FORESTRY IN IRELAND
- A CONCISE HISTORY

Arthur Charles (A.C.) Forbes. Forestry Adviser to Department of Agriculture and Technical Instruction 1906. Assistant Forestry Commissioner for Ireland 1919. Director of Forestry 1922-1931.

Photo: Coillte

Forestry in Ireland - A Concise History

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To the memory of those who worked hard
for little reward
and less thanks
to create the asset we all now enjoy.

Foreword

Ireland's forest cover and its history is a record of overexploitation, to the extent that forest, in the truest sense of that word, ceased to exist on the island for well over two hundred years prior to the beginning of the twentieth century. Centuries of unsustainable forest management, allied to a grazier society, put paid to indigenous woodlands and any hope of their regeneration. Island vegetation is known to be particularly vulnerable to population and grazing pressure - quite simply there is not enough space for forest refugia to shelter and reclaim the land as and when opportunities arise. Scattered remnants of indigenous forest did remain but they were brushed into the folds and corners of the land, and were kept there by generations of sheep and cattle.

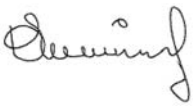
Around the end of the 18th century the home-based parliament of the time, through the agency of the Dublin Society, recognised the parlous state of the forest cover and attempted a restoration, based on incentives to landowners to plant farmland. Valiant though this effort was, it was short-lived and had little effect. But the seed was sown, though it would take all of the 19th century and more before it germinated and a fledgling forest programme was once more begun in the early 1900s. This time, however, the programme was sustained by successive indigenous governments, grew apace, and was supplemented by the EU from the early 1980s as part of the programme to reform the Common Agricultural Policy and sustain rural communities. The successful forest industry we see today is therefore based on a hundred years and more of sustained progress and endeavour by policy makers and foresters.

Tracing the history of these developments requires a combination of historical, ecological and forestry skills. We have first and foremost the vegetation history, remembering that forest cover has itself waxed and waned in the past under the influence of successive glaciations; the impact of policies and often the lack of policies; and whole area of forestry practice and how this has impacted on forest cover. Putting all these together in a relatively short publication requires a great deal of skill and judgement – what to leave out as much as what to include.

Dr Niall OCarroll has performed these tasks admirably in this book. With almost a half century of working in and around forestry, he has accumulated a huge reservoir of knowledge and a wealth of anecdotes relating to forestry in Ireland. He has been able to organise and reflect on this experience and,

most importantly, communicate it in a factual but lively manner which holds the reader's attention throughout.

This year, 2004, is the hundredth anniversary of forestry in Ireland, from its beginnings at Avondale in Co Wicklow. It is an event well worth celebrating; COFORD's main contribution to this notable milestone is *Forestry in Ireland – A Concise History*. We are proud to publish this insight, from one of the most accomplished foresters of his time, into the history of forestry in Ireland, as a fitting tribute to a century of national achievement.



David Nevins
Chairman

Dr Eugene Hendrick
Director

Réamhfhocal

Baineann clúdach agus stair na foraoiseachta in Éirinn le róshaothrú, sa mhéid is nach raibh a leithéid agus foraoiseacht ann, sa chiall is firinní, ar an oileán ar feadh breis is dhá chéad bhliain roimh thús na fichú aoise.

Chuir na céadta de bhainistíocht foraoiseachta gan inbhuanaitheacht, chomh maith le sochaí féaránach, deireadh le talamh coille dúchasach agus dóchas ar bith eile den athghiniúint. Tá cáil ar fhásra oileáin bheith leochaileach don bhrú daonra agus féaraigh- go simplí níl go leor spáis ann d'ainmhithe na foraoise le dul ar foscadh agus an talamh a shaothrú de réir mar a thagann deiseanna chun cinn. Fágadh taobh thiar iarsmaí den fhoraois dúchasach scaipthe thart, ach scubadh isteach i loig agus i gcúinní an talaimh iad, agus choinnigh na glúnta caorach agus bó ann iad.

Timpeall dheireadh na hochtú aois déag, d'aithin parlaimint bailebhunaithe na linne, le hoibriú Sochaí Bhaile Átha Cliath, staid baolach an clúdaigh foraoiseachta agus rinneadh iarracht ar athshaothrú, bunaithe ar scéim deontais a thabhairt d'úinéirí talún talamh feirme a chur.

Cé gur iarracht chróga a bhí ann, níor mhair sé i bhfad agus ba bheag éifeacht a bhí leis. Ach bhí an síoda curtha, agus cé gur thóg sé an naoú aois déag ar fad agus níos mó sular ghinidigh sé, cuireadh tús arís le clár foraoiseachta gearrcach san luath míle naoi gcéad déag.

An uair seo, afách, mhair an clár trí rialtais dúchasacha leanúnacha, a d'fhás go tapaidh, agus a fuair tacaíocht ón AE ó na luath ochtóidí ar aghaidh mar chuid den chlár le leasú a dhéanamh ar an gComhbheartas Talmhaíochta agus pobail tuathúil a chaomhnú. Mar sin, is de thoradh dul chun cinn marthanach breis is céad bhliain agus iarracht lucht déanta beartas agus coillteoirí an tionscal rathúil foraoiseachta atá ann sa lá inniu.

Tá meascán de scileanna staire, éiceolaíocha agus foraoiseachta de dhíth le stair na bhforbairtí seo a rianú. Ar an gcéad dul síos tá an stair fásra againn, ag tabhairt san áireamh gur líonadh agus gur caitheadh an clúdach foraoiseachta féin san am a chuaigh thart faoi thionchar oigrithe leanúnacha; tionchar na mbeartas nó go minic an easpa beartais; an réimse ar fad a bhaineann le cleachtas foraoiseachta, agus an tionchar a bhí aige seo ar chlúdach foraoiseachta. Tá gá le an-chuid scil agus breithiúnas leis an rud ar fad a thabhairt le chéile in aon fhoilseachán gearr amháin- an rud le fágáil ar lár chomh mór céanna leis an rud le cur san áireamh.

Chuir an Doctúir Niall OCarroll na tascanna seo i gcrích ar fheabhas sa

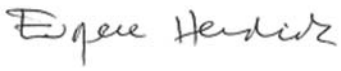
saothar seo. Le beagnach leath chéad caite aige taobh istigh agus thart timpeall ar réimse na foraoiseacha, thiomsaigh sé taiscumar ollmhór d'eolas agus saibhreas scéilíní a bhaineann leis an bhforaoiseacht in Éirinn.

Bhí sé de chumas aige a chuid taithí a chur in eagar agus machnamh a dhéanamh air, agus níos tábhachtaí fós, é a chur in iúl i mbealach fíorasach ach beoga, rud a choinníonn aird an léitheora síos tríd.

