestry Commission after 1919, and Robinson would help author the report that sparked its creation.

The 1918 report laid out reasoning and recommendations for the widespread afforestation of the country. The committee membership included several colonial foresters, in addition to several Members of Parliament. Simon Fraser, the 14th Lord Lovat, had made his name fighting in the Boer War and applied his education in estate management to timber supplies for the war effort. Fraser served as Chairman of the Forestry Commission and played a founding role in several important Empire organizations, including the Empire Forestry Association. Robinson, the Secretary of the Committee (as mentioned earlier) was responsible for drafting the Committee report, worked as a founding Forestry Commissioner, and worked his way up to the position of the fourth Forestry Commission Chairman. Schlich served as an expert representative on the Acland Committee, as well as in the founding consultative Committees of the Forestry Commission. These professional foresters recognized that the scale of production that the Committee asked for was not economical for private investors to

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[57] Clarence Oldham Hanson, *Forestry for Woodmen* (Oxford, Clarendon press, 1921); George Ryle, *Forest Service;* "Selborne, William Waldegrave Palmer, 2nd Earl of Selbourne," in *Encyclopædia Britannica*, 1911, Wikisource.

produce. As a share of land value, most forestry plantations produced too low of a return and took too long to mature for most private landowners, particularly as the plan called for the afforestation of marginal land that would produce a much lower yield than prime timber stands. As a remedy, the Acland report recommended the creation of a centralized government department funded by public funds: the Forestry Commission. This commission was tasked with land acquisition and afforestation, with the goal of afforesting 1.7 million acres (719,126 hectares), starting with a goal of 50,000 acres a year over four years. Commons were specifically targeted in the 1918 report for afforestation with conifers: the commission believed that "the utilization in due course of the timber will provide the small holder with a steady source of employment."[58]

Traditional British production, based on coppice forestry, was deemed inefficient based on expected timber values per acre (which it was, as traditional British forests weren't managed primarily for timber). As timber was deemed essential as a war material, provision had to be made to ensure a safe supply. Wood imports during the war rapidly increased in price due to increased demand and difficulties of importation due to German submarine attacks. But even prior to the war, Britain had imported more than 5 million loads of sawn conifers at a value of £15 million (including assorted unenumerated lumber). Many of these timbers were harvested in Russia, the supply of which the British government considered both unsustainable (due to the slow growth of Boreal trees) and insecure (due to predicted industrialization in Russia). Interestingly,

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[58] Acland, F. D. et al. "Forestry Subcommittee Final Report." Ministry of Reconstruction, 1918.

the Acland report also deemed Canadian timber supplies to be wholly unsustainable due to harvesting and fire: "unless arrangements can be made with the Dominion Government for the effectual conservation of these reserves, it is inevitable that provision should be made within the British Isles."[59] The report recommended both the afforestation of grazing land and the reorganization of existing forest land to maximize timber production. While they observed that spruce production provided far lower returns over the long term than larch or Douglas Fir, it produced a sufficiently high-quality product that the report deemed it "a mistake" to restrict any Spruce production that might occur.[60]

The 1920s witnessed the British Empire's transition to a Commonwealth of co-equal nations "in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations."[61] This is reinforced with textual analysis; we can see that within Forestry Commission annual reports, the "Colonial Office" was mentioned in nearly every annual report before 1940, with the last mentions occurring in 1957 after an 8 year gap. This indicates a lessening importance as the mentions generally occur in reports on joint work, job apportionment among program graduates, and conference attendees. "Commonwealth" replaced

[59] Acland, F. D. et al. "Forestry Subcommittee Final Report." Ministry of Reconstruction, 1918, 9.
[60] Acland, F. D. et al. "Forestry Subcommittee Final Report", 17.
[61] Inter-Imperial Relations Committee, "IMPERIAL CONFERENCE, 1926: Balfour Declaration," November 1926.

"empire" and "Colonial Office" with the first mention of "commonwealth" coming in 1947 and repeating nearly every year following.

