

The Impact of the First World War on the Woods and Forests of Scotland



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Contents

- p. 2 – The Situation at the Outbreak of War
- p. 4 – Crisis & Response: Help from Canada
- p. 6 – Opportunities for Women
- p. 7 – Foresters at the Front
- p. 8 – Impact on Scotland's Forests
- p. 10 – The War's Legacy
- p. 13 - Bibliography

Mission Statement

This paper aims to explore the important changes that occurred to forestry and woodlands in Scotland during the First World War and how these were achieved. It will consider the general situation of forest management and the state's role before 1914, the demands that the war made upon timber supplies and Scotland's woodlands and people, as well as some of the consequences for how forestry was managed in the years immediately following the war in Scotland.

The Situation at the Outbreak of War

With the outbreak of war in August 1914, the United Kingdom faced a potential crisis in timber supplies. Dependent on foreign imports for approximately 95% of all her timber, the U-boat campaign on commerce that began in early 1915 strangled this supply from Russia, the Baltic and North America.¹ With no more than 10% of the timber used in Britain sourced domestically in peace time, a wartime strategy for ensuring supplies reached those reliant industries – most significantly pit props used in the construction of coal mines, which in turn powered heavy industry – would be vital if the conflict was not over by Christmas 1914.

The first year and a half of the war largely represented a continuation of policy and practice from the previous decade. Import stocks were still high, and a lack of forestry experience and skills amongst the general population, combined with the *ad hoc* nature of the war and its planning, led to a general complacency on the issue of sourcing timber. With the war's entrenchment and the German Navy targeting commercial shipping, however, the government gradually came to realise a plan of action at home would be necessary to stave off an escalating crisis. As David Lloyd George himself remarked, Britain came closer to losing the war through lack of timber than want of food.²

¹ Affleck Gray, *Timber!*, p.1 (East Linton, 1998). Estimates vary; contemporary accounts such as Stebbing and Bird & Davies, put Britain's domestic supply nearer 8-9%.

² David Foot, "The Twentieth Century: Forestry Takes Off", p.160 in *People and Woods in Scotland: A History* (Edinburgh, 2003)

Redress was begun in December 1915, when the Home Timber Committee was created under the Directorship of John D. Sutherland, who had previously headed up the Forestry Department of the Board of Agriculture for Scotland.³ To some observers, it was a belated response to a problem they had been speaking of for years. Two Scots landowners who would independently chair the Forestry Commission in its early years – Simon Fraser, 14th Lord Lovat, and Sir John Stirling Maxwell – had been pressing the need for a national forestry body for years before the war. In 1914 Lovat commented, “(We) have seen, since the foundation of the Society (Royal Scottish Arboricultural Society) sixty years of private endeavour and sixty years of organised inactivity on the part of the state”.⁴

It is peculiar today, perhaps, to consider two individual, extensive property owners pushing for public intervention in land management, but they were certainly not unique in their thinking amongst the gentry. Sir Francis Acland, whose committee in 1916 formally established the grounds for the Forestry Commission, was likewise a substantial landowner, in Devon and Somerset.⁵ Across Britain, and especially in Scotland, there was growing opinion amongst interested parties that land that could have been used for forestry was going to less worthy uses for want of concerted organisation.

Many academics were also concerned, such as the Head of Edinburgh University’s Forestry Department, Professor E. P. Stebbing. Likewise more radical thinkers, such as future President of the Royal Scottish Forestry Society, John McEwen, and future Scottish Secretary, and later Chairman of the National Committee of the Forestry Commission in Scotland, Tom Johnston, similarly harboured plans for a state role in planning and directing forestry in the UK, though to their mind it would be a program of nationalisation regardless of the interests of the landowners.⁶ Though collectively they made for strange bedfellows, the circumstances of the war did much to advance the case for a state body to oversee forestry, regardless of political viewpoint. As the Earl of

³ Transactions of the Royal Scottish Arboricultural Society, Vol. 29, p.118 (Edinburgh, 1915)

⁴ T.C. Smout, Alan R. MacDonald & Fiona Watson, *A History of the Native Woods of Scotland, 1500-1920*, p. 279 (Edinburgh, 2005)

⁵ David Foot, *Woods and People: Putting Forests On the Map*, p.40 (Stroud, 2010)

⁶ Thomas Johnston, *Our Scots Noble Families*, “A General Indictment” (Glasgow 1909; republished Argyll 1999)

Selborne commented in the House of Lords in August 1918, “The whole problem of re-forestation depends on the decision of the Cabinet.”⁷

Ironically, it was to Germany, as well as France, that many looked for guidance on how and why the state should take a greater role in forest management. Many Scots forest managers in the Victorian and Edwardian eras had received training in Germany, where formal higher education and the notion of “scientific forestry” had a longer pedigree than in Britain.⁸ Indeed, the man credited as the “father of Indian forestry” during British colonial rule in the subcontinent was a German, Dietrich Brandis.⁹ A visit by the Royal English Arboricultural Society (today the Royal Forestry Society) to Saxony in 1913 left them highly impressed at the state forest management, though the author suggested that transplanting these state practices to *laissez-faire* Britain would not be straightforward, “Such things as, for example, a 300 years’ (crop) rotation is out of the question.”¹⁰ This arguably points to a difference between the English and Scottish societies as much as anything though, with the latter body more widely sympathetic to the idea of the state playing a role in land improvement where reasonably possible.¹¹ All the same, there was little evidence in 1914 of any concern within the Cabinet to radically change the *laissez-faire* policy on timber imports that had seen Britain become a net importer to such an overwhelming extent, to the exclusion of significantly expanding Britain’s own forest resources.

Crisis & Response: Help from Canada

The finer points of such policy debates were of secondary concern for most of the war’s duration. With imports increasingly at risk and unable to meet demand, timber stocks running low, and with the relative lack of experience and equipment at home, Britain faced a potential crisis if action was not taken. It was in such circumstances that the Colonial Secretary, Andrew Bonar Law, telegraphed the Governor-General of Canada in

⁷ *Hansard’s Parliamentary Debates*, Vol. 31 cc678-80, House of Lords Debate, 8th August 1918

⁸ See *Transactions of The Royal Scottish Arboricultural Society* (Edinburgh), where a regular feature entitled ‘Continental Notes’ kept readers abreast of developments in Europe

⁹ Jan Oosthoek, *The Colonial Origins of Scientific Forestry in Britain*, http://www.eh-resources.org/colonial_forestry.html

¹⁰ *Transactions of The Royal Scottish Arboricultural Society* Vol. 28, p.104 (Edinburgh, 1914)

¹¹ Foot, *Woods and People*, p.42

February 1916 explaining that, "Owing to the very serious shortage of freight for munitions, food, forage and other essentials, which is a matter of the gravest concern to H.M. Government, it is impossible to continue to import Canadian timber on a sufficiently large scale to meet War requirements... (Request) that a Battalion of Lumbermen might be formed of specially enlisted men to undertake exploitation of forests of this country."¹²

The response was swift; approximately 10,000 lumbermen arrived to work in Britain during the course of the war, with approximately one-third of them based permanently in Scotland. The first Canadians were logging by June 1916 in Dalbeattie and Kirkconnel in Dumfriesshire, and advanced quickly throughout the country. They would serve throughout the country, establishing headquarters at Stirling, and intermittently at Edinburgh, Inverness and Nairn.¹³ Overcoming adverse terrain and relatively rudimentary infrastructure, especially in remoter parts of Speyside and the Highlands, they often had to erect their own sawmills, light railways and, in the case of a Newfoundland Forestry Corps unit (the N.F.C., made up of 500 volunteers, arrived 1917 and were organised separately from the Canadians) at Craigvinean Forest on the Atholl Estate near Dunkeld, a 3,200 foot log chute that was a revelation to the locals.¹⁴

The Canadians were not ones to shy from their labour and brought the ingenuity that working in their homeland required to Scotland. So called "steam donkeys", engines that combined with winches to drag felled timber onto waiting train carts, were used where possible in place of the traditional method of horses.¹⁵ There is even an unverified account of one unit clearing an entire plot in Ayrshire to build their cabins, only to be told that they had felled the entire crop intended to help the war effort! Operations were ultimately directed by Major-General Alexander McDougall, a civil engineer by background who had worked on the great Transcontinental Railway's construction in his native Canada, amongst other projects, before taking up this post.¹⁶

On the whole, the Canadians appear to have had a warm reception during their stay, many of them finding wives amongst the locals, and a dinner hosted in their honour by

¹² C. W. Bird & Lieutenant J. B. Davies, *The Canadian Forestry Corps: Its Inception, Development and Achievements*, p.5 (London, 1919)