Is féile chéad bhliain í an bhliain seo, 2004 den fhoraoiseacht in Éirinn, óna thús ag Avondale, Contae Chill Mhantáin. Is ócáid í ar fiú go mór a cheiliúradh; príomh chúnaimh de chuid COFORD den chloch mhíle suntasach seo ná *Forestry in Ireland – A Concise History*.

Táimid bródúil as an léargas seo a fhoilsiú, ó dhuine de choilleoirí is oiltí na linne sin, ar stair na foraoiseachta in Éirinn, mar ómós oiriúnach do ghlún d'éacht náisiúnta.

David Nevins
Cathaoirleach



An Dr Eugene Hendrick
Stiúrthóir

Preface

It may be useful to record at the outset that the present writer is, first and foremost, a forester, so that this account is that of a professional practitioner of the science of forestry.

I hope this leads to a balanced approach to the essence of the subject, with less emphasis on details of administration and politics, although these, too, have their rightful place.

I have drawn on personal experience, conversations down the years with senior colleagues, and accumulated papers, generally carbon copies of official documents referred to the top professional officer 'for information'[1].

From early in my career I took advantage of all available opportunities to acquire books and pamphlets dealing with forestry, and especially forestry in Ireland. It may be that the present project was at the back of my mind for years past, but it only emerged as a definite intention some years into my retirement. As a result, when I began this work I found that most of the necessary material was available on my own bookshelves. There were plain gaps, of course, which had to be filled, and there may still be some, but I think not too many. It arises from the nature of forestry in Ireland that published material, apart from recent years, is scant.

This narrative deals primarily, though not exclusively, with forestry in the Republic of Ireland and its predecessor, the Irish Free State, as constituted since 1922. A full account of developments in Northern Ireland is given by Kilpatrick (1987).

Niall OCarroll

June 2004

[1] With permission of the Department of Agriculture and Food.

Réamhrá

Is fiú a lua ag an tosach gur coillteoir ar an gcéad dul síos é an t-udar seo, mar sin is cuntas é seo ó chleachtóir gairmiúil ar eolaíocht na foraoiseachta.

Tá súil agam go dtagann toradh le cur chuige cothrom ar chroílár an ábhair, le níos lú béime ar na mionsonraí a bhaineann le riarcháin agus polaitíocht, cé go mbíonn áit dlisteanach acu sin freisin.

Táim ag gníomhú de réir taithí phearsanta, comhráite síos tríd na blianta le comhleacaí sinsearacha, agus thiomsaigh mé páipéir, de ghnáth cóipeanna carbóin de chaipéisí oifigiúla a cuireadh faoi bhráid an príomhoifigigh gairmiúil 'ar son an eolais'[1] .

Ó thréimhse luath i mo gharim beatha, bhain mé leas as gach deis a bhí ar fáil le teacht ar leabhair agus bileoga eolais a bhain leis an bhforaoiseacht, agus go háirithe an fhoraoiseacht in Éirinn. D'fhéadfadh sé bheith go raibh an togra atá idir lámha agam anois i gcúl m'aigne ar feadh na mblianta, ach nár nocht sé é fhéin mar sproic cinnte go ceann cúpla bliain agus mé éirithe as obair. Mar thoradh, nuair a thug mé faoin obair seo, thuig mé go raibh an chuid is mó den ábhar riachtanach ar fáil ar mo sheilf leabhar féin. Bhí bearnaí sonracha ann, ar ndóigh, arbh gá a líonadh, agus seans go bhfuil go fóill, ach ní dóigh liom go bhfuil an t-uafás acu ann. Tagann sé ó nadúr na foraoiseachta in Éirinn, go bhfuil an t-ábhar atá foilsithe gann, seachas i mblianta beaga anuas.

Pléann an fhaisnéis seo go príomha, ach ní amháin, le foraoiseacht i bPoblacht na hÉireann agus lena réamhtheachtaí, Saorstát na hÉireann, mar a reachtaíodh é 1922. Tugann Kilpatrick (1987) cuntas iomlán ar fhorbairtí i dTuaisceart Éireann.

Niall OCarroll

Meitheamh 2004

[1] Le cead ón Roinn Talmhaíochta agus Bia.

Acknowledgements

Assistance in a variety of ways has been received from the following: Paddy Howard; Padraic M. Joyce; Martin Heraghty, (Department of Agriculture, Food and Rural Development); Anne Kehoe (Librarian, Coillte); Tony Mannion (Society of Irish Foresters); Cormac OCarroll; Derval OCarroll; Liam O'Flanagan; Michael Prendergast (Forest Service); Colin Smythe (Publisher); Dr Eugene Hendrick (Director) and staff of COFORD.

Successive Ministers' Reports on Forestry, have proved useful throughout.

Stephen James Joyce, Trustee of the Estate of James Joyce, kindly gave permission for the use of the extract from *Ulysses*, Episode 12 Cyclops, cited on page 21 of this document.

Contents

1.
TIMES PAST

Where to begin a history of forestry in Ireland presents a conundrum.

M.L. Anderson opens his *A History of Scottish Forestry* (1967) with: 'In tracing and correlating the series of events through the passage of time which concern forestry in Scotland it is necessary to choose a starting-point…We can, therefore, conveniently use as our starting-point…the end of the Ice Age, when there were no forests.'

N.D.G. James starts his *A History of English Forestry* (1981) with: 'In some respects, history can be compared to a river following a winding course which, instead of finding its ultimate outlet in the sea, flows on interminably towards the distant future. It is made up of a perpetually moving stream of events and, like a river, it cannot be divided into clear-cut sections…'

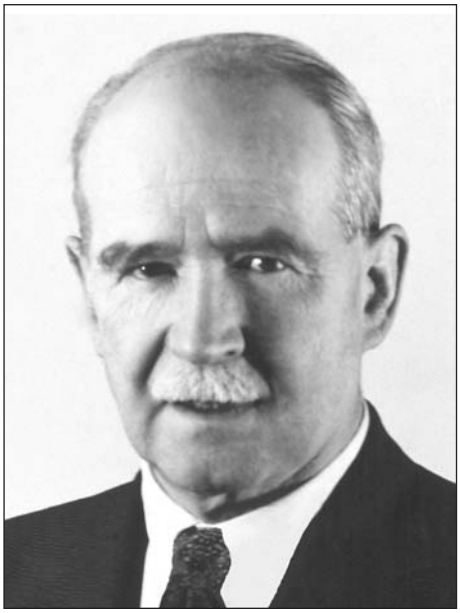
If forestry is to be considered in its simplest terms as the management of woodland for the production of wood, then an appropriate starting point in Ireland is the setting up in August 1907, by the Department of Agriculture and Technical Instruction for Ireland, of a Departmental Committee on Irish Forestry. The Committee submitted its report in April 1908. But, as the French say, *Il faut reculer pour mieux sauter*.[2]

The history of Irish forests consists of a steady decline lasting many centuries followed by a sharp upswing around the beginning of the twentieth century.

