Ireland's Forest Fallacy

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When asked to imagine Ireland's landscape, citizens and visitors alike will allude to rolling green hills, impressive cliffs, and quaint cottages. However, this tourist-board image of a pristine and untouched countryside masks a historical reality: Ireland's land has been shaped and manipulated by humans for thousands of years. Moreover, the decreasing number of native woodlands and the rise of forestry plantations offer striking evidence of the historic decline of the nation's natural resources. After the supplanting of a vast network of native woodlands with a smaller-scale monoculture crop of nonnative conifers, today's deforested expansive fields and large pastures offer a relatively new feature in the country's landscape history. Scholarly work on the history of Irish woodlands, which has focused on the period between the end of Tudor rule in 1603 and the nineteenth century, typically concludes with a rhetorical question: what will the island become with the continuation of the conifer plantations?[1] Investigations in the twentieth and early twenty-first centuries reveal that further cultivation of nonnative conifer plantations will not only disastrously harm Ireland's ecology but also undermine a familiar image of the countryside.

As of 2018 only one percent of Ireland's native woodlands remained intact.[2] Although the Department of Agriculture, Food, and the Marine (DAFM) has made efforts to include native trees in its plans, its priority is to cover 18 percent of Ireland with forestry plantations by 2046, with only 30 percent of that area consisting of broadleaved

1. See Eileen McCracken, *The Irish Woods since Tudor Times: Their Distribution and Exploitation* (Newton Abbot, UK: David and Charles, 1971); Eoin Neeson, *A History of Irish Forestry* (Dublin: Lilliput Press, 1991); and Nigel Everett, *The Woods of Ireland: A History, 700–1800* (Dublin: Four Courts Press, 2014).

2. Irish Wildlife Trust, "Irish Wildlife Trust Submission to Oireachtas Committee on Climate Action," 14 Dec. 2018, p.1, https://iwt.ie/wp-content/uploads/2018/12/Climate-committee-submission-Dec18.pdf, archived at https://perma.cc/RW5C-7MCD.

species, most often rapidly growing willows.[3] Almost three-quarters of all trees in Ireland were under thirty years old by 2019.[4] The oak, once prized by the island's early inhabitants and still a symbol of Irish culture, constitutes only 2.7 percent of the Republic of Ireland's trees, while the Sitka spruce, a conifer native to North America's Pacific Northwest, makes up 51 percent.[5] The DAFM and Coillte, Ireland's leading forestry company, lump the few remaining native woodlands together with conifer plantations under the singular term of "forest." Despite the company's insistence that it plants forests across Ireland, such cultivation might better be termed the cultivation of conifer crops since these trees are planted and harvested as low-cost commercial produce. A healthy Irish forest includes a rich array of tree and shrub species such as oak, birch, holly, hazel, ash, willow, and rowan that can support a diverse tapestry of animals and wildflowers, not a barren stand of one or two exotic tree species; such a manipulation of language underscores a rhetorical forest fallacy.[6]

A 2016 study titled "When Is a Forest a Forest? Forest Concepts and Definitions in the Era of Forest and Landscape Restoration" describes the problem of classifications and definitions used in forest management that do not adequately "distinguish between natural and planted forests." The authors report that such terminologies are "created for the purpose of assessing global forest stocks, which do not distinguish between natural and planted forests or reforests, and which have not proved useful in assessing national and global

3. Helen Davies and Michael Image, *Ireland's Forestry Programme, 2014–2020: Strategic Environmental Assessment (SEA)* (Leeds, UK: ADAS UK, 2014), 6.

4. Department of Agriculture, Food, and the Marine (DAFM), *Forest Statistics Ireland 2019* (Wexford: Department of Agriculture, Food, and the Marine, 2019), p. 4, https://www.agriculture.gov.ie/media/migration/forestry/forestservicegeneralinformation/ForestStatisticsIreland2019161219.pdf, archived at https://perma.cc/25EZ-MXJ9.

5. Ibid., 10. For the oak, see the early law texts translated by Fergus Kelly that classified oaks as the most valuable tree and referred to them as *in Temair feda*, "the Tara of the Wood." Fergus Kelly, *Early Irish Farming* (Dublin: Dublin Institute for Advanced Studies, 2000). For an example of contemporary significance, see Nuala Ni Dhomhnaill, "Why I Choose to Write in Irish, the Corpse That Sits Up and Talks Back," *New York Times*, 8 Jan. 1995, 3.

6. Craig Bullock and Jerry Hawe, *The Natural Capital Values of Ireland's Native Woodland* (Dublin: Woodlands of Ireland, 2014), p. 10, https://www.heritageweek.ie/content/images/Natural-Capital-Value-of-Native-WoodlandsAbbreviated-version-March2014.pdf, archived at https://perma.cc/YWZ3-REKJ.

rates of forest regrowth and restoration."[7] Using the word "forest" as an umbrella term to describe either native woodlands or conifer plantations undermines actual conservation measures in Ireland and clouds public perception of what is being planted. The recent history of Irish forests conveyed in DAFM statistics—as well as the language on Coillte's website—relies on such ambiguous terms, causing the public to fall prey to the forest fallacy.

The definition of a forest varies and is determined by users' goals. For Coillte and the DAFM, as well as the original Free State government, a "forest" simply referred to any tree-covered area in Ireland. Since few realize that a forest can be something other than a vibrant ecosystem, such loose description perpetuates a falsehood. Chazdon et al. describe the multiple purposes that a forest may serve:

> From different vantage points, forests can be seen as a source of timber products, an ecosystem composed of trees along with myriad forms of biological diversity, a home for indigenous people, a repository for carbon storage, a source of multiple ecosystem services, and as social-ecological systems, or as all of the above. . . . No single operational forest definition can, or should, embody all of these dimensions.[8]

Although Coillte and the DAFM are technically creating new forests based on their own respective definitions, they are actually cultivating monoculture tree plantations of single species—moreover, they are doing so in areas with trees planted too close together for any wildlife or other plant life to survive. Abundant research reveals that monoculture forestry fails to support a healthy ecosystem (see figure 1).[9]

This problematic state of contemporary Irish forestry stems from

7. Robin Chazdon et al., "When Is a Forest a Forest? Forest Concepts and Definitions in the Era of Forest and Landscape Restoration," *Ambio* 45:5 (Sept. 2016): 538.