¹³ *Ibid.*, p.22

¹⁴ Helen Jackson, *Neil Gow's Inver*, p.85 (St. Andrews, 2000)

¹⁵ Bird & Davies, *The C.F.C.*, p.7

¹⁶ *Ibid.*, p.15

John Stirling Maxwell, a month prior to their completion of duty, at the Royal Hotel in Inverness on 15th May, 1919 is reported as being held in good spirits and humour.¹⁷ Their stay wasn't entirely without incident, though. Joseph Edward Boyce, a lumberman soldier in the 107th Company of the Corps was accused of, "Theft by housebreaking with intent, malicious mischief, breaking open lockfast places and assault with intent to murder at Drumdelnies House, near Nairn," in 1918.¹⁸ What this amounted to, in effect, was a drunken breaking-and-entering incident at the local manor, whereupon Boyce shot wildly at the arresting policeman. Fortunately for both parties he missed, but was jailed nonetheless for his misdemeanours. Whilst there is no mention of this particular case in the Corps' official history, it is admitted there were some minor offences committed by the men, as initially "there was very little in the way of amusement."¹⁹ Besides the Canadians, Finns, Portuguese, and even some German Prisoners of War also found themselves working in Scotland's woods. The Finns in particular, most of them rescued sailors from torpedoed shipping vessels, were noted for their aptitude for the work.²⁰

Opportunities for Women

In addition to foreign labour, the second half of the war also provided opportunities for women to become practically involved in forestry in an unprecedented manner. This wasn't without reaction – the Treasurer's Remembrancer replied curtly to a Board of Agriculture request for an additional £2,000 to employ women in forestry work by stating he thought there was "... no likelihood of the Board spending the £10,000 on putting women into knickerbockers to work on farms."²¹ But employ them they did. The Women's Forestry Service was set up under the Board of Trade, and worked closely with the Women's Land Army. Across Britain, though based mainly in the south of

¹⁷ Ibid., p.24; and James Miller, *The Foresters*, p.42 (Edinburgh, 2009)

¹⁸ National Records of Scotland, Ref. AD 15/18/67

¹⁹ Bird & Davies, p.24

²⁰ Ibid.

²¹ National Records of Scotland Ref. E 824/243

England, there were nearly 2,000 women working in forestry at the war's end, around 350 as measurers and forewomen, and 1,500 as loggers.²²

Whilst the funding for this enterprise came from central government, it was the private estates that hired women to fill the labour shortage and help supply timber. Eleven such "ladyworkers" arrived at the Blair Atholl Estate in March 1917, and a further eleven "ladystudents" a month later, where the former tended to felling, clearing and planting duties alongside men and boys, and the latter to the newly founded garden nursery at Inver. Lord Tullibardine, heir to the Duke of Atholl, noted in a letter to his brother that "when they are not squabbling, (they) work well."²³ Sadly, three of these young women of the "Girls' Forestry Corps" drowned in the Tay near Dunkeld in July 1918, having gone swimming at a notoriously dangerous spot unbeknown to them.

Interestingly, estate records show that the gap in average pay between the men and women working in forestry was not as great as might be expected for the time and, on the whole, it closed as the war progressed.²⁴ Without specific details of individual pay and tasks, however, it's difficult to draw too many conclusions from this. Even so, it remains that forestry, like the more renowned industrial job sectors of the war, such as munitions production, provided novel employment opportunities for women.

Foresters at the Front

For men working in forestry in 1914, the call to arms was heeded much as it was by those of any other profession. For Lord Lovat, who had raised the Lovat Scouts during the Second Boer War and who became chairman of the Inverness Territorial Force Association in 1908, it was unlikely he would abstain from active service. He served first in the Dardanelles with the Highland Mounted Brigade before being invalided back to Britain in 1915. He resumed both an active role and his passion for forestry in 1917 with his appointment as Director of Forestry on the Western Front, directing loggers from various Allied nations in the Jura in Eastern France for timber supply to the

²² *Land and Water Magazine: Women in the War Edition*, April 1919, <http://www.scarletfinders.co.uk/160.html>

²³ Jane Anderson (ed.), *Chronicles of the Atholl and Tullibardine Families*, Vol. 6, 1907-57, p.110 (Aberdeen, 1991)

²⁴ Blair Atholl Estate Archives, *Atholl Woods General Monthly Reports*, (1917-1918)

frontline, for which he received the *Ordre du Mérite Agricole* and the *Légion d'honneur*.²⁵ He likewise remained in contact with Lord Acland and his Committee's progress during the later stage of the war.

John Campbell, employed as a woodsman on the Blair Atholl estate prior to the war, volunteered and served as a Sapper in the Royal Engineers of the Black Watch and was awarded a Distinguished Conduct Medal in 1916.²⁶ He returned to Blair on furlough in February of that year to a hero's welcome; shortly thereafter his brother Duncan, likewise employed on the estate woods, signed up for duty. But whilst John would survive the war, his brother would not be so lucky. It is likely he volunteered before conscription was enforced in May 1916, as those working in forestry were exempted from the frontline, being in a reserved occupation.

The Impact on Scotland's Forests

The timber from Atholl Estate wound up being sold to a number of firms. By far the greatest buyer was a Robert Frazer & Sons of Newcastle, an iron and steel merchants as well as "wagon builders and repairers, oil and grease manufacturers and merchants, colliery stores merchants, railway and colliery plant, bolts, nuts, rivets and spikes producer."²⁷ From the moment imports were struck by the German naval blockade in 1915, Frazer & Sons, as well as a number of heavy industries in Glasgow and elsewhere, began demanding unprecedented quantities of timber that would persist into 1919.²⁸

Of the Atholl woods themselves and the landscape in which they stood, the war brought about significant change to certain areas. As per most of the rest of the country the first eighteen months saw little development, but by the second half of 1916 felling, timber prices, revenue and employment had all increased remarkably. In October of that year, a £26,000 contract (approximately £2.3m today)²⁹ was signed giving access to

²⁵ John Martin, "Simon Joseph Fraser", Oxford Dictionary of National Biography <http://www.oxforddnb.com/index/33/101033254/>

²⁶ Perthshire Advertiser, 2nd February, 1916, A K Bell Library Archives, Perth

²⁷ *Grace's Guide to British Industrial History*, http://www.gracesguide.co.uk/Robert_Frazer_and_Sons

²⁸ Blair Atholl Estate Archives, *Atholl Woods General Monthly Reports*, (1915-1919)

²⁹ Conversion made using historic inflation calculator at <http://www.thisismoney.co.uk/money/bills/article-1633409/Historic-inflation-calculator-value-money-changed-1900.html> and <http://safalra.com/other/historical-uk-inflation-price-conversion/>

Edinburgh-based timber merchants Calder Dixon & Co. to stands of Scots Pine, Larch and Spruce from around the Cally Loch near Dunkeld, amongst other sites.³⁰ Lord Tullibardine suggested in a letter dated April 1918 that this was “absolutely necessary, as it was all rotting.”³¹ James Calder, chairman of the company, was himself Controller at the Timber Supply Department of the Board of Trade from 1917 to 1919, so one can probably assume he was wise to the nature of the deal.³² Baluan Wood near Bruar, today a larch plantation, was reported as having been almost entirely felled by April 1918, though care had been taken to plant up the “Middle District”, that is, the area around Blair Atholl, as a future asset.³³

In early 1918, £34,000 (approx. £2m today) worth of timber felled in Craigvinean was sold to the government.³⁴ One of the oldest and largest managed forests in Scotland, it was established by the Dukes of Atholl between 1738 and 1830 with the intention of providing timber for the Royal Navy, and is today part of the National Forest Estate, managed by Forestry Commission Scotland. This would later be followed by the sale of the land, the deal only concluded in 1937.³⁵ It was not the first occasion that the estate and government had sought to work together in forestry. In 1913 Lord Tullibardine had proposed an arrangement whereby the Board of Agriculture’s Forestry Department would plant a variety of species at Ballogie, near Loch Ordie, as their educational plot. In return for having got the land for nothing, ownership of the trees would revert to the estate after thirty-five years or so, i.e. whenever they ceased to be of educational value.³⁶ This shrewd proposal, that would have furnished the estate with a valuable range of timber at little to no personal cost, was weighed up by the Board. Many influential figures, including Lovat and Stirling Maxwell, were supportive of the idea, though concerns were raised that its commercial appeal would be detrimental to its educational purpose. Ultimately the onset of war put a brake on the plan’s development

³⁰ *Abstract of Agreement and Conditions of Sale of Wood Lots at Craig-y-Barns between His Grace The Duke of Atholl and Messrs Calder Dixon & Co.*, October 1916, Blair Atholl Estate Archives

³¹ Jane Anderson (ed.), *Chronicles of the Atholl and Tullibardine Families*, Vol. 6, 1907-57, p.110 (Aberdeen, 1991)

³² Calders & Grandidge Company History, <http://www.caldersandgrandidge.com/about-us/our-history>

³³ Jane Anderson (ed.), *Chronicles of the Atholl and Tullibardine Families*, Vol. 6, 1907-57, p.110 (Aberdeen, 1991)

³⁴ *Ibid.*

³⁵ Helen Jackson, *Neil Gow’s Inver*, p.86 (St. Andrews, 2000)

³⁶ *Ibid.*, p.66

but as the sale of Craigvinean's timber demonstrates, it certainly did not bring an end to cooperation between government and landowners.