The development of Irish forests after the close of the last ice age has been widely described to the extent that it has been interpreted (e.g. Mitchell 1986) and will be briefly summarised here.

About 13,000 years ago (13,000 BP – before present) the climate began to improve with increasing temperature, and a vegetation cover started to develop. Between then and 8,000 BP a variety of species, which included juniper, willow, birch and finally hazel, arrived. From about 10,000 BP the climate allowed the development of closed woodland. Records of pollen remains show the presence of juniper and willow, both disappearing shortly after 10,000 BP, and of birch, hazel, pine, yew, oak, elm and alder. Pine pollen has a maximum from 9,000 to 7,000 BP with oak continuous from 8,000. An abrupt and precipitous fall in the occurrence of elm pollen at about

[2] One must pull back in order to jump better.



Mark (M.L.) Anderson, Director of Forestry 1939-1946. Prolific uthor on forestry matters.

Photo: Edinburgh University

5,100 is ascribed by Mitchell to a disease epidemic similar to that of the recent Dutch elm disease.

He suggests a climax-phase of woodland[3] from 7,000 to 5,100, that from 5,000 to 1650 BP (i.e. about AD 350) primitive farming damaged woodland, and that after that advanced farming destroyed woodland. Farming destroyed woodland through the need to clear areas for the cultivation of crops and for grazing by animals, which also in itself inhibited natural regeneration in woodlands.

Kelly (1997), basing his account on law texts of the seventh and eighth centuries A.D., states: 'The texts do not suggest that large areas of the country were under woodland. On the contrary, the general picture we get is of woods and copses, very often privately owned, whose resources are limited and need careful protection by the law. The author of a ninth-century series of geographical triads clearly regarded large woods as unusual in the Ireland of his day.' He lists the wood-cutting tools which a prosperous farmer was expected to possess, with their Irish language equivalents. These were: the small axe (*eipit*), large axe (*biáil*), billhook (*fidbae*), saw (*tuiresc*), adze (*tál*), auger (*tarather*) and a whetstone (*liae forcaid*) to sharpen those tools.

[3] The type of vegetation which will not undergo further change under the controlling climate (Carpenter 1962).

How realistic those protective provisions may have been is a question raised by the information that the fine for cutting down a ten-foot oak was apparently the same as that for cutting down an eighty-foot oak.

Irish townland names are thought to have been fixed about the eighth century AD (McCracken 1971). Patrick Weston Joyce in his comprehensive three-volume account of Irish place-names (1869-1913) writes: 'All our historians, both native and English, concur in stating that Ireland formerly abounded in woods, which covered the country down to a comparatively recent period; and this statement is fully borne out by the vast numbers of names that are formed from words signifying woods and trees of varying kinds. According to our historians, one of the bardic names of Ireland was *Inis-na-bhfiodhbhaidh* [Inis-na-veevy], woody island. If a wood were now to spring up in every place bearing a name of this kind, the country would become once more clothed with an almost uninterrupted succession of forests.'

Joyce (1903) quotes Giraldus Cambrensis[4], writing at the end of the twelfth century, as saying: 'Ireland is well wooded and marshy. The [open] plains are of limited extent compared with the woods.' That appears to be in conflict with the sources quoted by Kelly (above). The same Giraldus, who regarded the Irish generally as barbarians, was exceptionally complimentary about Irish music and harp-playing. Harps from before the eighteenth century were invariably made of willow, including the fourteenth century so-called Trinity College harp, the emblem shown on Irish coins. Sycamore appears in a harp from the late seventeenth/early eighteenth century, said to have belonged to the famous harpist/composer Carolan (1670-1738)[5], and other ancient harps incorporated elements made of yew, spindle wood (*Euonymus europaeus*), birch and pear (Rimmer 1969). It is nowhere suggested that those trees were specially cultivated with harp manufacture specifically in view.

Mitchell believes that Scots pine 'probably died out in Ireland in the early centuries of the Christian era' although Nelson and Walsh (1993) refer to Neil Murray's finding of a continuous record of pine pollen right up to the surface layers of Clonsast bog, in Co Laois, while accepting that the pollen from recent centuries most likely derived from plantations of trees raised from mostly imported seed.

According to Joyce (1903) the Brehon laws (7th to 9th centuries AD) classed pine (in Irish *ochtach* or *giumhas*) among the 'chieftain' trees, together with oak, hazel, yew, ash and apple. Dwelling houses, he states,

4 1146-1223. Welsh historian of the Anglo-Norman invasion.

5 Nelson and Walsh (1993) cite 'reliable evidence' that sycamore was being planted near Derry about 1610.

were nearly always of wood, the most common of which were deal (pine), oak and yew. While we may take leave to doubt the literal or historical veracity of ancient lore, there is no doubting that it is generally based on a kernel of fact.

Mitchell also speculates on the fact that non-native species such as horse chestnut and sycamore develop leaves earlier than natives such as oak and ash, suggesting that the native varieties have developed from late-flushing ecotypes[6] which arose through local natural selection in response to the frequency of spring frosts. In Ireland horse chestnut is always the first to open its buds. The more important native tree species are, among the broadleaves: oak (sessile and probably pedunculate), ash, wych elm, birch (silver and downy), alder, wild cherry, mountain ash (rowan), aspen, some willows and whitebeams. The major introduced broadleaves include beech, sycamore and horse chestnut. Among conifers Scots pine was native and widespread but probably became extinct and was reintroduced. Yew and the shrubby juniper are also native members of the conifer plant order. All other conifers are introduced species.

McEvoy (1958) points out that 'by comparison with England and the Continent Irish agriculture was characterised by its emphasis on livestock, especially cattle on open range, in a climate which allowed all-the-year-round grazing. Under this system regeneration would be lacking and the forest would be gradually thinned out even without recourse to extensive fellings. Incidentally, the Normans added the rabbit and the fallow deer to the herbivorous enemies of the forest.'

According to Mitchell, raised bogs, characteristic of midland areas, began to form 'not less than 7,000 years ago', while blanket bogs, occurring on flat and undulating ground along the western seaboard and at high elevations, began to form about 4,000 years ago.