8. Ibid., 539.

9. J. W. Veldmen et al., "Where Tree Planting and Forest Expansion Are Bad for Biodiversity and Ecosystem Services," *BioScience* 65:10 (Oct. 2015): 1011–18; J. D. Wilson et al., "Modelling Edge Effects of Mature Forest Plantations on Peatland Waders Informs Landscape-Scale Conservation," *Journal of Applied Ecology* 51 (2014): 204–13; Michael Griesser et al., "Impact of Forestry Practices on Fitness Correlates and Population Productivity in an Open-Nesting Bird Species," *Conservation Biology* 21:3 (2007): 767–74.

FIGURE 1. Clear-Cutting of a Coillte Forest, Glendalough, Co. Wicklow, 2 August 2018. Plastic tubing is being used to protect new trees. Reproduced with permission from photographer Bryce Haney.

a conflicted national relationship with trees. Originally a forested country, Ireland was inhabited by woodland dwellers. The country's forests and their uses influenced local cultures, as evidenced by early Irish literature, cultural iconography, and the landscape itself.[10] However, after independence—and certainly influenced by an antipathy toward past cultivation and ownership of woodlands by a landed Ascendancy class—an economically struggling Free State government focused its attention on the economic output of its wooded land. In other words, Irish forestry policy and practice developed without attention to the importance of woodlands for prehistoric and early Irish societies, or to later eighteenth- and nineteenth-century political and cultural movements.

10. For more on the connection between historic loss of forests and changes in Irish culture, see Marjan Shokouhi, "Despirited Forests, Deforested Landscapes: The Historical Loss of Irish Woodlands," *Études irlandaises* 44:1 (2019), 117–20.

This essay argues that the major attack on Ireland's woodlands in the modern era began with the forestry policies set in place by the Irish Free State. Furthermore, an exploration of recent policies from DAFM and Coillte reveals that these groups use misleading language to influence public perceptions of the nation's forests. An awareness both of how rhetoric shapes public opinion and of the cultural and ecological history of Irish woodlands should shift public priorities, including those of DAFM and Coillte, to conservation. Ireland's forests can be better understood and subsequently preserved and protected by a population no longer misinformed by language embodying the forest fallacy. In outlining the history of forests and the cultural connection between the early Irish and their woodlands, this essay reveals how they endured as a symbol of Irish culture until the land transfer in the late nineteenth and early twentieth centuries. Some Irish subsequently sought to reestablish a cultural bond with their forests during the Cultural Revival, but such efforts remained strong only until the formation of the Free State. The growing awareness of global climate change in the twenty-first century, in addition to the government's subsequent move to curb carbon emissions by encouraging a switch from cattle farming to forestry, signals an appropriate moment for Ireland to reexamine the state of its woodlands.

Prehistoric Forests of Ireland: A Resource and a Cornerstone of Culture

Much of what we know about Ireland's prehistoric landscapes, forests, and culture emerges from Old Irish law texts written in Latin and Old Irish between the seventh and ninth centuries.[11] Interpretations of these texts—provided, for example, in Fergus Kelly's *Early Irish Farming* (1997) and Nerys Patterson's *Cattle Lords and Clansmen* (1994)—are now available.[12] When Mesolithic settlers migrated

11. Kelly, *Early Irish Farming*, 6.

12. Nerys Patterson, *Cattle Lords and Clansmen: The Social Structure of Early Ireland* (1994; Notre Dame, IN: University of Notre Dame Press, 2012). Additionally, the Department of Agriculture, Fisheries, and Food (DAFF) published a short history of Irish forests. See DAFF, "Irish Forests: A Brief History," *An Roinn Talmhaíochta, Bia, agus Mara*, 2008, https://www.agriculture.gov.ie/media/migration/forestry/forestservicegeneralinformation/abouttheforestservice/IrishForestryAbriefhistory200810.pdf. This source reflects the department's official views. The Department of Agricul-

to Ireland around 7000 B.C.E., most likely from Britain and mainland Europe, they were met with a dense blanket of woodland—forests of oak, elm, and Scots pine. Oak and elm forests grew on rich soil, with ferns, liverworts, and mosses thriving on the forest floor and pines, grasses, ling heather, and bracken developing on poorer soil. Rowan was a prominent species as well, growing in openings in the forest canopy alongside ivy, holly, whitebeam, and honeysuckle.[13] The forests were home to a host of animals—brown bear, wolf, and boar, all of which are now extinct, although the fox, stoat, and pine marten survive today.[14] These early settlers may have made small clearings in the woodlands, but they did not need expanses of open land, for they neither sowed crops nor kept domestic animals.[15]

Although Mesolithic hunter-gatherers left almost no impact on Ireland's forests, the country's densely wooded landscape began disappearing about 6,000 years ago. The two major theories accounting for this initial disappearance of Irish forests involve natural growth of blanket bogs and forest clearance by early Neolithic settlers for farming development.[16] An abundance of evidence suggests that around 4000 B.C.E. newly arrived Neolithic farmers made a considerable impact on the environment through this clearing of forests. Pollen analysis conducted at Ballynagilly, Co. Tyrone, reveals how in approximately 3900 B.C.E. a shift occurred from elm and pine pollen to pollen from grasses and cereal; this shift indicates the clearing of forests, the planting of grasses (possibly for cattle-rearing), and the cultivation of crops. Neolithic inhabitants were probably also responsible for bringing domesticated cattle, sheep, and goats to Ireland.[17] By 3000 B.C.E. Neolithic society in the Boyne Valley became organized enough to build the passage graves of Knowth, Dowth,

ture, Fisheries, and Food changed its name to the Department of Agriculture, Food, and the Marine in 2011.