Looking across Scotland, it is notable that Speyside was a particularly concentrated area of felling activity, unsurprising given that it was historically one of the most widely and densely afforested areas of the country. Plantations on the Darnaway and Moray Estates were worked on extensively by the CFC for approximately two years whilst large areas of remnant native Caledonian pine in the Abernethy, Glenmore and Rothiemurchus Forests between Nethy Bridge and Aviemore were cleared from October 1917 until the end of the war, producing over 56,000 m³ timber.³⁷

Several other estates of varying sizes also furnished the war effort with timber. The Canadians logged extensively around the country, notably at Drummond Hill, Logiealmond, and Taymount in Perthshire, Braemore in Ross, Dornoch in Sutherland, Drumtochty and Kemnay in Aberdeenshire, Tulliallan in Fife, Mauchline and Kilkerran in Ayrshire, Kirkconnel and Castle Douglas in Dumfriesshire, and Birkenhead in the Borders. Ultimately, just less than 47% of the Canadian Forestry Corps' total timber production in Britain was sourced in Scotland.³⁸ Given that Scotland was one of the least afforested areas of Europe at this time, at somewhere around 5% of land area under woodland, this felling was to have a dramatic impact upon the forest landscape and resources.³⁹ The Forestry Commission census of woodlands in 1924 showed Scotland to have around one million acres (405,000 hectares) of woodland at the end of the war, of which some 21% was classed as felled or devastated. As the likely area of productive woodland accounted for only a further 40%, it is probable that around one-third of the potential source of timber was felled over the course of the war – a vast impact.⁴⁰ John Stirling Maxwell went so far as to estimate that had the war continued another year or two, Scotland's woods would have been "largely swept away."⁴¹

³⁷ H. M. Steven & A. Carlisle, *The Native Pinewoods of Scotland*, p.117 (Bodmin, 1959); the figure and date are from Bird & Davies, p.33

³⁸ Bird & Davies, p.33, table of statistics. Of the near 398 million FBM of timber felled, 187 million was from estates in Scotland (this relates only to the CFC).

³⁹ Smout, MacDonald & Watson, *A History of the Native Woods of Scotland, 1500-1920*, p. 259

⁴⁰ Forestry Commission, *Report on Census of Woodlands and Census of Production of Home-grown Timber, 1924* (H.M. Stationary Office, 1928)

⁴¹ Mark Loudon Anderson, *A History of Scottish Forestry, Vol. 2: From the Industrial Revolution to Modern Times*, p.454 (London, 1967)

The War's Legacy

It was in such an environment that greater action on the part of the state was deemed essential. The largely fruitless campaigns for government to acquire and manage forestry holdings before 1914 had been given fresh impetus and a clear motive by the war. In Acland's words, never again could "the United Kingdom run the risk of future wars without safeguarding its supplies of timber as every other Power that counts has already done."⁴² With the Acland Committee of 1916, the various supporters of an independent state body to oversee forestry found a vehicle for their cause and a government at executive level that was willing to listen. Following the Russian Revolution in 1917, the supplier of at least 35% (and possibly as much as 50%) of Britain's timber in 1914 fell into disorder.⁴³ Allied to growing concerns over the depletion of forests across the Empire, notably in Canada, the need for domestic afforestation was as clear as it was varied.

The Committee was not afraid to think long-term, suggesting as a target the near-doubling of the UK's woodland area over the course of the twentieth century, from approximately 2m acres to 3.77m.⁴⁴ This target would later be revised upward, but nonetheless displays the early ambition and seriousness with which the project was handled. The independent state body created was to be the Forestry Commission, which officially came into being on September 1st, 1919, supplanting the Interim Forest Authority that had been provisionally created ten months earlier at the end of the war.⁴⁵ Of the eight Commissioners, all but one were private landowners – three of them in Scotland, with Lord Lovat the Chairman.⁴⁶ The Commission's northern office – the only outside London – was in Edinburgh.

The primary objective of both bodies was a rapid program of afforestation and the acquisition of land to do so. With the war having devastated timber stocks on many private estates, some landowners recognised the financial and practical difficulties of taking on such a long-term project as the planting and maintenance of woodlands and

⁴² David Foot, *Woods & People: Putting Forests on the Map*, p.41 (Stroud, 2010)

⁴³ E. P. Stebbing, *British Forestry: Its Present Position and Outlook After the War*, p.67 (London, 1916)

⁴⁴ George Ryle, *Forest Service: The First Forty-Five Years of the Forestry Commission of Great Britain*, p.28 (Newton Abbot, 1969)

⁴⁵ James Miller, *The Foresters*, p.46 (Edinburgh, 2009)

⁴⁶ Ibid. In addition to Lovat and Stirling Maxwell was Walter Scrymgeour-Steuart-Fotheringham, a Perthshire landowner.

decided to sell, or in some cases donate, land to the Commission. With the end of price controls for agriculture in 1921, as the Commission was beginning its task of planting in earnest, forestry became a significant employer in rural areas and a partial check on the migration of workers to cities.⁴⁷

Amongst the areas of land that would come under control of the Forestry Commission in Scotland during its early years were Monaughty Forest and the Culbin Sands in Moray, Inchnacardoch and South Laggan Forests in the Great Glen, and Benmore and Kilmun Estate, along with the adjoining Glenbranter, in Argyll, the last two former properties of Harry Younger, of the Edinburgh-based brewing dynasty, and Harry Lauder, the music-hall entertainer, respectively.⁴⁸ By 1924, the government owned 29 forests across Scotland, comprising 141,900 acres.⁴⁹

As in so many other areas, the First World War acted as a catalyst for considerable and radical change to forestry in Scotland. Events of diplomacy and warfare abroad, that seemingly had little to do with woodland management, subtly shaped a profound change in government policy toward forestry in Britain, changing Scotland's rural economy and landscape in a manner that continues to be seen to this day.

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⁴⁷ Foot, *Woods & People*, p.45

⁴⁸ *Ibid.*, p.49

⁴⁹ Anderson, *A History of Scottish Forestry*, Vol. 2, p.434

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<http://safalra.com/other/historical-uk-inflation-price-conversion/>

WW1 and Scotland's Forests



Purpose

- To tell the story of forestry in Scotland during WW1
- To illustrate the impact of WW1 on the forests of Scotland
- To show the importance of WW1 in understanding the forest resource in Scotland today and its place in the landscape

Content

- Forestry in Scotland pre-1914
- Situation at the outbreak of War until early 1916
- Crisis and response:
 - Help from Canada
 - The mobilisation of women
 - Impact on Scotland's small forest area
- Proposed action post-WW1
- The legacy

Forestry in Scotland pre-1914 (1)

- UK heavily dependent on **imports** from Russia, Baltic & N. America (~95%) in laissez-faire market
- ~5% of Scotland afforested – **lowest** in Europe
- **No dedicated state service** -Forestry included within Board of Agriculture. Small beginning at Inverliever in 1907
- **A few**, key private landowners actively pursue forest management & expansion:
 - Perthshire (Atholl/Breadalbane);
 - Grampian (Moray/Caledonian pinewoods);

Forestry in Scotland pre-1914(2)

- Vibrant small-scale local markets
(tools/farming/boat building/manufacturing)
- Royal Scottish Arboricultural Society (est. 1854) led academic and policy **debate** via Sir John Stirling Maxwell; Lord Lovat
- Chairs in Forestry at Edinburgh and Aberdeen, though primarily to educate colonial service