The extensive occurrence of natural forest is clearly evident from the near-constant presence of tree stumps, usually at or close to the boundary between peat and mineral soil. Blanket bogs have mostly Scots pine, while oak, Scots pine, alder and birch, with some yew, are found beneath the raised bogs. One of the causes of the death of those forests was their gradual submergence beneath the gradual but persistent spreading of the peat cover.

There appears to have been no systematic or contemporary recording of the gradual disappearance of native forests over the years and centuries.

[6] Ecotype: a distinct race resulting from the selective action of a particular environment and showing adaptation to that environment (Wright 1962).

Watts (1984) points out that 'in Ireland the description of the detailed history of woodland sites is more difficult than in England where abundant documentation may exist'. According to Alice Stopford Green (1926) 'All tillage and civilisation as we understand them began when people had iron tools in their hands. Then for the first time they had axes to hew down the heavy forests of the plain, and to plough the fertile lands opened along the rivers. The fine bronze spear or blade was good to slay a man in battle; it was no use against the wood of a thousand years' growth, or to trench up the heavy soil. It was only the man with the iron axe who could conquer the giant oak of the forest, and the man with the iron plough who could till the cleared land.' The Iron Age is thought to have begun in the 3rd century BC (Connolly 1998).

Population pressure and the need to produce food certainly played a part in forest clearance. With a population rising to 8.2 million by 1841, there were demands for wood for industrial use in housebuilding, iron smelting, cooperage, shipbuilding, glass-making, tanning, etc. (McCracken 1971). We must depend on occasional contemporary snapshots of the situation. MacLysaght (1950) writes that: 'As the [seventeenth] century drew to a close landowners and their agents began to give some attention to the art of forestry which while the natural woods of the country were still plentiful, had not concerned them.' He records that in 1654 a forestry service was set up in Wexford and Wicklow, later extended to Carlow and Kildare. In a footnote he quotes Petty's[7] estimate, in the Kenmare mss, 'that the woods of Ireland might, with the help of Norwegian imports, last some 50 years from that date (1673).' Anderson (1967) reports imports of timber to Scotland from Ireland, 'not yet entirely denuded', in 1507. O'Brien (1918) records ironworks, common in the early part of the eighteenth century, ceasing to work 'owing to the timber of the country having been used up for fuel', and quotes Kinahan's (1889) opinion that 'the woods finally gave out in 1765'. He suggests that 'the country must have been completely denuded of timber' and goes on to quote Young[8], writing in his *Tour*: 'Through every part of Ireland in which I have been, one hundred contiguous acres are not to be found without evident signs that they were once wood, or at least very well wooded…The kingdom exhibits a naked, bleak, dreary view for want of wood, which has been destroyed for a century past…' *Deire na gcoillte*[9] indeed. Or, as another anonymous poet put it: 'Tis cause enough for grieving,

7 Sir William Petty (1623-1687). Born in Hampshire. Mapped the confiscated lands of Ireland ('The Down Survey') in the 1650s.

8 Arthur Young (1741-1820) first visited Ireland in 1776. He returned in the following year and stayed for two years. His *A Tour in Ireland* was published in 1780.

9 'The last of the woods'. From an anonymous Irish poem.

/ Our shelter felled about us, / The north wind freezing / And death in the sky' (O'Connor 1962).

O'Brien summarises a series of Acts of the Irish Parliament from 1698 to 1792 which were intended to halt or reverse the increasing destruction of the woods. He goes on to state that: 'It is quite certain that in spite of these Acts the destruction of woods still went on', and quotes one Newenham (no publication details, possibly 1809): 'The precarious state in which Ireland had long been, and the refuge which its forests afforded for criminals and outlaws, rendered the landlords careless with regard to the preservation of their lands and woods, and, rather, it would seem, adverse to their existence, for in many old leases clauses are to be found requiring tenants to use no other article for fuel but timber.' O'Brien considers Newenham to be 'by far the most enlightened writer on Irish affairs' in the eighteenth century.

Some remnants of semi-natural woodland survive; examples are at the Vale of Clara, Co Wicklow; Glengarriff, Co Cork; Killarney, Co Kerry; Uragh Wood, Co Kerry; Brackloon, Co Mayo and Abbeyleix, Co Laois. The term 'semi-natural' refers to woodlands of native local origin which have been subject to some degree of human management and exploitation, but not planting.

The more socially-discerning classes in the 18th century found the situation worrying. Swift, in a letter of 1732, wrote 'Tipperary…is like the rest of the whole kingdom, a bare face of nature without houses or plantations' (Nokes 1985). In 'An Humble Address…' one of the *Drapier's Letters* (1735), listing 'only those wishes of the nation, which may be in our power to attain' he includes 'Sixthly, That the defects in those acts for planting forest trees, might be fully supplied, since they have hitherto been wholly ineffectual; except about the demesnes of a few gentlemen; and even there, in general, very unskilfully made, and thriving accordingly. Neither hath there yet been due care taken to preserve what is planted, or to enclose grounds; not one hedge, in a hundred, coming to maturity, for want of skill and industry[10]. The neglect of copsing woods cut down, hath likewise been of very ill consequences. *And if men were restrained from that unlimited liberty of cutting down their own woods before the proper time, as they are in some other countries; it would be a mighty benefit to the kingdom* [emphasis added]. For, I believe, there is not another example in Europe, of such a prodigious quantity of excellent timber cut down, in so short a time,

[10] 'As to improvement of land; those few who attempt that, or planting, through covetousness, or want of skill, generally leave things worse than they were; neither succeeding in trees nor hedges; and by running into the fancy of grazing, after the manner of the *Scythians*, are every day depopulating the country' (Swift 1728).

with so little advantage to the country, either in shipping or building …

'So that, I think, little is left us, beside the cultivating our own soil, encouraging agriculture, and making great plantations of trees, that we might not be under the necessity of sending for corn and bark from England, and timber from other countries', and concluding, of politicians, 'that ninety nine in a hundred, have done abundance of mischief.'

Swift followed his own inclination in this regard. 'Out of doors we know that he beautified the churchyard and the deanery garden of St. Patrick's, Dublin, with plantations of elms, even shifting tombstones, and angering parishioners, to make room for them' (Ehrenpreis 1983). He even set out his ideal in verse (Davis 1967):

I often wish that I had clear
For Life, six hundred Pounds a Year,
A handsome House to lodge a Friend,
A River at my Garden's End,
A Terras Walk, and half a Rood
Of Land set out to plant a wood.

In the *Drapier's Letters* passage quoted above, Swift may have been referring to laws passed by the Irish Parliament after 1600. Generally these were intended to promote and protect woods and plantations but apparently little if anything was done to implement or police them.