13. DAFF, "Irish Forests," 1.

14. Ibid.

15. Kelly, *Early Irish Farming*, 3.

16. DAFF, "Irish Forests," 1. There are two main types of bogs in Ireland: blanket and raised. The two are very similar, but they differ in depth and species presence. Blanket bogs have shallow peat deposits (2–5 meters), while raised bogs contain deeper peat deposits (4–8 meters).

17. Seán Duffy, *The Concise History of Ireland* (Dublin: Gill and Macmillan, 2005), 17.

and Newgrange. Though little is known of the culture and religion of these people, Kelly explains that these sophisticated cultural monuments point to a high level of farm organization and social structure.[18]

With the advent of the Bronze Age around 2400 B.C.E., the emergence of iron tools between 600 and 500 B.C.E., and the concurrent arrival of the Celts during the Iron Age, farming techniques became more advanced, with the harvesting of more woodlands as an inevitable consequence. Studies of pollen profiles, however, indicate that cutting down trees often coincided with the recovery of forests.[19] Such recovery occurred when forests were robust enough to withstand some losses and when settlers failed to clear-cut huge expanses—thus allowing the woodlands an opportunity to regenerate and endure. In this same period settlers increasingly used timber in constructing roads, bridges, and other technologically advanced infrastructure. Kelly discusses the archaeological discovery of a causeway built to allow the *Slige Már* highway to cross a bog in Corlea, Co. Longford, around 150 B.C.E.: "It was made of logs of oak laid on top of brushwood, and would have been capable of supporting wheeled vehicles."[20] The oak logs used were huge and resembled railroad ties, suggesting the organized communal effort needed to assemble and build them.[21] Of course, timber had been used since the Neolithic period for housing and for other aspects of domestic life such as simple paths over damp ground and oars for boats, as evidenced by the late Bronze Age settlement at Clonfinlough, Co. Offaly.[22] Beyond the use of timber, a central part of all early Irish life revolved around gathering wild plants and using woodland resources. Kelly points out the significance of trees to the early Irish economy through supplying nuts and fruit for human consumption and food stock for animals.[23]

The first "destruction phase" of Irish woodlands began much later, in 300 C.E. when major road construction occurred. Kelly finds evidence of such destruction in the language itself; the common Irish

18. Kelly, *Early Irish Farming*, 3.
19. DAFF, "Irish Forests," 1.
20. Kelly, *Early Irish Farming*, 392.
21. Duffy, *Concise History of Ireland*, 31.
22. Ibid., 18, 30.
23. Kelly, *Early Irish Farming*, 379.

word for road was *slige*, which "literally means 'hacking, clearing.'" Another Irish word for road, *botharín* or *boreen*, translates roughly to "cow track," and for cattle pastures to be maintained, the clearing of woodland became essential. Nevertheless, forests were held in such high regard by the early Irish that the surviving seventh- and eighth-century law text on farming, *Bretha Comaithchesa*, lists twenty-eight trees and shrubs of significance arranged in order of their economic value. The trees are arranged into four classes: *Airig Fedo*, "nobles of the wood"; *Aithig Fedo*, "commoners of the wood"; *Fodla Fedo*, "lower divisions of the wood"; and *Losa Fedo*, "bushes of the wood." The oak is listed in the noble class, indicating its high status, followed by hazel, holly, yew, ash, Scots pine, and wild apple.[24]

Evidence of the cultural significance of trees also appears in laws dedicated to their damage. Harming another's tree led to a penalty fine and a compensation fee in accordance with the severity of the damage. The higher the class of tree, the greater the fine and compensation. Kelly notes how a tree's status "may make it a target for enemy attack," as when the Ulstermen chopped down sacred trees at the royal inauguration site of the *Cenél nEóghain* at *Telach Oc* in 1111 C.E. Of more practical importance were the many forests, bogs, and mountains that could not be cultivated for farming and were considered common land, or *dírann,* undivided land. Although certain restrictions mandated who could use common land, generally each freeman of the region was entitled to a share in its use. Such shared uses involved the grazing of cattle and collecting of wood, turf, herbs, and berries.[25]

Even after Neolithic settlers introduced domestic animals and crops around 4000 B.C.E., the Irish maintained an abiding relationship with wildlife and native plants. Discussing the cultural importance of Ireland's fauna invites a broad consideration of the island landscapes, as these animals could exist and thrive only because of the lakes, rivers, coastlands, and woodlands. Eoin Neeson describes the often-overlooked relationship that people have to forests:

> Like animals, trees may be classified in two broad groups, wild and domesticated (or natural and cultivated), with subdivisions that ex-

24. Ibid., 4–5, 380.
25. Ibid., 388, 406.

> tend to individual species. The point is that we take the use of woods, of timber, and of wood products by man from beyond the dawn of history so much for granted that we tend to overlook the fact that the relationship between these two living organisms, man and tree, is no less complex and intimate than the relationship between man and animals.[26]

Woodlands profoundly influenced early Irish society; they provided resources and had a central role in folklore, but also offered habitat for animals and plants. Law texts suggest an awareness of the need to protect the limited resources of these woodlands,[27] and Ireland remained largely forested without major human intervention until 1600. Significantly, by 1800 most of these extensive native forests were gone.