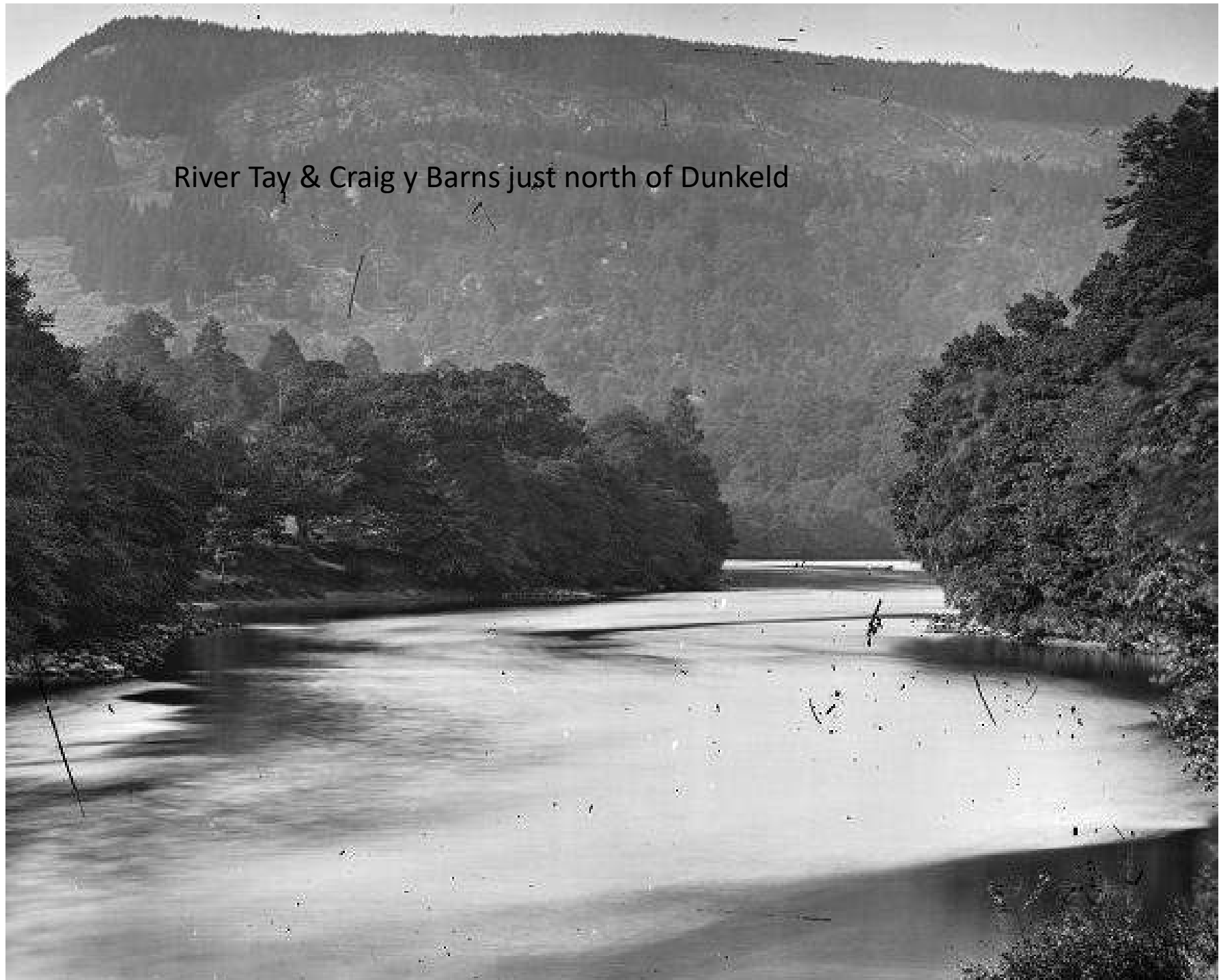
SCENE 4W. THE FOREST OF GLENTANAR.

295. F.G.



KENMORE FROM THE SOUTH. 1810. J. H. W.

River Tay & Craig y Barns just north of Dunkeld





F. M. MCINTOSH Felling larch on Atholl pre-WWI: note number of workers required BIRN

Men and horses, Donside – circa 1912





Nos. 1 & 2 :
Loggers

Nos. 3, 5 & 6:
sawyers. Note
No. 6 with peg-
tooth saw for
cutting timber
into log lengths
after felling

Nos. 4 & 7: Boys
learning the
trade, possibly
relations of other
men

No. 8: Machinery
maintenance and
repair man

Sawmill at Dufftown, 1917

Scotland 1912



Outbreak of War: August 1914 – Early 1916

- Timber vital for pit props in mining, railway construction, scaffolding, trenching, etc.
- U-boats vastly reduce timber supply by 1915
- Home Timber Committee est. Dec 1915 with growing recognition of potential timber crisis
- Lack of experience and expertise amongst general population – many rural workers volunteer for military service in first months of conflict
- Suitable felling sites scattered throughout Scotland on estates; piecemeal infrastructure

Forests of Scotland: Atholl Estate

- First 18 months of war, felling and management much the same as pre-1914
- Notable increase in production from mid-1916, as shortage approached and Home Timber Committee demanded increase
- Heavy industry from Newcastle and Glasgow predominated amongst buyers – supplied collieries and railway construction
- Craigvinean Forest heavily logged then later sold to govt for approx. £2m (£34,000)



Timber
was used
extensively
in coal
mining...



... and for building trenches

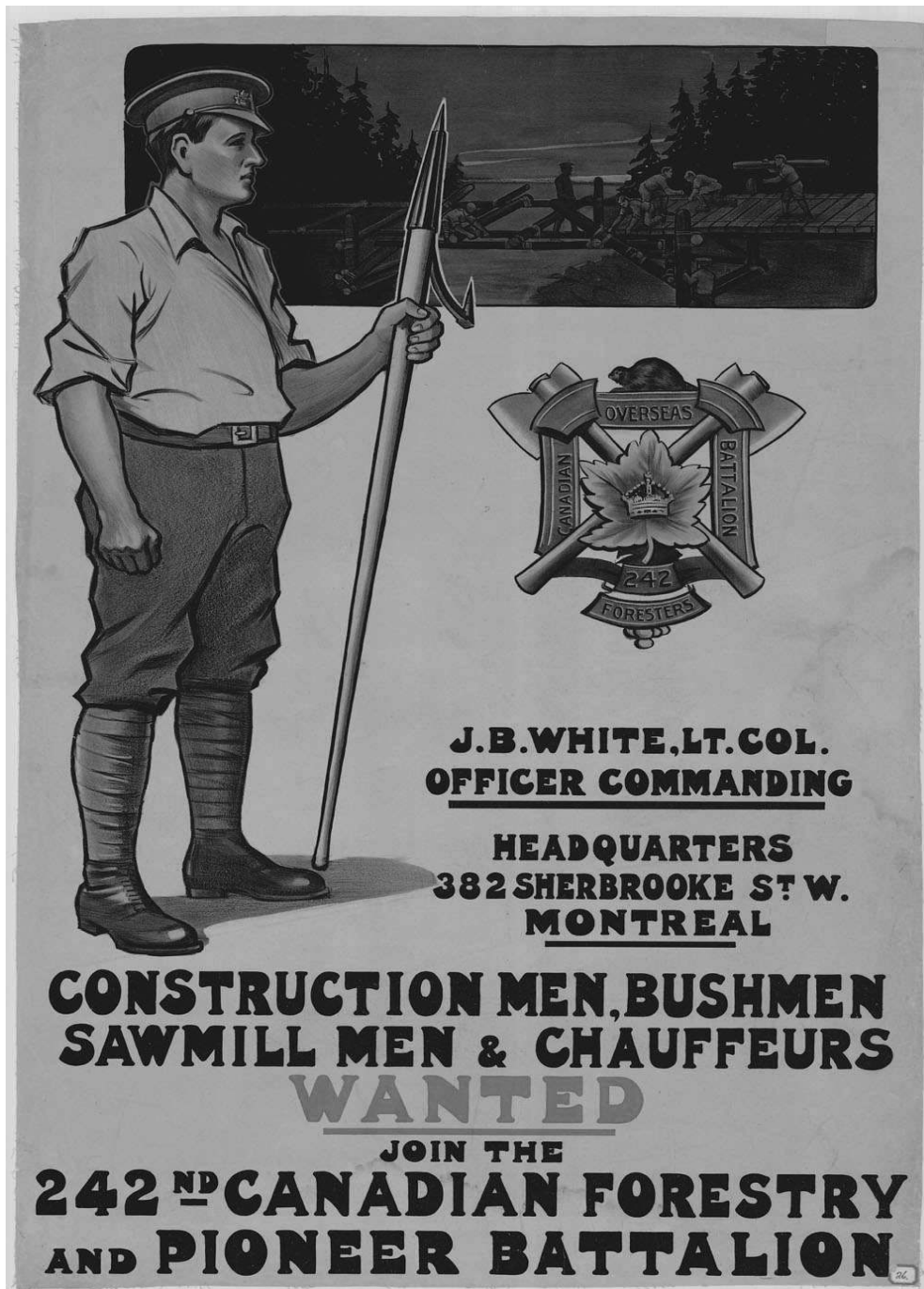
Later War: mid-1916 – 1918

- Acland Committee, July 1916, recognises insecurity of British timber supply
- Greater urgency placed on short-term sourcing of timber for immediate use, i.e. domestic supply
- Established basis for state body to oversee future forestry management & create timber reserve for further potential national emergencies in the form of the Forestry Commission

1916: Help from Canada

- Canadian Forestry Corps created in response to British request, Feb 1916
- 10,000 men in six units, two based in Scotland
- Brought new techniques of felling and clearing, e.g. log chute at Inver, donkey engine
- CFC serves across Scotland, notably in Speyside and Highlands, including felling remnant native pinewoods
- Finns, German PoWs and Portuguese also worked in felling at sites around Scotland

Canadian Forestry Corps recruiting poster, 1916





No. 1. MAJOR-GENERAL ALEXANDER McDOUGALL, C.B.
Director-General Timber Operations, Great Britain
and France.