But despite the separation of the forestry services throughout the empire that occurred after the establishment of the Commonwealth, these new services often helped one another through shared research, the provision of transport, and materials procurement. This is particularly notable in the case of seed provision for the afforestation of Britain. In the 1920s, Douglas fir and Sitka spruce plantations were not large enough to provide the quantity of seed needed to plant 50,000 acres a year. Seed instead had to be obtained from the trees' native range in British Columbia. The Canadian Forestry Branch and the BC Forestry Department assisted by setting up a three-storey seed extraction plant in New Westminster. The actual collection of the Sitka spruce seeds took place on Haida Gwaii (then called the Queen Charlotte Islands by the Government) and required the participation of the local Haida population, while the Douglas fir seed collection relied on settlers:

> The cones are collected by Indian families under the direction of the [Indian] agent. Hitherto owing to the great difficulty in penetrating into the trailless forest and the impossibility of climbing the trees, the collectors confined themselves to collecting along the shore line. Small trees were felled to get at the cones, while larger trees had slots nailed transversely to the stem, ladder wise, for the purpose of climbing. Many of those slotted trees were still visible…. The collecting [of the Douglas fir] is being done by settlers all of whom are or have at one time been closely associated with the forest service, and the work is being superintended by specially instructed members of the [Canadian} forest staff.[62]

[62] A. W. Borthwick., "Seed Supply from British Columbia," *JOURNAL OF THE FORESTRY COMMISSION* 3 (November 1924): 31–33.

The seeds were then transported to New Westminster for processing packing. The Forestry Commission was therefore entangled with extractive colonialism from its establishment. The trees that would quickly come to dominate the British landscape were planted from seeds extracted on an industrial scale using Indigenous labour.

An additional example of the Forestry Commission directly engaging in colonialism was the role that the Commission played in postwar Germany. Facing enormous shortages of the fuel and material required to rebuild in both Germany and in Britain after the war, the British government dispatched several Forestry Commission officers to organize the forestry effort in occupied Germany. While the publicly stated goal was to reorganize German foresters after defeat, Forestry Commission forester George Ryle reported that the true ambition of the Director of the Timber Supply Department was to "accelerate exploitation of the German forests that there should be enough for these essential domestic needs, as well as a really big surplus to ship back to Great Britain."[63] This required a "watchful eye" to ensure Germans or any refugees would not take for firewood timber requisitioned for British export, or some 1,829,000 metric tons of timber products.[64] Here we can see an obvious use of the Forestry Commission as a tool of empire, sent into occupied territory to manage resource extraction.

This colonial project and the efforts to reforest and recover from World War I were in many ways the last acts of the Forestry Commission's first generation. By the

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[63] Ryle, "Forest Service," 90
[64] Ryle, "Forest Service," 89-96

1960s the last foresters trained at Cooper's Hill had passed away, including Hanson and Robinson, the "guiding light" of the Forestry Commission.[65] They were replaced with foresters trained explicitly for work in Britain. The Forestry Commission opened a series of schools for this purpose: Parkend, in the Forest of Dean; one in the New Forest; Chopwell, in Co Durham; Beaufort, on Fraser's family lands; Benmore, near Edinburgh; Lynford Hall, in East Anglia; Faskally, in Scotland; a third short lived Scottish school in Glentress; and Gwydyr, in Wales.[66] While colonial foresters did attend these schools, graduates overwhelmingly went on to work in the Forestry Commission; in 1949, 112 graduates of the Forester Training Schools in Britain took up jobs with the Forestry Commission, in comparison to 6 foresters that joined the Colonial Office.[67] Nevertheless, this shift away from shared educational institutions meant fewer connections between imperial forestry services.

Despite this declining connection, or perhaps because of it, commission foresters made a clear and concerted effort to remain part of an empire-wide profession. Most clear is the tight bond between the Forestry Commission and imperial organizations such as the Empire Forestry Association:

> The Empire Forestry Association should prove a useful intermediary between all these agencies and should be instrumental in levelling up the knowledge and methods of conservation and afforestation in all the different centres of the Empire…. within one great voluntary organization such as the Empire Forestry Association, every society and department can pool its knowledge, make known its methods, and make use of the information and experiences of its fellow-members

[65] A. H. Popert, "Obituary," *JOURNAL OF THE FORESTRY COMMISSION* 31 (1962).
[66] Ryle, *Forest Service,* 312-4
[67] FORESTRY COMMISSION, "THIRTIETH ANNUAL REPORT OF THE FORESTRY COMMISSIONERS FOR THE YEAR ENDING SEPTEMBER 30TH 1949" (HIS MAJESTY'S STATIONERY OFFICE, November 13, 1950).