Historical Perspectives on Irish Woodlands, 1600–1800

In 1600 one-eighth of Ireland was forested. But in the dominant narrative shaping public perception as articulated by Eileen McCracken, for example, by 1800, following the English conquest and the commercial exploitation of the land, the proportion of the island's forested land was reduced to one-fiftieth. But in his recent revisionist history Nigel Everett challenges the popular belief that the English caused all such damage to Irish woodlands. Looking critically at both the work of McCracken and Neeson's *A History of Irish Forestry* (1991), Everett observes that the conquest of the English actually set in place "conservative standards of forest management."[28]

Discussion surrounding the history of Irish woodlands has become politicized, but when the issue is viewed ecologically, we see that many factors contributed to deforestation, not simply colonization. These include the clearing of land for the planting of crops; the use of timber for the construction of houses and boats; and the foraging of domestic animals such as cattle, sheep, and goats. All

26. Eoin Neeson, "Woodland in History and Culture," in *Nature in Ireland: A Scientific and Cultural History*, ed. John Wilson Foster and Helena C. G. Chesney (Dublin: Lilliput Press, 1997), 133–56.

27. Kelly, *Early Irish Farming*, 389.

28. McCracken, *Irish Woods*, 15; Nigel Everett, *The Woods of Ireland: A History, 700–1800* (Dublin: Four Courts Press, 2014), 15. Neeson's *A History of Irish Forestry* draws much of its information from McCracken's work, and so is of a similar opinion.

such development played a role in the destruction of forests and new saplings.[29] The prevailing narrative that attributed most blame to English colonizers has in fact shifted to an account placing the burden of responsibility on the indigenous Irish. In *Ireland, 1912–1985: Politics and Society*, J. J. Lee notes:

> The stark arboreal bleakness of the Irish landscape in the late twentieth century can no longer be attributed to the destructive frenzies of Tudor and Stuart. Nor is it solely the result of bureaucratic inadequacy. There were objective problems for the policymakers, not least those posed by landholding patterns and peasant mentalities.[30]

The devastating environmental effects of colonialism arguably pales in comparison to the failures of the colonized to restore what had been lost. Lee's "inertia of the indigenes" is still evident in contemporary Irish forestry policy.

Although there is no single cause of the decline of Ireland's forests between 1600 and 1800, scholars and policymakers can agree upon several contributing factors: industrialization, plantations, population growth, and the Land Act of 1881, which aimed at resolving tenant-landlord relations by reducing landlord powers.[31] These late dates suggest that the Irish have been a forest-dwelling people for much of their existence. But as a result of their own "inertia," in the past two hundred years they have grown accustomed to large expanses of bogs and fields—and now to conifer plantations.

Woodland Imagery of the Irish Revival, 1800–1922

In the years of the Literary Revival and the formation of the Irish Free State, small-scale rural landowners became central players in new forestry policies following prime minister William Gladstone's initiation of the transfer of ownership from landlord to tenant farmer. Tenants purchasing land from their former landlords remedied their economic burdens by the felling and sale of trees on their newly

29. McCracken, *Irish Woods*, 20.

30. J. J. Lee, *Ireland, 1912–1985: Politics and Society* (Cambridge: Cambridge University Press, 1989), 523.

31. DAFF, "Irish Forests," 2.

acquired property. Anna Pilz and Andrew Tierney discuss a "cultural inversion" in forestry: "The destruction of woodland by new tenant-proprietors that followed Gladstone's land reforms was a cultural inversion of the earlier arboreal catastrophe that saw new English proprietors cut down the woods of dispossessed Irish landowners during the sixteenth and seventeenth centuries." Pilz and Tierney describe how between 1868 and 1894 Gladstone turned to the "tree of the Ascendancy" as a central metaphor in his attack on Ireland's landed class, arguing that the only trees of significance remaining in Ireland had been carefully protected by Anglo-Irish landlords.[32] The disheartening irony of this "cultural inversion" lies in the historical reality that native Irish forests were not originally representative of a colonial elite. By the nineteenth century ancient oaks and other mature trees surrounding the Ascendancy demesnes had indeed become a symbol of Anglo-Irish dominance. Thus farmers cutting down mature trees in order to remain financially stable not only severed ties with what they perceived as a colonial past, but unwittingly helped to destroy their own ancient birthright: a practical and spiritual bond to forests.

Whereas estate forests had been long criticized for erasing a native landscape and replacing it with British wooded landscaping, these demesne woodlands would later inspire revivalists such as Lady Gregory and W. B. Yeats in their search for an Irish identity. In her 1898 essay "Tree Planting," written for the *Irish Homestead*, Gregory notes how "Ireland, more than other countries, ought to be a country of trees, for the very letters of her alphabet are named after them." Pilz and Tierney see Gregory as asserting "that Ireland's forestry in the late nineteenth century was as much a matter of cultural identity as an economic resource, and that only the Irish tongue could properly recover her trees."[33] In other words, they portray Gregory as acknowledging that forests do not represent the Anglo-Irish, but rather that the Irish should recognize woodlands as part of their own integral cultural identity and become the stewards of Ireland's trees. Like the rural peasant of the west, the tree was becoming a powerful symbol for the coming nationalist movement. However unreal-

32. Anna Pilz and Andrew Tierney, "Trees, Big House Culture, and the Irish Literary Revival," *New Hibernia Review* 19:2 (2015): 70–71, 73.

33. Ibid., 65, 67.

istic or unrealized the revivalist veneration of the landscape and its people may have been, this glorification focused on Ireland's trees as an integral part of its Celtic past and demanded that woodlands be protected for the future.