Alexander McDougall, a Civil Engineer by education and vocation, was chiefly responsible for organising the CFC's operations. His previous projects had included railroad construction in his native Canada and dam-building in Mexico.



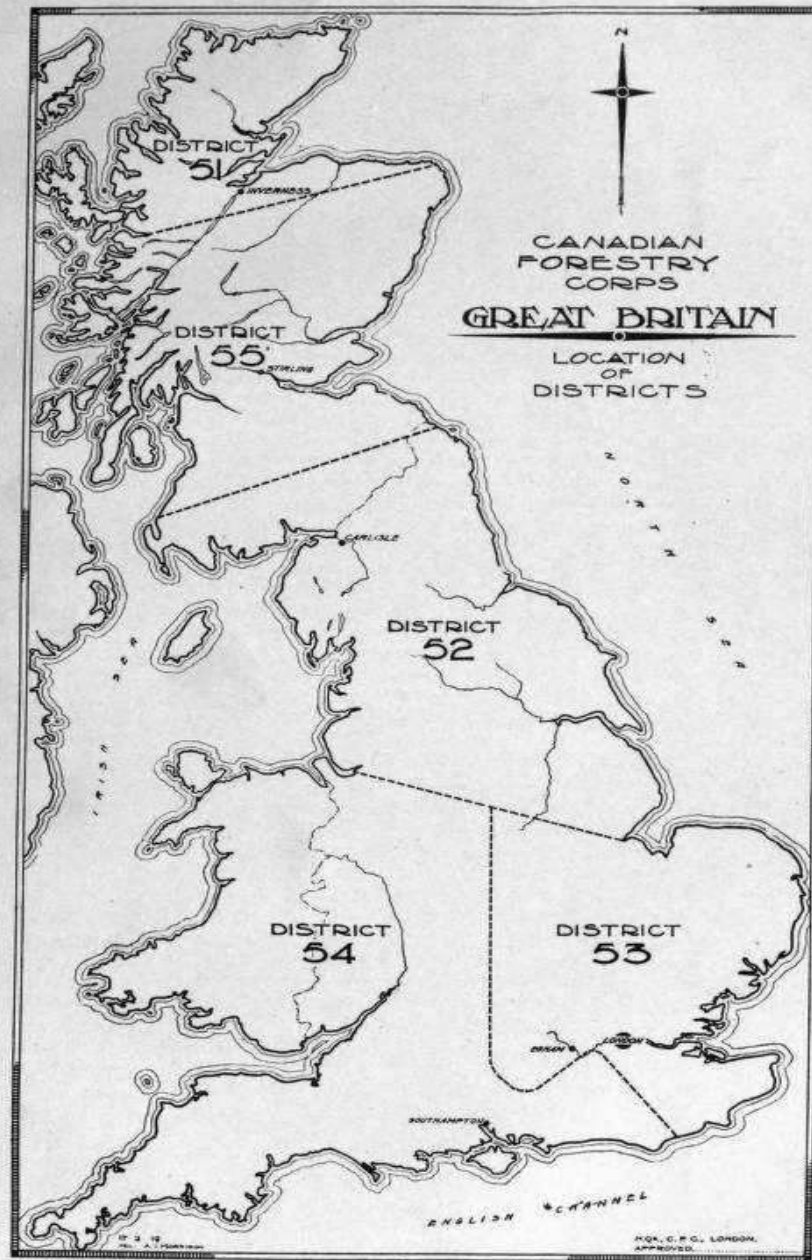
No. 15.

LIEUT.-COLONEL D. B. CAMPBELL, M.B.E.
Chief of Technical Staff.

David Campbell was born in Glasgow in 1880 before emigrating to Canada as a young man. He became a Mill Architect and Engineer in British Columbia, establishing his firm in Vancouver, before returning to Britain in 1916 as part of the CFC.

The CFC & Caledonian Pinewoods

- CFC logged on planted estates such as Darnaway (Moray), Dornoch (Sutherland) and Kemnay (Aberdeenshire), as well as in Lowlands at Tulliallan (Fife), Taymount (Perthshire) and Castle Douglas (Dumfries)
- Major activity logging native Caledonian pinewood remnants at Glenmore, Rothiemurchus & Abernethy from late 1916
- Around 56,000 m³ utilised from these forests from 1916 to 1919, though likely considerable wastage
- Introduced modern techniques including light railways, log chutes & new machinery to increase scale and efficiency of working



No. 20.

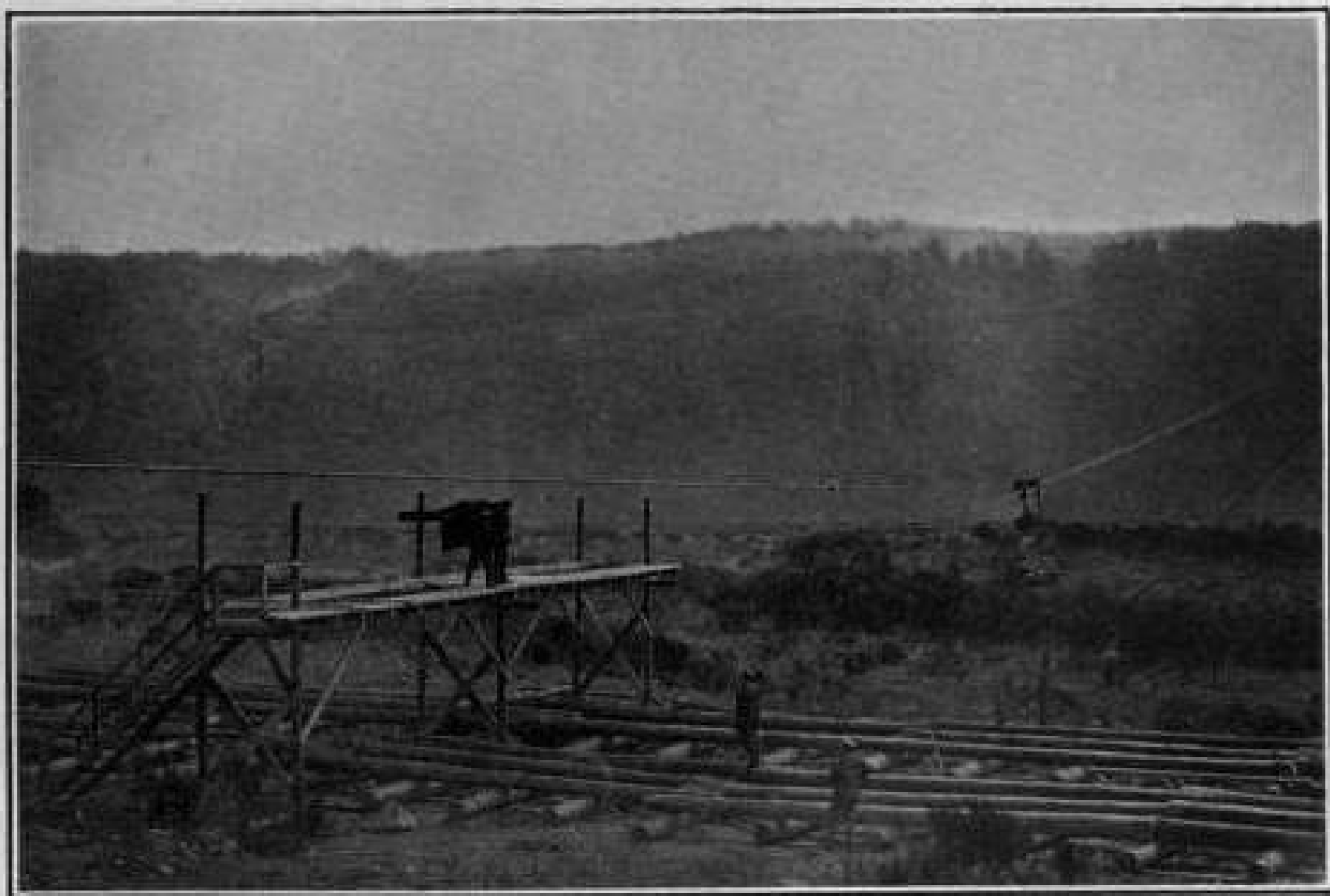
Map showing C.F.C. Operations in Britain.