> without acknowledging any obligation. There are knotty points to be solved, and I say with conviction that a quickening of interest in forestry and a general advance in knowledge will be best secured through the co-operation of those who have an intimate experience of local policy and conditions in all British lands, and it is such persons who will form the membership of the E.F.A.[68]

This statement, made by the former Governor General of Australia in the inaugural meeting of the EFA, was chaired by Fraser, the Chairman of the Forestry Commission, and included representatives from the colonial governments of India, Tasmania, Australia, and Canada, as well as the Under-Secretary of State for the Colonies.[69] The statement underscores an important aspect that is ignored by many historians of British forestry: that British colonies *were* "British lands." It was only in 1931 that the Statute of Westminster re-codified the legal status of the Dominions as independent states within the Commonwealth, and it took much of the rest of the twentieth century for fully independent national identities to develop in places like Canada and Australia. The identity of the Forestry Commission followed, becoming increasingly separate from colonial forestry services, except through international organizations like the EFA and the United Nations.

In addition to the importance that the Forestry Commission placed on the EFA throughout the twentieth century, underscored by the prominent place of the EFA conferences in the Commission's annual reports, the EFA's journal published hundreds of articles about plantations, techniques, experiments, programs, and tools across the

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[68] Viscount Novar, as quoted in Commonwealth Forestry Association, "REPORT OF THE INAUGURAL MEETING OF THE EMPIRE FORESTRY ASSOCIATION," *Empire Forestry Journal* 1, no. 1 (1922)
[69] Commonwealth Forestry Association, "REPORT OF THE INAUGURAL MEETING OF THE EMPIRE FORESTRY ASSOCIATION"

empire. These articles constitute an ongoing imperial dialogue of foresters. Some demonstrated that the Forestry Commission saw itself as part of an empire

-wide network of timber suppliers, like a 1929 article on empire softwood supplies that tallied consumption and production within the empire's common market.[70] Most saliently, the journal provided a space to share information on conifer plantations, as well as afforestation and conservation efforts. In 1938, for example, a Canadian forester visiting Britain shared his advice on how the commission could improve conifer planting.[71] Foresters also shared their local difficulties, solutions, or advantages.[72] This extended to notes on growing conditions and experiments with species grown across the empire such as Douglas fir and Sitka spruce, as well as cultural notes on a shared imperial heritage.[73] The journal also reported on the empire-wide effort to train foresters.[74]

These journal articles served to inform, and in turn were informed by, several projects undertaken by the Forestry Commission that we can interpret as "internal colonialism." This concept has been assessed in the context of Britain by writers such as Michael Hechter, who frames an internal colonial model as one where

[70] Fraser Story, "Softwood Supplies of the British Empire," *Empire Forestry Journal* 8, no. 1 (1929): 28–36.
[71] F. D. Mulholland, "Random Notes on British Forestry by a Canadian," *Empire Forestry Journal* 17, no. 2 (1938): 211–13.
[72] James Kay, "LOGGING AND MILLING COSTS IN BRITISH COLUMBIA," *Empire Forestry Journal* 12, no. 1 (1933): 59–61.
[73] F. R. S. Balfour, "THE DOUGLAS FIR FLAGSTAFF AT KEW," *Empire Forestry Journal* 1, no. 1 (1922): 69–71; R. S. Perry, "Sitka Spruce," *Empire Forestry Journal* 20, no. 2 (1941): 171–73; W. L. Taylor, "DIRECT SOWING OF CONIFER SEED," *Empire Forestry Journal* 4, no. 1 (1925): 106–10; W. L. Taylor, "The Afforestable Lands of England and Wales," *Empire Forestry Journal* 6, no. 1 (1927): 58–69.
[74] Alexander Rodger, "Forestry in the Empire During the Last Hundred Years," *Empire Forestry Journal* 10, no. 2 (1931): 203–8.