More influential was the Act of 1784-5. This explicitly recognised that previous laws had been ineffectual. It gave certain classes of tenants who planted trees the right to harvest them, either for their own use or for disposal. It also required planters to register their plantations by affidavit and/or to publish a notice in the *Dublin Gazette*. And it provided that owners of goats found trespassing in woodlands might be fined 20s [£1.0s.0d] for each goat (Anderson 1944).

In examining the effects of the Acts of 1784-85, Anderson, perhaps understandably, refrained from a complete examination of the *Dublin Gazette* records but did examine the records of the four years 1805, 1810, 1829 and 1844 and concluded that 'considerable areas must have been planted – very much greater than those under the Dublin Society's premium scheme', and estimates that in the sixty years from 1791 to 1850 a total area of about 25,000 acres was planted. He further points out that since most of these trees in 1940 would have been from 90 to 140 years old, therefore 'a considerable proportion of the old and mature trees which have been cut during the present emergency [the war of 1939 – 1945] must have been planted under this Act'. He goes on to list some such areas which had passed into the ownership of

the Forestry Division (later the Forest Service) and which still survived at the time of writing in various properties of a number of state forests, e.g. Ballymahon (Newcastle, Clonkeen and Forgney), Coolgreany (Newtown), Delgany (Kindlestown Upper) and Killeshandra (Gartinardress and Marahill). He also reckons that an area of similar origin at Bree (Craan) was clearfelled 'several years ago'.

Anderson also identifies 'a black period of depression for forestry from about 1850 until about 1920, not entirely unconnected with the operation of the various Land Purchase Acts…but also owing to the importation of cheap timber and other forest products from abroad. There is every reason to think, however, that the increase in forestry activity since 1920 will be maintained in view of the increasing value of forest products and the increasing competition for them.'

The basis of the land-hunger which affected Irish forest policy until near the end of the twentieth century can be appreciated from reading passages from Moore (1887). George Moore (1852-1933), the fourth-generation owner of a Co Mayo estate, had aspirations to be an artist. He had lived in Paris on his Mayo rents from 1873 until he was informed that his income was falling as a result of the activities of the Land League (Frazier 2000). He returned to Mayo in 1880, planning to negotiate rent reductions with the tenants. He described local circumstances as he observed them: 'You want to know what Ireland is like?…The country exhales the damp, flaccid, evil smell of poverty – yes, a poverty that is of the earth earthy. And this smell hangs about every cabin; it rises out of the chimneys with the smoke of the peat, it broods upon the dung-heap and creeps along the deep black bog-holes that line the roadway, and the thin meagre aspect of the marshy fields and the hungry hills reminds you of this smell of poverty – the smell of something sick to death of poverty…

'Driving along the bleak roads suddenly we see trees, and through the foliage the grey lake glitters, and its many aspects are unfolded; long wooded promontories, islands, ruined castles and wide expanses of white water. This is Lake Mount, the property of the mysterious being of whom nothing seems to be known except that he lives in Paris and writes French poetry. The park is handsome; it is adorned with trees more than a century old…'

He describes the tenants. 'These people are called small farmers; they possess from three to ten acres of land, for which they pay from twenty to five and twenty shillings an acre [perhaps €65-100 per acre or €160-250 per hectare in recent money terms]. In their tiny fields, not divided by luxuriant hedges like the English fields, but by miserable stone walls which give an

unspeakable bleakness to the country, they cultivate oats and potatoes. With the former crop and the pig they pay the landlord, with the latter they live.'

He also had to meet tenants on his other properties some thirty miles to the north. 'During the first eight or nine miles the country presents its usual sad aspect of servitude and poverty. We see on our right and left the same miserable cabins stuck here and there under the potato-fields that feed the family; poor miserable cabins built of loose stones without a tree or a bush to hide their nakedness or shelter the inmates from the wild wet winds – wet with Atlantic surges – that howl up and down the bleak roads and sterile uplands… and along the hillsides the woods of the domain lands extend in curving lines, and I see the square white houses of the landlords gleaming at the ends of the vistas – handsome square white houses – each is surrounded with a hundred or so filthy tenements that Providence and God have decreed shall unite to keep the master in affluence and ease…So we enter on a new country, a country even bleaker than the one we left. No landlords live here, they only come here to collect rent.'

Micks (1925) described conditions 'in east Connaught and similar inland districts [about 1891] where among the numerous small holdings there is much good land, but practically altogether devoted to the cattle-trade, except residences and demesnes of noblemen and gentlemen of whom the number was considerable. The bulk of the population eked out a precarious existence on small scattered plots of poor land, generally reclaimed bog or moor, and supplemented the inevitable deficiency obtained from their holdings by migrating to Great Britain for some months each year as harvestmen, etc. For the last thirty years or more the tenants of the small holdings of poor land looked with naturally wistful eyes on the good grass lands quite close to them, because the purchase and apportionment of the cattle land was the only means of improving the condition of this struggling tenantry.'

A population living in such conditions understandably did not welcome the prospect of a competitor for the land they needed. That land-hunger led to a situation where subsequent native Irish governments all but prohibited the planting of any but the poorest and most unproductive land.

The gradual development of agrarian protest during the nineteenth century, with its attendant political uncertainty, was not conducive to long-term investments such as tree-planting. Nevertheless planting continued, whether motivated by fashion or the prospect of profit, and FitzPatrick (n.d.) records that by the end of the eighteenth century there were notable woods in Co Wicklow in Shillelagh, Ballycurry, Avondale, Grange Con, Kilruddery, Powerscourt, Glenart and Charleville. He lists other estates where substantial

plantings took place: Shane's Castle (Co Antrim), Clandeboye (Co Down), Caledon (Co Tyrone), Baronscourt (Co Tyrone), Kinnitty (Co Offaly), Curraghmore (Co Waterford), Ennis (Co Clare), Durrow (Co Laois), Abbeyleix (Co Laois), Rockingham (Co Roscommon), Loughcrew (Co Meath), Killarney (Co Kerry), Tullamore, (Co Offaly), Ballygar (Co Galway) 'and dozens of others still notable for their trees'. He also quotes contemporary survey returns which show a steady increase in the area of woods and plantations from 305,000 acres (123,000 ha) in 1851 to 340,000 acres (138,000 ha) in 1880.

But the Land Acts, from 1870, altered the climate for the estates. They were encouraged, or compelled, to sell their land to the Land Commission, set up in 1881[11], which then transferred it to tenants in return for long-term repayment commitments. Landlords saw the end of the road and not only ceased to plant, but proceeded to sell their woods for welcome cash returns.