District 55 HQ was based at Stirling; District 51 at Edinburgh, then Inverness, then later Nairn. District 52 also operated in Southern Scotland, with its HQ in Carlisle.



No. 4.

Felling in Scotland.



No. 5.

Carrying Logs by Ropeway across a River in Scotland.



No. 6.

Log Chute in Scotland.

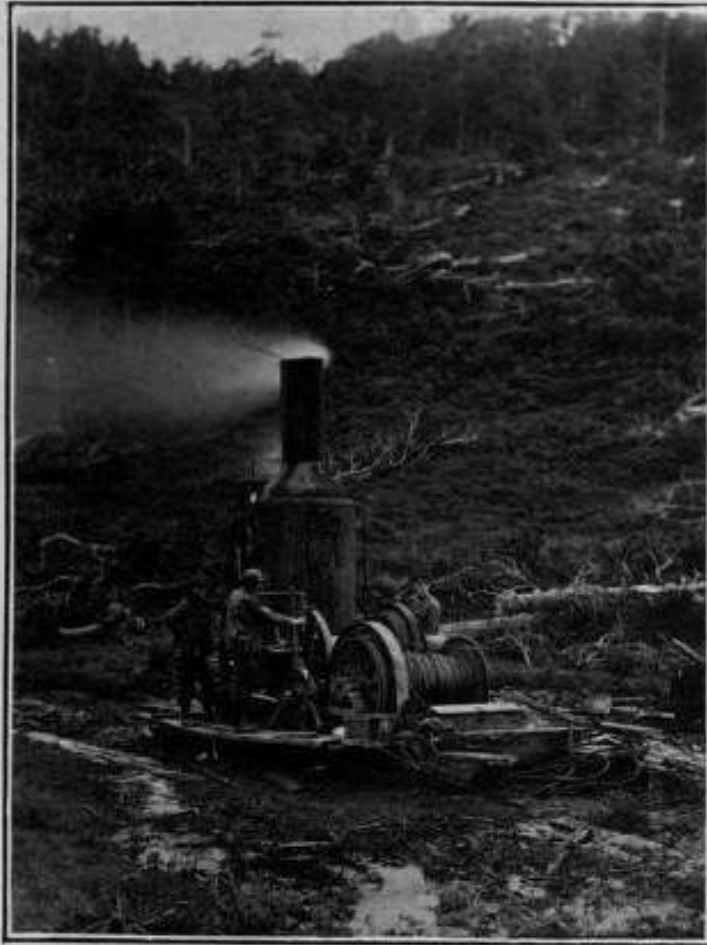
Log chutes were a revelation to those working in forestry in Scotland, brought by the Canadians. This may be the famous example at Craigvinean, but cannot be verified.



No. 7.

Pole Track in Scotland.

The time honoured method of clearing and transporting timber and ...



No. 9. Donkey Engine at work in Scotland.

... a more modern system. Donkey engines were used to drag logs overland from where they had been felled using a steam-powered winch. In cooperation with a pulley system, they could also be used to load the logs onto the trains. The machine was invented in California in 1881.



No. 11.

Piling Logs in Scotland.



No. 17.

Rail Hauling with Horses.



No. 3.

A Camp in the Scottish Highlands.



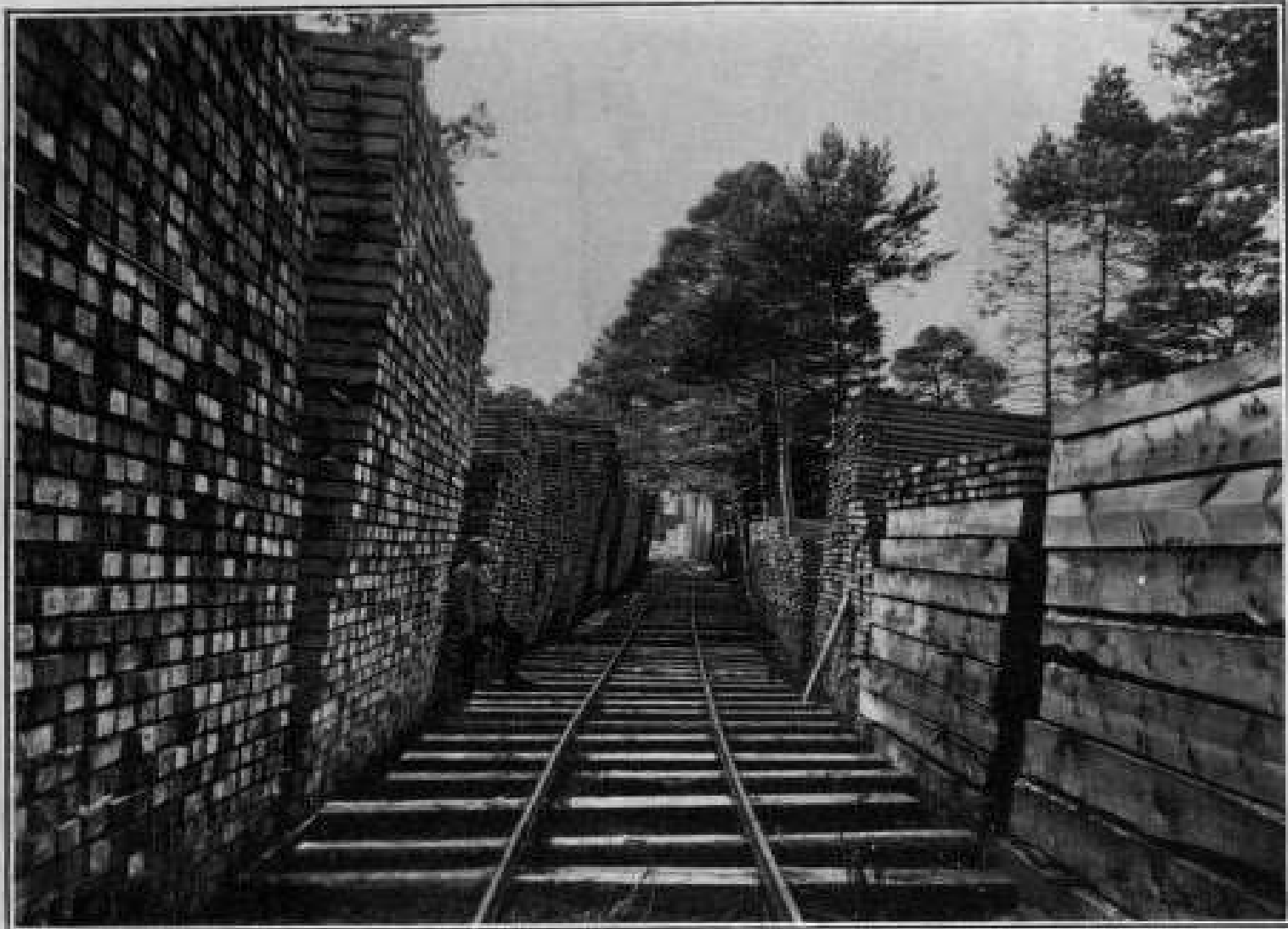
No. 10.

Rail Loading Station in Scotland.