> The spatially uneven wave of modernization over state territory creates relatively advanced and less advanced groups…. there is crystallization of the unequal distribution of resources and power between the two groups. The superordinate group, or core, seeks to stabilize and monopolize its advantages through policies aiming at the institutionalization of the existing stratification system…. Whereas the core is characterized by a diversified industrial structure, the pattern of development in the periphery is dependent, and complementary to that in the core. Peripheral industrialization, if it occurs at all, is highly specialized and geared for export. The peripheral economy is, therefore, relatively sensitive to price fluctuations in the international market. Decisions about investment, credit, and wages tend to be made in the core.[75]

The British state took a forestry approach developed for the maximal exploitation of colonies such as in India and applied it to their own homeland. This sought to maximize timber productivity through the creation of conifer plantations, both through direct purchase and planting, as well as engagement, incentivization, and education of private landowners. In the vein of Hechter's definition, the Forestry Commission attempted to insulate itself from democratic accountability. From the outset, the Forestry Commission was run by professional foresters and bureaucrats answerable to unelected civil servants rather than an elected official, and successfully fought to keep this near-complete independence until 1945, when forestry was made a responsibility of what is now the Department for Environment, Food, and Rural Affairs (DEFRA).[76] Today the forestry commission remains a non-ministerial department with significant autonomy, meaning that while there is a minister responsible for forestry, the head of the Forestry Commission remains a civil servant.

[75] Michael Hechter, *INTERNAL COLONIALISM : THE CELTIC FRINGE IN BRITISH NATIONAL DEVELOPMENT, 1536-1966* (BERKELEY, CALIF. (U. A.): UNIV. OF CALIFORNIA PR, 1975), 9-10
[76] Ryle, "Forest Service," 102-103

In this undemocratic vein, the Forestry Commission served to colonize Britain: pushing aside traditional land uses, imposing new uses, and initiating settlement projects in forestry plantations, in a pattern that seems remarkably similar to settler colonialism. To repopulate the countryside and ensure a supply of experienced woodsmen who grew up around the profession and practice, the Forestry Commission established hamlets and villages across Britain. For only £15 yearly (around £430 in 2023 values) foresters could live in a Forestry Commission house and harvest from its own connected woodland. The commission often gave renters the option of renting additional pasture or forestry land at a loss to the Commission, to encourage renters to stay. While this policy in part started as an effort to provide good housing for Commission staff through the refurbishment of extant housing on purchased land, the commission expanded the program to the creation of smallholdings for the unemployed in the 1930s. After World War II, the Forestry Commission shifted to prioritizing forest villages, sometimes with schools, community centres, libraries, and recreational businesses.[77] By 1939 the Commission owned more than 2200 homes, or enough to house around a sixth of their workforce.[78] 1952 marked record number of homes constructed, 427, up from 324 a year prior.[79] By 1965 the Forestry Commission owned some 3299 smallholdings and 1076 forester's cottages. New construction continued after 1965 for another decade but the rates of sale and demolition of existing houses exceeded

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[77] Ryle, "Forest Service"

[78] Forestry Commission, "THIRTIETH ANNUAL REPORT."

[79] Forestry Commission, "THIRTY-THIRD ANNUAL REPORT OF THE FORESTRY COMMISSIONERS FOR THE YEAR ENDING SEPTEMBER 30TH 1952" (HIS MAJESTY'S STATIONERY OFFICE, April 14, 1953).

that of new construction. While this program of settlement does not meet many of the definitions of settler colonialism, it is clear that the Forestry Commission's remaking of the British landscape involved (re)settlement.[80] The commission's mission of afforestation was intertwined with a wider forested vision of rural British society.

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[80] Lorenzo Veracini, *Settler Colonialism: A Theoretical Overview* (Houndmills, Basingstoke ; New York: Palgrave Macmillan, 2010).