The Land Acts were continually revised and the Land Commission worked steadily to substitute for a system of landlordism and tenants-at-will a system of resident proprietorship, the tenant having a full fee-simple estate in the farm. By 1954 a total of 450,000 holdings, comprising some 6 million ha, or about 85% of the land of the Republic of Ireland, had been dealt with under those various acts (O'Shiel and O'Brien 1954), and it is reasonable to assume that much of the non-agricultural land involved had been transferred to the forest service under its various titles.

There is evidence of emotional concerns about woodland acquisition by the state. For example Lady Gregory, of Coole Park, Co Galway, recorded in her diary, '*Jan 4. [1921]*. On Monday I had a long talk with Margaret [her widowed daughter-in-law]. She cannot keep the woods – she thought not the house – that all must go – land and rates so high.

'*Oct. 20, [1927]*. Today Mr Reid, of the Land Commission, and Mr Donovan[12], of the Forestry Department, came and formally took over Coole, took possession. It no longer belongs to anyone of our family or name. I am thankful to have been able to keep back a sale for these years past, for giving it into the hands of the Forestry people makes the maintenance and improvement of the woods secure, and will give employment and be for the good and dignity of the country.

'*Dec. 31 [1929]*. … The coming-of-age [of her grandson Richard Gregory] is not now the coming into ownership of his property and home that

[11] Its statutory functions were to fix fair rents and to acquire and redistribute land.

[12] Timothy Donovan, 1882-?, entered the forestry school at Avondale in 1906. He took charge of the first state forest property in Ulster, at Ballykelly, Co Derry, in 1910.

Lady Augusta Gregory of Coole Park, Co Galway, enthusiastic tree planter and preserver of woods.

Photo: Colin Smythe Publishers.

were owned by the generations before him. And although I am thankful it is in such good hands as those of the Forestry Department there is a little sadness in this.'

But all was not smooth sailing: '*Jan. 26 [1930]*. A peaceful day except that the grass upon the edge of the drive round the yard is being ploughed up by Mr O'Beirne's[13] car and I must remonstrate.

'*Jan. 1, [1928].* The sale of the woods and house has been completed. I hope to be able to keep it [the house] as long as the children need a home. All land troubles are at an end. I don't know how my money will hold out.'

Lady Gregory took a letting of the dwelling-house and offices, gardens and front lawns, which was renewed annually until her death in 1932 (Gregory 1946). The sale of the house for demolition in 1941 was on foot of a government decision[14] and was not the responsibility of the Forest Service.

Even after independence 'Some destruction continued, principally the felling of trees which no one wanted when people were land-hungry. Lady

[13] Michael O'Beirne, Forestry Inspector, Gort, was later Superintendent of Avondale Forestry School.

[14] 'The Irish government had considered using it as a military hospital, but the local surveyors who looked over it considered that it was in such a state of neglect, after being empty for nine years, that the cost of making it habitable again would be too great to justify the expense' (Smythe 1983).

Gregory regretted the destruction of trees in 'Lord M's' demesne. 'How sad it is,' she said to Speakman, 'to see all the wood disappearing. When I came through town on Friday I saw a number of carts filled with logs. Formerly it was peat they used.' She would see the woods around her old home at Roxborough annihilated – all the timber cut by 1929 except for some lime trees, 'the wood not being so useful'.

Trees were associated with landlords. One of the most comprehensive tree-felling exercises took place in Co Laois on the Castle Durrow estate after the departure of Lord Ashford. Over 650 acres of oak, beech and ash were cleared between 1922 and 1928 with great difficulty; long cross-cut saws worked by four men divided up the great trees while the saw-doctor stood by. 'The Plain of the Oaks[15] became a huge barren space to be divided up among needy farmers by the Land Commission' (Somerville-Large 1999).

In a booklet about Coole it is stated that '[Lady Gregory] took some consolation from the fact that the Forestry Department would take over after her departure, confident that they would maintain and extend the generations of planting. Her optimism was unfounded' (Feehan and O'Donovan 1993). That last comment is unjustified. The woods were managed and maintained by the Forest Service until they were handed over as a non-commercial nature reserve to the Wildlife Service of the Office of Public Works. The Forest Service had no land available on which to extend the plantations.

Some private forest estates have survived and been developed. Examples are at Knockrath, Co Wicklow; Charleville, Co Offaly; Farnham, Co Cavan and Knockdrin, Co Westmeath. So dedicated was the ownership to that development in some cases that professional expertise was employed. For example William Y Chisolm (1898-1969), a graduate in forestry of Edinburgh University, was employed at Birr Castle, Co Offaly, Oakpark, Co Carlow, and Lismore Castle, Co Waterford (FitzPatrick 1970).

H.M. FitzPatrick in 1956 wrote, in reply to a query as to what were the usual reasons for selling timber from private estates 'The most usual reason is a desire to make money. In the case of "old families" it is often dire necessity which prompts the felling of "the trees" which were "always there" and are a part of the place and very nearly a part of the family. Sentiment has preserved them long past their normal time, and their felling is determined eventually by empty coffers and sudden demands for large sums of money, such as for Death Duties. The massacre of the woods which then takes place

[15] A reference to the place-name, Durrow: 'from the Irish *Dearmhagh*, the field of the oaks'. In connection with the Co Offaly location of the same name Adamnan [St. Adhamhnán 635-704] uses the Latin form *roboreti campus*, 'the plain of the oaks' (Joyce 1869-1913).

usually confirms "the family" in the belief that cutting down trees is a barbarous practice – they are large and awkward, and extraction does severe damage to roads and avenues never intended for heavy haulage.

'In a word, selling trees is a tragedy on a normal Irish Estate – the second last act (the last one is selling the estate). It is very seldom regarded as commercial business and very rarely indeed, as selling a crop of timber' (OCarroll 1957).

The decline and recovery of our forests, so far as it is on record, may be summarised chronologically thus:

Time	*Status/Event*
13,000-8000 BP	Climate improving; some woody species arrived.
10,000 BP +	Closed woodland including birch, pine oak, elm etc.
7,000-5,000 BP	Climax woodland.
7,000 BP +	Development of midland raised bogs.
4,000 BP +	Development of blanket bogs, woodlands overcome and suppressed by spreading bog.
Early AD	Possible extinction of native Scots pine. Norman colonisation. Introduction of fallow deer and rabbit.
Medieval period	Increasing demand for wood for industry.
Late 16th century	Beginnings of concern for security of wood supply
1673	'Woods might last 50 years.'
Early 18th century	Closure of ironworks due to exhaustion of timber fuel
1765	'Woods gave out.'
18th century	Laws to protect woods, and explicit concern for future wood supply (e.g. Swift).
1784-5	Tree planters' rights protected.
1798-1850	25,000 acres (10,000 ha) planted (much of the resulting crops felled during the 1939-1945 war).
1850-1920	Land Acts and cheap imports inhibited investment in forestry.
1920s	Continued large-scale fellings.
1928	Forestry Act introduced the state control of tree felling
1930s +	State and private afforestation programmes and conservation of remaining areas of semi-natural woodland.