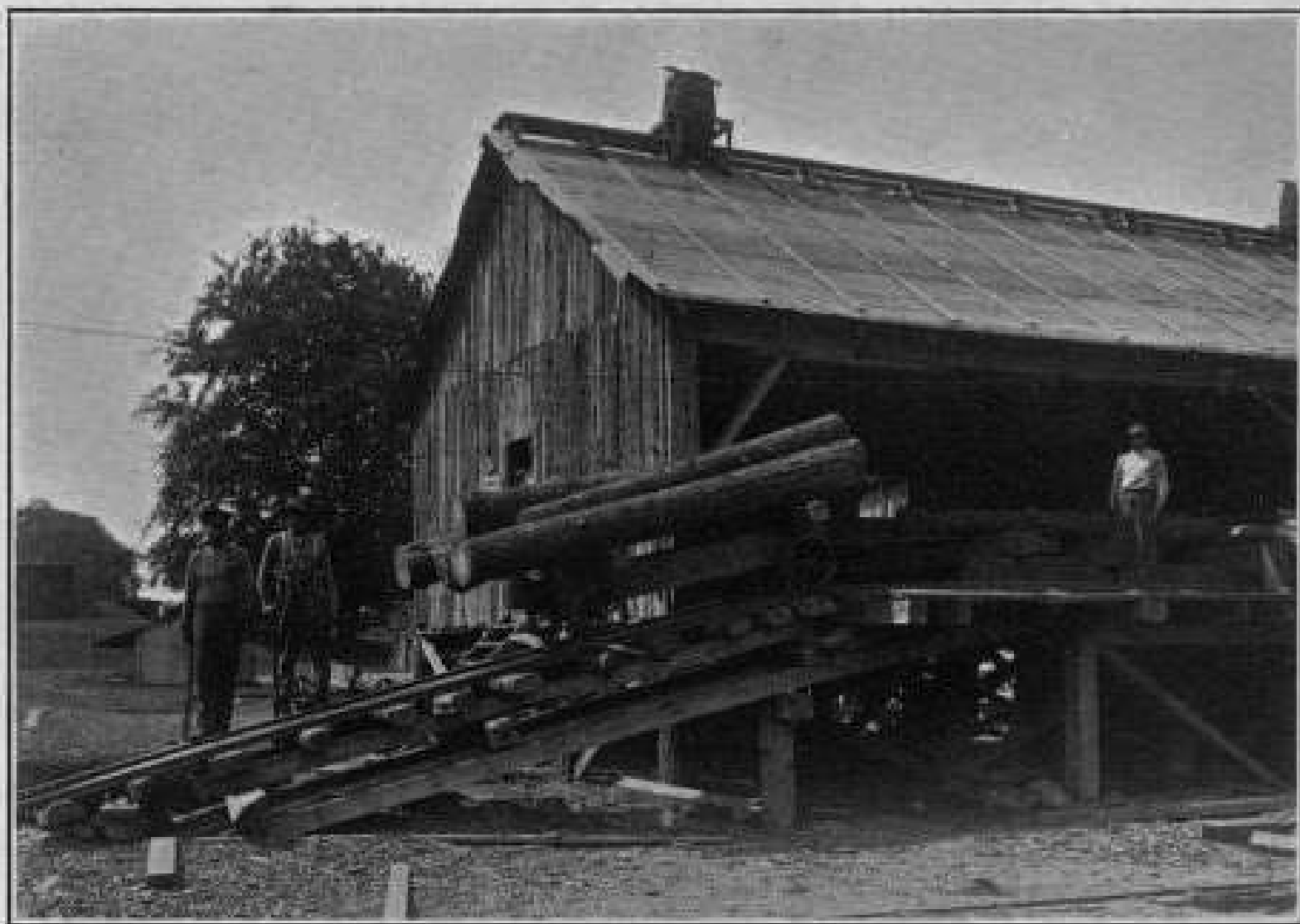
No. 16.

Railing Logs to Station in Scotland.



No. 25.

A Lumber Avenue.



No. 19.

Logs entering a Mill in Scotland.



No. 21.

Inside a Mill in Scotland.

15,000,000
12,000,000



THE DRUMTOCHTY TIMBER

FOR SALE BY AUCTION OF
2,000,000 FEET
TUESDAY, 18TH JULY, 1916.

SOLICITORS:
MESSRS. DAVIDSON & GARDEN,
12, DEE STREET,
ABERDEEN.

AUCTIONEERS:
NORBURY-SMITH & Co.,
5, GEORGE STREET,
HANOVER SQUARE,
LONDON, W.

FAREWELL, KILKERRAN.

We bid thee Farewell, dear friends of Kil-
kerran,

The Land of the Heather as well,
O'er thy hills and valleys we wandered—
We bid thee a fond farewell.

We're leaving thy shores unforgotten,
Though miles from thee we must part,
To the land that is not forgotten—
The land that is dear to our heart.

Now, Farewell all kind friends we are
leaving,

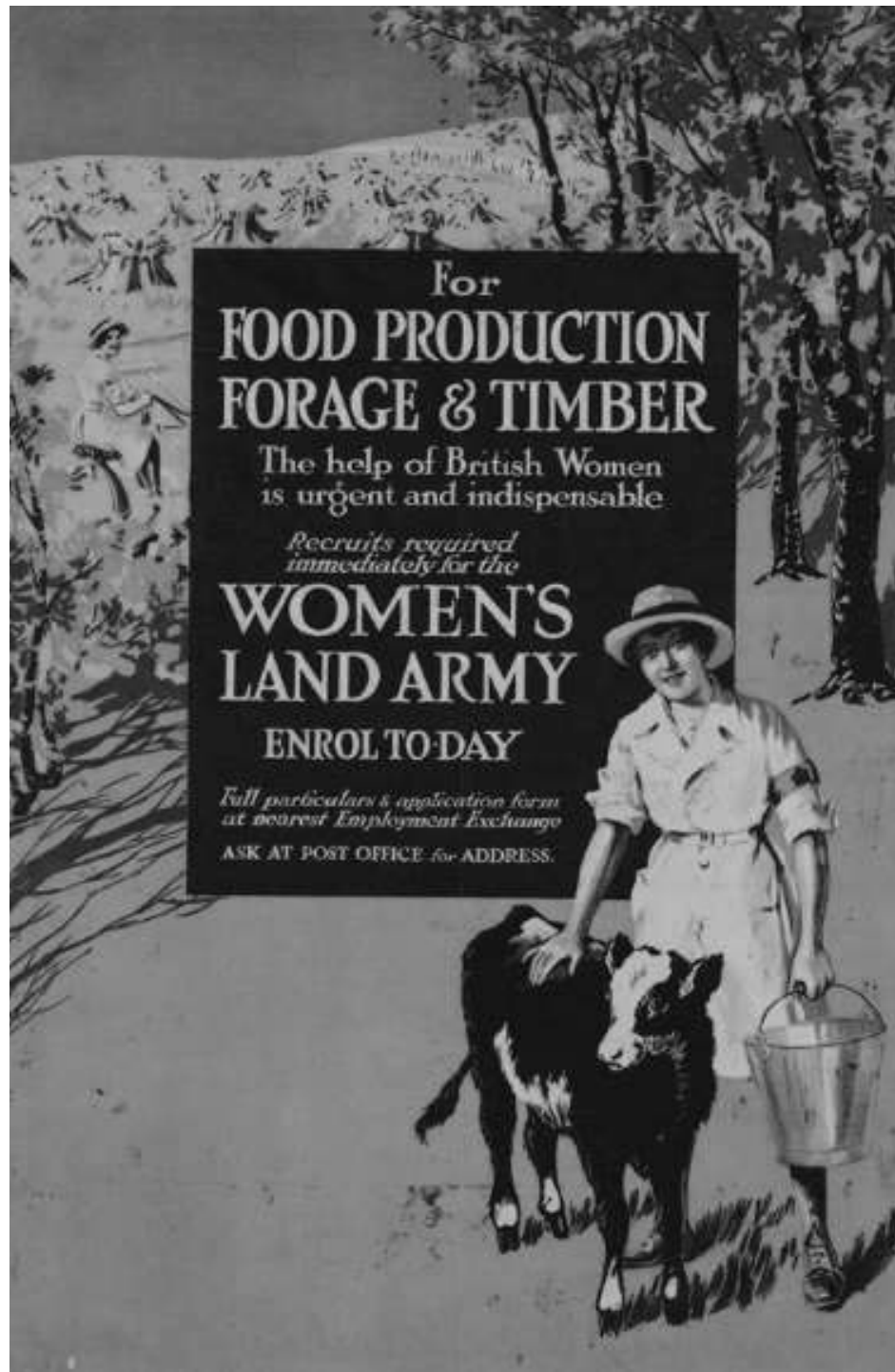
Kind thoughts in our memories will dwell,
So here's to the Land of the Thistle,
We bid thee a fond Farewell.

Corpl. A. ADAMS.
Pte. A. ARDEN.
Pte. F. PASCH.
Pte. A. KARLE.
Pte. H. HOLZMAN.
Pte. R. BLANCHARD.

128th Coy. C.F.C., Kilkerran.

Women in Forestry

- Women's Timber Service set up by Dept. of Agriculture in 1916
- By Jan 1918, 400 "Lumberjills" in govt service across Britain, besides others privately employed
- 11 women arrived at Blair Atholl Estate in March 1917 – put to work on "lighter duties"
- More women followed to work in nursery at Inver
- Paid less than men on average
- Established first significant female presence in forestry



113,00 women in Britain joined the Women's Land Army, which was set up in 1917 to help the war effort. This included The Women's Forestry Service.