Yeats frequently included trees in his work, imbuing nature with superhuman powers. In "The Two Trees" the speaker asks his beloved to look upon a tree of life and joy and to turn away from the tree whose "broken boughs and blackened leaves" draw demons and ravens. "Flying, crying, to and fro, / Cruel claw and hungry throat, / Or else they stand and sniff the wind, / And shake their ragged wings: alas!" The "roots half hidden under snows" imply Ireland in servitude whereas the tree whose branches bear "trembling flowers" harken to a revived Ireland.[34] Although Yeats initially wrote "The Two Trees" in 1893, he spent years perfecting it, and it was a favorite work of his muse, the stalwart nationalist Maud Gonne.[35]

Though much of the scholarship surrounding the Irish Revival—between the 1890s and the beginning of the Irish Free State in 1922—focuses on the work of literary artists such as Yeats and Gregory, the revivalist creation of a symbolism of the rural west influenced nationalists as well. Although nationalist activity occurred in urban centers, imagery rooted in rural Irish life offered a focused, if imagined, homeland for which to fight. This rhetoric asserted that to be truly Irish one needed a bond to rural Ireland, and it symbolically idealized those living on the land and in touch with ancient Irish forests. The use of such imagery has a long history; examples can be found among the prints of the 1790s associated with the United Irishmen, who also made use of the familiar revolutionary-era Liberty Tree symbol. An image included in *Paddy's Resource*, a songbook published in 1795, for example, depicts a woman with a harp, the personification of Ireland, who calls on the viewer to "tear off your chains and let millions be free" (figure 2). She sits in a bucolic countryside under a large, prominent tree that reminds viewers of the popular belief that Irish forests were decimated because of British rule. Though this image was made for the United Irishmen's cause, creative works with nearly

34. W. B. Yeats, *Collected Poems of W. B. Yeats* (London: Collector's Library, 2010), 87.

35. Robert Mortenson, "Yeats's *Vision* and 'The Two Trees,'" *Studies in Bibliography* 17 (1964): 220–22.

identical symbolism could still be found in the early 1900s—Yeats and Gregory's one-act play *Cathleen ni Houlihan*, for instance.

With the formation of the Irish Free State, however, revivalist and nationalist interest in a woodland connection with a national identity declined, replaced by a purely economic endeavor: the regimented planting of nonnative conifer plantations. The cultural self-confidence of the Revival changed to the inward-looking ideology of the Free State that censored and banned works challenging its conservatism. Or, to quote Yeats in "The Two Trees," the "joy the holy branches start" was exchanged for "the bitter glass."[36]

FIGURE 2. The first page of the songbook *Paddy's Resource: Being a Select Collection of Original and Modern Patriotic Songs* (Dublin?: James Porter, 1795), captioned "Tun'd to Freedom." Reproduced with permission from Library of Congress holdings.

Regimented Forestry in the Free State

The beginning of regimented forestry in Ireland already appears in Sir Richard Griffith's Valuation Report of 1845, which suggested that "half of the six million acres of waste and unproductive land could be planted" in Ireland.[37] However, the Department of Agriculture and Technical Instruction's 1904 acquisition of Avondale House and the surrounding woodland areas in County Wicklow marks the official beginning of state forestry, with a training center established on the expansive grounds of the house. Prior to the formation of that department in 1899, Irish forests were overseen by the Commissioners of Woods and Forests, responsible for managing all crown forests in England, Wales, and Ireland. Curiously,

36. Yeats, *Collected Poems*, 87.
37. McCracken, *Irish Woods*, 143.

there were no official crown forests in Ireland in 1829, and no purchases of such forests were ever made for the country.[38] In a 1963 study H. J. Gray of the Department of Lands wrote: "It might be thought from their title that the Commissioners of Woods and Forests had something to do with forestry in Ireland. No doubt they had powers in that direction, but in Ireland, at least, they were never exercised."[39] In 1908 the Departmental Committee on Irish Forestry estimated that about 1.5 percent of the total land area in Ireland was forested,[40] generally the remains of landed estates such as Lady Gregory's Coole Park.

State afforestation—the new establishment of trees in an area without previous cover—resulted in the coverage of almost 4,000 acres by 1922, with fast-growing conifers such as Sitka spruce and lodgepole pine planted instead of native species.[41] Under economic pressure the Free State focused not on preserving and developing native Irish woodlands but on increasing output. At Avondale House, after botanist and forester Augustine Henry led experiments to identify what trees would be suited for forestry in Ireland, Sitka spruce was widely planted (at 51 percent of Ireland's trees, this tree remains the most prominent forestry species).[42] Native to the Pacific Northwest of North America, it established easily, grew very quickly in poor soil, and had saplings that could grow in close proximity.[43] In 1922 the new government initiated an afforestation program with the goal of planting 388 hectares (948 acres) in 1923—this in addition to the less than 4,000 acres of conifers previously planted that marked the beginning of the government's interest in forestry as an economic program. Free State policy called for afforestation to occur only on land that was not "fit for agricultural purposes" or of poor quality—a goal that reflected a new state's fear of being unable to feed its population.[44]

38. H. J. Gray, "The Economics of Irish Forestry," *Journal of the Statistical and Social Inquiry Society of Ireland* 21:2 (1963–64), 31, http://www.tara.tcd.ie/bitstream/handle/2262/6037/jssisiVolXXIPartII_1844.pdf.

39. Ibid.

40. DAFF, "Irish Forests," 3.

41. Gray, "Economics of Irish Forestry," 33.

42. DAFM, *Forest Statistics Ireland 2019*, 9.

43. DAFF, "Sitka Spruce," *Department of Agriculture, Food, and the Marine*, n.d., https://www.agriculture.gov.ie/media/migration/forestry/publications/SitkaSpruce_low.pdf, archived at https://perma.cc/QT54-43WF.