2.
POSITIVE MOVES

The Dublin Society ('Royal' after 1820) was founded in 1731 to encourage industry and agriculture. It did so by offering grants ('premiums'[16]) and medals for specific projects. The grant scheme was first applied to planting in 1741, the funds being supplied by the members. In 1747 funds were made available from the Privy Purse and in 1761 and subsequent years money was voted to the Society by the Irish Parliament, known later as 'Grattan's Parliament'. In 1765 grants were offered to the person who had the greatest number of oaks, not less than 160 per acre [395 per hectare, i.e. spaced at 5 x 5 m] in a thriving condition seven years after claiming a medal.

Various conditions were imposed to try to ensure the safety and maintenance of the plantations, but, as with all such schemes, fraudulent practices developed. In 1808 the Society resolved that the planting premiums be discontinued. But the scheme could not have survived in any case since, after the Act of Union, 1800, 'at the earliest opportunity the Imperial Parliament reduced the Votes-in-Aid to the Society to a sum insufficient for the maintenance of the educational and scientific institutions the Society had founded' (Departmental Committee 1908b Appendix 71). Several counties were surveyed early in the nineteenth century to determine the condition of plantations in respect of which grants had been awarded. Many of them were found to be thriving. For instance, in a report of 1802 on Co Mayo, eight plantations covering 73 acres are stated to be all 'of good growth and preservation except those of Mr Bourke, of which not a trace remains'[17].

In a summary comment on the scheme Moss concluded: 'The system seems to have done a great deal indirectly, and by force of example. It did not, however, lead to the creation of a single plantation on a really large scale, and it can scarcely be claimed that it promoted forestry in the proper sense of the term.'

One notable feature of the scheme is that, being funded by the

[16] Use of the term 'premia' as the plural of 'premium' is wrong, as agreed by authorities such as *The New Fowler's Modern English Usage*.

[17] In 1794 Peter Burke [*sic*] was paid £7 0s 0d for planting 2 roods 25 perches [1.62 ha statute measure, 1.86 ha Irish measure] and enclosing 60 perches [0.15 or 0.25 ha], rath [ringfort]. The bulk of the premiums for Mayo went to Lord Altamont and Lord Sligo (Anon. 1806 p 128).

independent national parliament[18] in Dublin, it was probably the first, and for a long time the only, state afforestation grant scheme anywhere in the world, and, moreover, it was specifically Irish.

One of the most notable state-promoted afforestation schemes was that of the Landes (literally 'sandy tracts') on the Bay of Biscay, in Gascony, France. It was begun about the turn of the 18/19th centuries, the main purpose being to halt the landward spread of sand dunes then estimated to be moving at the rate of twenty to thirty yards a year (Reed 1954) [20 to 30 *miles* according to Lowenthal (1956)]. The state paid for initial infrastructural work – drainage and roads – but by 1892 a total of 1,445,900 acres (585,000 ha) of private land had been afforested by the proprietors at their own expense (Ministry of Reconstruction 1918, Appendix 3).

Lord Lovat (Simon Fraser, 1871-1933) was appointed British Army Director of Forestry in France in 1917. His job was to arrange for adequate supplies of timber for military activities. In a letter to his wife in August 1917 he wrote 'Did I tell you what a wonderful time we had in the Landes. It is a most lovely country, great tracts of firs slightly disfigured by the resin tapping, but in great masses mixed with rivers, villages, clearings and lovely red-appled orchards. I have never seen a more peaceful prosperous country, and one can hardly imagine that a war is raging in France. There are no men, however, to be seen…We spent three amusing days, bought several forests, arranged for docks and train facilities and visited four sawmills, producing some two thousand tons apiece per month. We did business with several ladies [the men were at war] whose woods and lands have suddenly become extremely valuable. One lady (she was only one remove from a peasant) had four hundred thousand trees in all (worth at least £2 apiece) growing on her estate. She did all her business from her two-roomed cottage, and measured each tree herself before she would sell' (Lindley n.d.).

It is worth emphasising that this deals with a totally man-made forest where previously there was waste land[19], and also worth noting how strikingly effective the local landowners were in responding readily to the new commercial environment. It is also tempting to surmise that a knowledge of the *Landes* development may have influenced the thinking of Seán MacBride on forestry in Ireland (see Chapter 3). MacBride had spent his

[18] Its status defined in 1782 by a resolution moved by Henry Grattan, 'That the king's most excellent majesty, and the lords and commons of Ireland, are the only power competent to enact laws to bind Ireland', subsequently confirmed by the British parliament (McCracken 1971).

[19] As described by Augustine Henry in 1903: 'Where eighty years earlier there had been a million and a half acres of malarious waste land – sand dunes, marshes and lagoons – there now stretched a vast pine forest full of villages and industries' (Pim 1966).

early years in France.

Lovat later became Chairman of the Forestry Commission and, through his personal energy and high-level social connections, saved it from abolition as part of a government economy drive – the 'Geddes Axe' of 1922 (Ryle 1969).

McNamara (1967) describes and quotes extracts from a report on the forestry potential of Ireland prepared for the Gladstone government by Daniel C.B. Howitz following two visits to Ireland in 1883. Howitz concluded that an area of 5 million acres [2 million hectares] in Ireland was most suited to forestry and recommended the planting of 3 million acres [1.2 million hectares] along the western seaboard whose primary purpose, it seems, would be to provide shelter for the agricultural land in that region. In his introductory remarks McNamara describes Howitz as having 'graduated in forestry in 1865'. Apparently in support of this, his 'bibliography' cites '*Danish Forest Graduates 1861 to 1936*, 1936.' McCracken (1971) notes that Howitz 'graduated in forestry in Denmark in 1865' without source reference, while Forbes (1943) describes Howitz's report as 'a most extraordinary document' which 'advocated the planting of a shelterbelt along the entire West coast to exclude the Atlantic gales and to bring down the rain which accompanied them…The species recommended for planting them were apparently taken from a nurseryman's catalogue in alphabetical order. It transpired later that Mr Howitz had no forestry qualifications whatsoever, and must have compiled the report more in the nature of a hoax than as a serious attempt to grapple with the situation at issue.'[20]

The Congested Districts Board was established in 1891 by Arthur Balfour, Chief Secretary for Ireland, with the object of improving agriculture and industry in the poorest parts of Ireland, primarily along the west coast. The Board's Chief Land Inspector, Henry Doran, later gave oral evidence to the 1907 Committee[21] on the project to plant a large tract of land at Knockboy (located to the west of the road from Carna to Glinsk), on the coast of Connemara, Co Galway. It appears that in the course of a debate in the House of Commons in the 1880s, Balfour 'expressed his concurrence with a great many views expressed in favour of extensive planting operations in Ireland on areas that were not suitable for agriculture.' He also 'mentioned that if suitable land could be secured at a reasonable price he would be very glad to have an experiment carried out in the planting of a large tract. There was a

[20] The Royal Danish Veterinary College, having been suggested as the appropriate source by the Danish embassy in Dublin, did not reply to a repeated request for information on Howitz's academic status.