Women's Forestry Service Hat, World War One





© BRITISH PATHE
LAYOUT ONLY



Members of
the Women's
Forestry
Corps
selecting
trees for
felling



A member of
the Women's
Forestry
Service in
action

Women's Land Army Forestry Corps felling trees





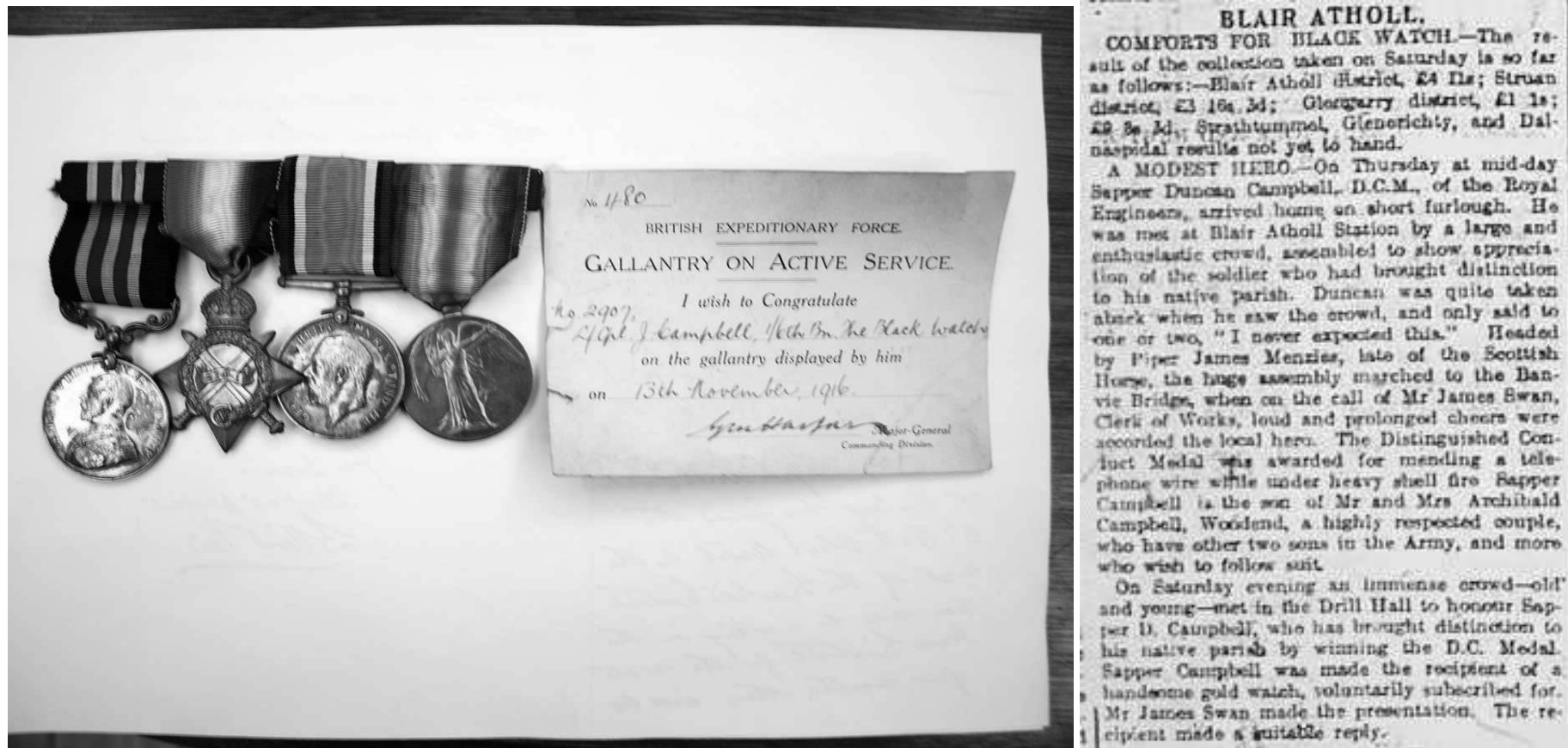


HENDERSYDE—CROSS-CUTTING.



HENDERSYDE—ON THE MOVE.

War Service by Foresters



L to R: The Military Medal, The 1914-15 Star, British War Medal and the Victory Medal awarded to John Campbell, woodsman on Atholl Estate and Black Watch enlistee in 1914. He survived the war, unlike his brother Duncan, also a worker on the estate and soldier in the Black Watch.



Simon Fraser, 14th Lord Lovat and first Chairman of the Forestry Commission, was Director of Forestry on the Western Front from 1917 until the end of the war, having previously served in the Dardanelles. He directed foresters from several Allied nations.

Clearing logs near the Western Front with horses “skidding”, Canadian Forestry Corps, 1918



Craigvinean

- Over 300 members of Newfoundland Forestry Corps arrived in 1917 and set up camp in Craigvinean Forest at Inchmagrannachan
- 3,200 ft chute to move logs from forest at top of hill to sawmill at bottom
- 1200 acres cleared by early 1918
- Moved to Drummond Hill on Taymouth Estate until the end of the War
- Operations finished in Jan 1919 & “Newfies” returned home

Sawmill and Log Chute near Inchmagrannachan, 1917



Elsewhere in Scotland

- Significant felling in and around Speyside, much of it native pinewood: Nethy Bridge, Broadshaw, Knockando, Keppernach, Achneim, Ord, Kinsteary, Orton, Forres, Loch Morlich, Aviemore
- North: Dornoch in Sutherland and Braemore in Ross
- Borders & Dumfries: Birkenaside, Lantonhill, Castle Douglas, Southwick, Kirkconnel
- Central: Methven, Taymount, Kincardine-on-Forth, Kirriemuir
- Kemnay in Aberdeenshire
- Mauchline and Kilkerran in Ayrshire

Perthshire Constitutional and Journal 6 Aug 1919

**‘ War has denuded Perthshire of
forest’**

PAYTON, JAMES EDWARD

Rank: Private

Service No:297584

Date of Death:04/11/1918

Age:26

Regiment/Service:

Canadian Forestry Corps

Grave Reference: N. 20 (3).

Additional Information:

Son of Mr. and Mrs. James

Payton, of Ontario;

husband of C. Isles

(formerly Payton), of South

St., Burrelton, Perthshire,

Scotland.



The Legacy

- Of 1m acre (405,000 ha) forest cover in 1924 Census:
 - 40% conifer
 - 6% broadleaf
 - 6% mixed
 - < 1% coppice
 - 19% scrub
 - 21% felled (compares with 12% for England)
- Normal proportion for felled forest at this time would have been 5-10%
- Forestry Commission founded in 1919 to create a forest resource for any future emergency – two Scots among first Chairmen of FC, Simon Fraser, 14th Lord Lovat and Sir John Stirling Maxwell
- Experience of WW1 shaped forestry policy for many years to come ie establish a timber reserve for times of national emergency + dedicated supporters of a role for forestry in Scotland (20th century ‘Improvers’?)

- Planting of new forests begun in 1920s and '30s, as well as transfer of numerous private woodlands to FC
- Forest cover in Scotland increased from ~ 5% of total land use in 1900 to 18% in 2000
- Home-grown timber now the largest supplier in the UK – contrast with pre-1914
- Commission would acquire, establish & manage new forests including Borgie (Sutherland), Monaughty (Moray), Inchnacardoch & South Laggan (Great Glen), Glen Duror (Argyll), Kirkhill (Aberdeenshire) forests, amongst others, from 1919



L to R: French Ambassador to USA Jean Jules Jusserand and J. J. Broderick of the British Embassy receive a donation of seeds from Charles Lathrop Pack of the American Forestry Association, Washington D.C., April 6th, 1922. The species donated included Douglas Fir, Western Larch, Red Oak, Sugar Maple, White Ash and Sitka Spruce.

35 Million Tree Seeds Given to Belgium-France

WASHINGTON, Jan. 15.—Thirty-five million tree seeds were formally presented to the governments of France, Belgium and Great Britain by the American Forestry association here today. They were accepted by the consuls of the three countries and will be sent to the forestry departments of each to aid in reforesting the devastated areas of Belgium and France, and the woodlands cleared in the British Isles for war purposes. The consignments included Douglas fir, western larch, Englemann spruce, red oak, sugar maple, white ash and tideland spruce.

"A hundred years from now these trees will tell the glory of all those who heard the call of humanity," said Charles Lathrop Pack, president of the American Forestry association in presenting the seed to the consuls. "They will tell the glory of those who heard that call from across three thousand miles of water. We on this side are planting memorial trees and roads of remembrance, but this gift to help reforest the battle areas and the areas in Great Britain which were sacrificed to war's demands will, I believe do more than anything else toward cementing the friendship that was born of war and baptized in blood.



Aberfoyle, with Lime Hill in the background, pre-1914



Lime Hill Today from the Forest Park Visitor Centre