Part 4: Colonial Historians

I have sought to draw a story of contemporary British forestry as deeply intertwined with colonialism. Historians have broadly failed to critically assess the Forestry Commission as a colonial or colonial-adjacent actor, although some have recognized that the Forestry Commission has colonial origins. One of the clearest examples of this is Gregory Barton's *Empire Forestry and the Origins of Environmentalism*. The book discusses the history of Empire forestry and the

> international trail of environmentalism from India, under Lord Dalhousie's Forest Charter, to the British colonies in Africa and Australasia where it matured and, finally, to Canada, the United States, and other parts of the globe where environmentalism permanently entered the pantheon of political creeds.[81]

Barton even begins with a history of British history in the 1600s and 1700s, and the influence of British schools on empire forestry, but only mentions the Forestry Commission twice, once as sponsoring the first Empire Forestry Conference, and once as funding the Commonwealth Forestry Institute, despite going into detail as to the individual characteristics of Empire forestry in India, Canada, Australia, and the United States (who he argues should be considered under the aegis of imperial forestry).[82] He also incorrectly asserts that the Forestry Commission didn't come into existence until after World War II, and that the first school of forestry was the Cooper's Hill school rather than the school at Dehra Dun.[83] In Barton's narrative, the Forestry Commission

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[81] Barton, *Empire Forestry and the Origins of Environmentalism*, 1
[82] Barton, *Empire Forestry and the Origins of Environmentalism*, 160-165
[83] Barton, *Empire Forestry and the Origins of Environmentalism*, 71, 94

serves to shape and sponsor colonial forestry, rather than act as part of an Empire forestry that includes Britain. His factual errors regarding Cooper's Hill perhaps belie Barton's inclination to avoid questioning the dominant historical narrative of colonies dominated and controlled by the colonizing country, with little effect on the homeland.

Barton is far from the only scholar who fails to assess the Forestry Commission as a colonial institution. Victor Bonham-Carter frames the foundation of the Forestry Commission as a response to over-reliance on imports without mentioning colonial forestry. He discusses the foundation of the Cooper's Hill school and William Schlich's role there and at Oxford without mentioning either program's role in colonial forestry.[84] Roger Miles shares this perspective, but at least mentions Schlich's position in India, although he does not mention the purpose of Cooper's Hill, merely that it was a "school of forestry."[85] Instead of British forestry being based on nearly a century of British colonial experience, it was "an industry which was started with borrowed experience, mostly German."[86] Neither author discusses ongoing ties to the empire, similar to Jan Oosthoek, who discusses the origins of the Forestry Commission as colonial, but does not assess any ongoing connection.[87] Rather than investigating the origins of plantation forestry in Britain, Rackham instead prefers to focus on what he considers the destruction of the landscape wrought by the Forestry Commission.[88] Brian Clapp and

[84] Bonham-Carter, *The Survival of the English Countryside*, 60, 178-81.
[85] Miles, *Forestry in the English Landscape* 50.
[86] Miles, *Forestry in the English Landscape,* 61
[87] Oosthoek, "The Colonial Origins of Scientific Forestry in Britain,"; Jan-Willem Oosthoek, "The Logic of British Forest Policy, 1919-1970.
[88] Rackham, *The History of the Countryside*; Oliver Rackham, *Woodlands* (London, UK: HarperCollins, 2006).

Ian Simmons both fail to mention the origins of the Forestry Commission or empire forestry at all.[89] Together, these sources amount to a significant share of environmental history writing on British forests.

A few historians do (at least narrowly) address the Forestry Commission's colonial origins. Judith Tsouvalis addresses the training and experience of many founding members of the Commission in Germany and India, as well as the nature of British forestry as colonial, but does not discuss a wider empire forestry. She also incorrectly reports Schlich's positions towards extant British forestry, and fails to accurately cite several citations that are central to her argument.[90] Perhaps the most complete assessment of the colonial nature of the Forestry Commission comes from Noel James, who examines the origins of British forestry in India and Germany, as well as the Forestry Commission's part in forming organizations such as the Empire Forestry Association and the Imperial Forestry Institute. James's discussion, however, does not include an assessment of what this colonial origin means for English forestry.[91] Few other scholars discuss the Forestry Commission's involvement in colonial and imperial projects in any detail.