44. DAFF, "Irish Forests," 3.

In the years since, the Irish government has made a significant effort to ensure the success of its forestry business. Table 1, from the DAFM's annual report, reveals a steady increase in the total area forested after 1928.[45] In that year, when the total area of forests in Ireland covered just over one percent of the country, a new Forestry Act set in place an amendment restricting the felling of trees in order to encourage and facilitate afforestation. Crucially, it allowed the state to control the felling of trees and to "compel the replanting of felled areas." Indeed, the afforestation efforts have largely been a state-centered effort. Nonrefundable grants for private landowners were made available in 1931, but for the most part large estates were the main beneficiaries. New forest planting was almost exclusively a state operation.[46] The next decade saw an increase in the rate of state afforestation, with 7,603 acres (3,077 hectares) added between 1938 and 1939 alone.[47] However, the Second World War affected the afforestation program, and rates fell to 4,230 acres (1,711 hectares) per year between 1944 and 1945. The planting of forests occurring immediately during and after the "Emergency" sought to restore mature forests that had been felled for wartime fuel and timber. But significantly, the trees planted were not the hardwoods that had been felled in mature forests, but fast-growing spruce and pine. These were used commercially, as evidenced in the 1943 policy "to create a home supply of raw timber sufficient to meet home requirements," as well to provide employment opportunities for communities where jobs may have been scarce.[48] The Forestry Act of 1946, which still remains the principal legislative framework for forestry practices in Ireland, saw the repeal of the earlier acts of 1919 and 1928 and the addition of a much more detailed outline and legal framework.

Despite the steady increase of planting rates of fast-growing spruce and pine that proved financially successful from 1946 to 1970, such

45. DAFM, *Forest Statistics Ireland 2019*, 6. The table's title, "Forest Area in Ireland," conveniently avails itself of the lack of global consensus about what defines a forest. The DAFM offers no help; it defines a forest as "land with a minimum area of 0.1 ha under stands of trees 5 m or higher, having a minimum width of 20 m and a canopy cover of 20 percent or more within the forest boundary; or trees able to reach these thresholds *in situ*."

46. DAFF, "Irish Forests," 3–4.

47. The department did not switch to the metric system until 1972.

48. Ibid, 4.

Table 1.
FOREST AREA IN IRELAND

YEAR	AREA (HA)	PERCENT OF TOTAL LAND AREA
1656	170,000	2.5
1841	140,000	2.0
1908	125,200	1.8
1918	100,717	1.4
1928	89,000	1.2
1949	144,000	2.1
1965	254,350	3.7
1973	323,654	4.6
1985	411,529	5.9
2006	697,730	10.1
2012	731,650	10.5
2017	770,020	11.0

Source: DAFM, *Forest Statistics Ireland 2019*, 6.

a growth rate could not be maintained. By 1970 almost 4,400 people were employed by the state in the forest sector, and state forests covered 530,901 acres (214,853 hectares). But with the absence of enough suitable land (related to the exclusion of agricultural land for planting), forestry-planting annual rates peaked in 1979 at 8,800 hectares per year. Subsequently, the 1980s saw a decrease in the annual state afforestation rate to 5,700 hectares per year by 1989. At the same time, the 1980s also saw a rise in farmer participation in afforestation, accounting for 82 percent of private lands afforested in the four decades leading up to 2018.[49]

At this time the Forest and Wildlife Service of the Department of Energy was solely responsible for the total state forest area of 304,232 hectares as well as for state lands, including commercial forests, amenity and conservation woodlands, nature reserves, and wildlife sanctuaries.[50] During the latter part of the 1980s the govern-

49. DAFM, *Forest Statistics Ireland 2019*, 20.
50. DAFF, "Irish Forests," 4.

ment took steps to divide the Forest and Wildlife Service into three different sections: the Office of Public Works, Coillte Teoranta, and the Forest Service. The Office of Public Works took over the wildlife functions of the Forest and Wildlife Service, as well as the 21,000 hectares of lands and forests that were used for amenity and wildlife conservation. Coillte Teoranta was a new state body charged with managing commercial forests; all ownership of the state forests was transferred to them. Finally, the Forest Service, which remained situated in the Department of Energy, retained oversight of national forest policy, protection of the national forest estates from pests and diseases, control of tree felling, promotion of forest research and development, promotion of private forestry, and administration of grant schemes for state forestry.[51]

Twentieth-century Irish governments sought to improve and profit from forestry, leaving insufficient efforts to restore a healthy ecosystem. The failure to establish a strong forestry program early in the Free State—one that retained traditional cultural connections between Irish people and the land they inhabited—largely extinguished the efforts of Revivalists to bring attention to native woodlands. Although those at the beginning of the Free State might be excused for their inadequate forestry policies on the grounds of a lack of ecological understanding and the immense political and economic pressures they faced, subsequent governments have had no excuse for leaving Irish forestry in serious decline.

Twenty-First Century Forestry Policy and Practice

Today Irish forestry policy is influenced by multiple parties: government, private limited-company entities such as Coillte, and not-for-profit groups such as the Woodland League. At the government level forestry programs are run by the Forest Service division of DAFM, whose current forestry plan for the near future can be found in its publication *Strategic Environmental Assessment (SEA) for Ireland's Forestry Programme (FP), 2012–2020*. SEA outlines the four major schemes that are the centerpoints of the assessment: an afforestation scheme, a native-woodlands establishment scheme, an agroforestry

51. Ibid., 5.

scheme, and a forestry-for-fibre scheme. The afforestation scheme proposes the most specific guidelines of the four and lays down a target of 18 percent forest cover in Ireland by 2046, with 30 percent of that proportion consisting of broadleaved species.[52] Any afforestation plan means the massive planting of conifer plantations, usually Sitka spruce. The government views this scheme as beneficial since it provides the country with commercial timber and is designed to encourage commercial logging.

SEA's native-woodlands establishment scheme offers opportunities to conserve and expand Ireland's native forest but fails to establish adequate long-term goals. For example, the 2015–2020 scheme targets for afforestation are 37,215 hectares, but its goals for native woodlands are only 2,700 hectares.[53] Such allocations again make clear that the Forest Service division and the DAFM's priorities offer ambitious programs for commercial logging but pay minor attention to native woodlands. The scheme does, however, provide an exemplary outline of what should be done to protect and encourage native-woodland growth. So if the Forest Service chose to dedicate more land to native woodlands, Ireland would witness real improvement with native species such as oak, hazel, birch, and ash.

Unfortunately, "it doesn't work," writes Darragh Murphy for the *Irish Times.*[54] Whether or not farmers will reap any benefits from these native woodlands is always a consideration. Conifers are used for forestry because they are hearty fast-growers, producing timber used within a farmer's lifetime. By contrast, some hardwoods take over one hundred years to mature. For a restoration of native species to be effective, the Forest Service needs to increase premiums to farmers, and farmers should be paid for ecosystem services such as cultural services, amenity and health benefits, carbon sequestration, timber production, and biodiversity value. Otherwise, as Murphy maintains, "There is no viable return until your grandchildren inherit the woods." Murphy also observes that as with other seemingly beneficial schemes, this one "seems to be only created to satisfy sustainability criteria to achieve EU approval for state funding

52. Davies and Image, *Ireland's Forestry Programme*, 6.

53. Ibid.

54. Darragh Murphy, "Native Trees Cover Just 2% of Ireland. How Can This Be Increased?" *Irish Times*, 6 July 2018.

of Sitka spruce tree farms."[55] Yet native broadleaf species are in fact worth more than nonnative conifers when the economic value of their contributions to a larger ecosystem is taken into consideration. For example, a restored oak woodland would have increased amenity and tourism value, biodiversity value, water quality, flood and erosion control, carbon storage and sequestration as the forest grows older, and value of the timber that is logged, as there is high demand for hardwood.[56] Although well-managed conifer plantations have the potential to provide these services, "the public good value of native woodland is likely to be much greater."[57] According to a 2014 study that assessed the economic and ecosystem service-value of native woodland in Ireland, these areas make up just 14 percent of Ireland's total forest cover, or 1.4 percent of Ireland's land area, but through the value of ecosystem services they are estimated to provide between €67 and €76 million per year in excess economic value.[58] If the Forest Service replaced even fifty percent of its current conifer plantations with native woodlands, this economic value could increase to €436 million.[59]

Companies such as Coillte, and even the DAFM, strategically use the positive connotations of terms such as "trees," "forests," and "forestry," paired with imprecise definitions of these words, to further the agencies' interests. For example, Coillte boasts that in 2016 it "planted over 17 million trees, creating around 7,700 hectares of new forest all across Ireland."[60] Although the average person reads such a claim as promising, this commercial forestry company primarily plants nonnative conifers.[61] The second problem—constituting the forest fallacy that is crux of this study—lies in a persistent misappropriation of the word "forest" for conifer plantations rather than for a diverse array of native trees, plants, and wildlife. Coillte, described by the *Irish Times* as "deft exponents of the dark arts of clear-felling,"

55. Ibid.

56. Bullock and Hawe, *Natural Capital Values*, 3.

57. C. Bullock et al., "Realising the Ecosystem-Service Value of Native Woodland in Ireland," *New Zealand Journal of Forestry Science* 44 (2014): 7.

58. Ibid.

59. Bullock and Hawe, *Natural Capital Values*, 3.

60. Coillte, "Forestry," *Coillte.ie*, n.d., https://www.coillte.ie/our-business/our-divisions/forestry, archived at https://perma.cc/RNC9-SW3A.

61. DAFM, *Forest Statistics Ireland 2019*, 11.

further deceives the public by surrounding its plantations with broad-leafed, native trees.[62]

Ecological Consequences

Ireland has received bleak assessments of the current state of its wildlife habitat. In its *National Biodiversity Action Plan, 2017–2021*, the National Parks and Wildlife Service (NPWS) identified forestry as one of the main threats to EU-protected species and habitats, for monoculture tree plantings pollute waterways through increased nutrient concentrations (principally phosphorus and nitrogen).[63] Ireland's current forestry policies also negatively affect its "highest-value habitats" such as bog, heathland, and native woodland by replacing them. And despite a growing awareness of the global climate crisis, few citizens connect this threat with the extinction crisis. And yet "around a third of all species groups examined in Ireland, including plants, birds, butterflies, freshwater fish, dragonflies, and sharks are either threatened with extinction . . . [or] near-threatened," reported the Irish Wildlife Trust in its recent submission to the Oireachtas Committee on Climate Action. Protected under the EU Habitat Directive, some ninety percent of Ireland's highest-value habitats are in "poor" or "inadequate" condition. When compared to other EU countries, Ireland's forest cover ranks second to last, with only about one percent of the country consisting of native woodland and only 0.6 percent of its once-unique raised-bog habitats remaining.[64]

Ireland's new forests have damaging ecological impacts on wildlife and plants—effects stemming from how such forests are grown and harvested as clear-cut monocultures in which spruce and pine

62. Murphy, "Native Trees."

63. Department of Culture, Heritage, and the Gaeltacht, "National Biodiversity Action Plan, 2017–2021," *National Parks and Wildlife Service*, 2017, https://www.npws.ie/sites/default/files/publications/pdf/National%20Biodiversity%20Action%20Plan%20English.pdf, archived at https://perma.cc/9YPC-CLE9.