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[89] Clapp, *An Environmental History of Britain since the Industrial Revolution*; Simmons, *An Environmental History of Great Britain.*

[90] Judith Tsouvalis, *A Critical Geography of Britain's State Forests*, Oxford Geographical and Environmental Studies (Oxford: Oxford University Press, 2000).

[91] Noel David Glaves James, *A History of English Forestry* (Oxford, England: B. Blackwell, 1990).

Conclusion

Assessing the full implications of the imperial and colonial origins of the British Forestry Commission is beyond the scope of this thesis. I have instead established that British forests were interconnected with colonial ventures going back to the 1600s. The transition to a modernist scientific forestry regime was also deeply intertwined with colonialism, particularly in India. In turn, the Forestry Commission was a full and important participant in British imperialism and colonialism, not least through Empire forestry, well into the twentieth century. The modern (post 1600) history of British forestry and the British landscape is therefore interwoven with colonialism and imperialism, as much as any overseas colonized landscape. As Alexander Barder argues, colonies are used by the metropole (colonizing country) to experiment with models of governance and tools of control.[92] While Barder focusses his argument on political, military, and social experimentation, we should extend this theory to ecological governance. The Forestry Commission was in many ways the result of colonial experiments in state control of forests, particularly in India. Curiously, this has been dramatically understudied. The Forestry Commission has never come under the same kind of scrutiny that has been directed towards organizations in the BC forestry industry, for example.[93]

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[92] Alexander D. Barder, *Empire within: International Hierarchy and Its Imperial Laboratories of Governance*, Interventions (Abingdon: Routledge, 2015).

[93] Richard Allen Rajala, *Clearcutting the Pacific Rainforest: Production, Science, and Regulation* (Vancouver, BC: UBC Press, 1998); Donald K. Alper and Debra J. Salazar, eds., *Sustaining the Forests of the Pacific Coast: Forging Truces in the War in the Woods* (Vancouver: UBC Press, 2000); Jeremy Wilson, *Talk and Log: Wilderness Politics in British Columbia, 1965-96* (Vancouver: UBC Press, 1998).

Why? Perhaps the cause is the common narrative that colonialism is a story of a one-way influence, where a colonizing country dominates colonies for material benefit. This narrative is persistent, perhaps dominant, despite decades of attack from decolonial scholars and activists.[94] Perhaps then, the failure to examine the Forestry Commission's colonial history is because the narrative that I have laid out is one that fundamentally challenges the British disconnect from empire, a story on a scale that encompasses the entirety of Britain. This fits with Richard Drayton's argument that "British Imperialism, over the long term…, [is] a campaign to extend an ecological regime: a way of living in Nature," as well as Salmon Rushdie's argument that

> in Germany, after the fall of Hitler, heroic attempts were made by the people to purify German thought and the German language of the pollution of Nazism…. But British thought, British society, has never been cleansed of the filth of imperialism.[95]

Synthesizing Drayton and Rushdie, one could say that the Forestry Commission is part of a campaign to extend the Empire's ecological regime to Britain, a campaign that has not been fully assessed or understood, a campaign that remains part of British society. The empire shaped and continues to shape the British landscape—it is up to Britain what happens next.

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[94] Kojo Koram, *Uncommon Wealth: Britain and the Aftermath of Empire* (London: John Murray, 2022), 10

[95] Richard Harry Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (New Haven: Yale University Press, 2000), 229; Salman Rushdie, "The New Empire Within Britain." in *Imaginary Homelands: Essays and Criticism 1981-1991* (London: Granta books, 1991), 129-138.

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Appendix: Photos of Forestry Plantations, photographs by author

Photo 1: Sheep and Sitka spruce plantations over Galashiels in the Scottish Borders. (February 2023)

Photo 2: A traditional stone wall separates a forestry plantation from a sheep pasture, south of Galashiels in the Scottish Borders. (February 2023)

Photo 3: An oak plantation in the Forest of Dean (December 2022)

Photo 4: View from a high point in the Forest of Dean, showing a landscape of conifer plantations (December 2022)

Photo 5: An abandoned coppice in the Forest of Dean (December 2022)