64. Pádraic Fogarty, "Irish Wildlife Trust Submission to Oireachtas Committee on Climate Action," *Irish Wildlife Trust*, 14 Dec. 2018, pp. 1–2, https://iwt.ie/wp-content/uploads/2018/12/Climate-committee-submission-Dec18.pdf, archived at https://perma.cc/56JG-SVLB.

drastically lower biodiversity levels.[65] Monocultures prevent other types of plant life from thriving since vertebrates and invertebrates rely on a variety of plant species to prosper in an ecosystem; the biodiversity of native fauna and flora suffer as these organisms do not have access to adequate resources.[66] Warnings from the Irish Wildlife Trust's submission are chilling: "The extinction crisis is not something which is happening somewhere else." [67]

Just as native flora and fauna are impacted by the collapse of these ecosystems and the clearcutting of forests, local communities also face disastrous effects. One example occurs through soil damage caused by the felling of an entire forest in one harvest. When trees and their roots are quickly removed, little is left to hold the soil in place. Exposed to the elements, topsoil is blown away, washed into rivers, or drained of its nutrients in runoff rainwater that, no longer absorbed by roots, passes unhindered over exposed soil. Additionally, in areas where soil is thin the bedrock becomes exposed and groundwater is threatened by pollutants seeping deeper into the ground.[68] In the *Shell Guide to Reading the Irish Landscape* (1990), Frank Mitchell describes the particular fragility of Irish soil: "The soil of a country is its most important single resource. Unlike other resources such as oil or metallic ores, the soil is—or should be—inexhaustible, and no nation can afford to ignore its management. In Ireland, because the humid climate encourages soil deterioration, such management is a matter for special concern."[69] Soil quality is especially crucial for rural communities relying on agriculture as their primary sources of income. Additionally, soil washed into rivers serves as an environmental pollutant, changing the natural composition of river ecosystems and resulting in the expenditure of hundreds of thousands of

65. I. Ahlén, "Forestry and the Vertebrate Fauna," *Ecological Bulletins* 21 (1976): 59–62.

66. Veldmen et al., "Where Tree Planting and Forest Expansion Are Bad," 1011–18.

67. Fogarty, "Irish Wildlife Trust Submission," 1.

68. Brendan Wall, Jonathan Derham, Tadhg O'Mahony, eds., *Ireland's Environment: An Assessment, 2016* (Wexford: Environmental Protection Agency, 2016), p. 111, http://www.epa.ie/pubs/reports/indicators/SoE_Report_2016.pdf, archived at https://perma.cc/3RVW-3UUP.

69. Frank Mitchell, *Shell Guide to Reading the Irish Landscape* (Dublin: Country House, 1990), 203.

euros to repair damaged rivers and fisheries.[70] Subsequently, these polluted waters damage drinking water as well.

Healthy ecosystems provide clean water and air, food, flood protection, materials for industries, jobs, physical- and mental-health benefits, and recreational benefits for the local communities depending on them.[71] The stagnation of forestry policies in place for over a century and the "disinterest" in the natural environment by contemporary politicians have denied the Irish such ecological benefits.[72]

Conclusion

McCracken reports that half of Irish trees were under ten years old in 1971.[73] Despite the Free State's good intentions in establishing a forestry program—to provide jobs and timber for a new nation—these policies decimated a cornerstone of Irish identity. And despite heightened environmental awareness, the current forestry program continues to focus primarily on immediate economic gain, ignoring the destruction of Ireland's ecological health and undermining the country's long cultural and social relationship with its woodlands.

Ireland, however, appears ready for another revival, both cultural and environmental, one in which older Revivalist ideals encompass a new ecological awareness. Such a revival would reverse more than a century of harmful forestry practices advocated by the Irish Free State. Yet because the rate of monoculture forestry planting is increasing, the problems created by manmade forests are more acute, according to McCracken:

> If afforestation continues at its present rate of 30,000 acres a year, does this mean that in time the hills will be one vast coniferous

70. The Woodland League, "Submission on Overall Irish Forest Policy, 2010," DAFF, March 2010, p. 12, https://www.agriculture.gov.ie/media/migration/foodindustrydevelopmenttrademarkets/agri-foodandtheeconomy/foodharvest2020/foodharvest2020/submissionsreceived/The%20Woodland%20League.doc, archived at https://perma.cc/63N7-N24Q.

71. Fogarty, "Irish Wildlife Trust Submission," 2.

72. Irish Wildlife Trust, "Re: Submission to Draft National Biodiversity Action Plan (NBAP)," *Irish Wildlife Trust*, 20 Jan. 2017, p. 2, https://iwt.ie/wp-content/uploads/2017/09/IWT-submission-to-3rd-NBAP.pdf, archived at https://perma.cc/2HZ4-ZFW8.

73. McCracken, *Irish Woods*, 146.

> plantation, and if so, is that what the taxpayer wants? Are the mountain roads from which at present one can see miles over the open hills going to turn into long dark tunnels bounded by parallel lines of Sitka spruce or *Pinus contorta*? Will the flat bog-lands with their changing colours be sheets of dark green that know no season?[74]

Beyond the physical alteration of the landscape by commercial-logging forests, how will the national psyche be altered if there are no more expanses of bog and no more native woodlands? Will future generations ever be able to comprehend what they have lost if the landscape of their ancestors is permanently changed?

In *Connemara: The Last Pool of Darkness* (2008), Tim Robinson explores Ireland's future connections to the land: "Now we need dialogue, mutual understanding, sensible legislation, etc.—rare panaceas—and much deeper, a shared sense of the Earth's surface as a palimpsest, the compiled and over-written testaments of all previous generations, which it is our right and duty to read."[75] As Robinson makes clear, more than a change in forestry policies must occur; the Irish must reconnect with their woodlands and recognize the cultural impact that such ecosystems have had on identity—evident in the Irish language, traditional music, and the literary and visual arts—in order to fully dismantle the misleading rhetoric and confront the consequences of the forest fallacy.

74. Ibid., 149.

75. Tim Robinson, *Connemara: The Last Pool of Darkness* (Dublin: Penguin Ireland, 2008), 290.