[21] See below.

Father Flannery in Carna at the time. He was a very active man, and having read the speech, he communicated with Mr Balfour and said: "Here is suitable land at hand. I can get you possession of it without any trouble. You can have it at a very reasonable price. I invite you to take up the planting of it and so fulfil your promises."…Then the question arose, was the land suitable for planting, and there was a difference of opinion as to that among the experts. They had the opinion of a German expert, and a Scotch expert, and, I think, the opinion of one or two Irish foresters.' On being asked how opinion ran, Doran answered 'The balance of opinion was not in favour of trying the experiment.' Having outlined the following events, Doran concluded 'the experiment must be declared to be a failure.' The Chairman summed up further: 'It comes to this. That, so far as the Congested Districts Board were concerned, they were handed this over by the Government, without having any choice in the matter?' Doran: 'Yes. They did not originate it' (Departmental Committee, 1908b, Minutes 2099-2110).

W.L. Micks (1925) who worked with the Board for its entire existence from 1891 to 1923, described the project as follows: 'Some months before the creation of the Board a mountain side at Knockboy in Connemara was offered by Father Tom Flannery, P.P., to the Irish Government if it would attempt, as a Relief work, the planting of some hundreds of acres. This tract was exposed to the full force of the south-west wind, and the Atlantic Ocean was only a few miles distant. The Government accepted the offer, as it was felt that, if planting succeeded there, it might be tried anywhere! It did not succeed, and for many years the Board was twitted about the Knockboy "Forest". The selection of the site was not the Board's. The making of deep bog-drains at Knockboy was regarded by the Government as a suitable labour test for a relief work, and Knockboy was conveyed to the Board by the Government with a request that an experiment in planting should be made there. As much of the draining had been done the Board accepted the gift, but with considerable misgivings as to the result. Professor Schlich and Dr William Somerville, two great experts in forestry, were consulted but Science was powerless against the frequent gales from the Atlantic Ocean, which either killed the young trees or gave them a stunted inclination to the north-east. An unforeseen result was that excellent cover was provided by the stunted trees for woodcock and hares.'

Professor Sir William Schlich[22], invited to make a submission to the Committee, drew its attention to his *Report on the Plantations at Knockboy*

[22] Oxford University, Royal Indian Engineering College at Cooper's Hill, Surrey, formerly Inspector General of [Indian] Forests; principal author of the five-volume *A Manual of Forestry*, 1889-1896.

which he had submitted to The Congested Districts Board 'in, I think, the year 1895'. (He concluded his covering letter to the Committee with the comment 'The subject has been discussed, during so many years, so often and so thoroughly that I think what is wanted is "action" rather than further discussion.') His report on Knockboy was published in Appendix 35 to the Committee's 1908 volume.

Schlich inspected the Knockboy site on 10 and 11 July (1895?). Planting had been carried out over the three seasons 1891-1894, using 2.4 million plants of 26 species, 16 broadleaf and 10 conifer. He began his comments with 'The results of planting are so far disappointing', a high proportion of the planted trees being dead. He summed up: 'So far only Mountain, Austrian and Scotch Pines have proved that they will thrive in a locality like Knockboy.' He was also 'inclined to think that many of the plants must have arrived in a condition which made them unfit to cope with conditions so unfavourable as those found at Knockboy[23]. At least I cannot explain in any other way why such species as Alder, Birch and Willow should have proved such failures.'

Augustine Henry's comment in his oral evidence to the committee was 'At Knockboy they behaved on the principle of the old doctors. They gave

General view of the west face of Knockboy Hill showing the surviving north boundary of the failed 1890s state plantation, running lower left to top right.

[23] The inference appears to be that plants were packed so tightly in transit that they heated *en route*, with lethal results.

Remnants of the failed 1890s state plantation at Knockboy, Connemara.

you a prescription, which had numerous drugs in it on the chance that you would get in one of them at least what you wanted. At Knockboy they planted thirty or forty species of trees, and without a shelter belt, and, in a word, I understand nothing more foolish was ever done, and they spent £10,000' (Minute 4046).

OCarroll (1962) reported on the situation at Knockboy in 1961. 'Over much of the area not a sign of a tree remains.' Only a few patches covering about 15 acres [6 ha], relatively sheltered and well drained, still carried a tree cover.

More recent knowledge would leave little doubt that the primary cause of the failure of the tree crop at Knockboy was a deficiency of soil phosphorus. Even with added phosphorus fertiliser the exposure would have had serious adverse effects on crop quality, and we have not enough knowledge of the effectiveness of the original drainage system to know whether it might have been adequate.

The importance of Knockboy in the development of forestry in Ireland lay in the fact that, even though initiated as a political act, and implemented against professional advice, it was available as ready evidence against proposals to plant the only land available for that purpose, i.e. land marginal for agricultural use.

By the early part of the twentieth century the general citizenry of Ireland was becoming aware of the precarious condition of forestry in Ireland. An example of this is the exchange which took place in Barney Kiernan's public house in Little Britain Street, Dublin, on 16 June 1904, as imagined (or recorded?) by James Joyce in *Ulysses*[24]:

- As treeless as Portugal we'll be soon, says John Wyse, or Heligoland with its one tree if something is not done to reafforest the land. Larches, firs, all the trees of the conifer family are going fast. I was reading a report of Lord Castletown's…
- Save them says the citizen, the giant ash of Galway and the chieftain elm of Kildare with a fortyfoot bole and an acre of foliage. Save the trees of Ireland for the future men of Ireland on the fair hills of Eire, O.
- Europe has its eyes on you, says Lenehan.

An important event took place in 1903 when a great storm on 26 February destroyed woods throughout the country. Timber merchants immigrated, others developed locally, and having processed the windthrown timber they wanted more, a demand that landlords, foreseeing instability in their future tenure, were content to supply.

The 1907 Committee reported that 'over 200 saw-mills have been set up within the last four years' (Departmental Committee 1908a).

In 1919 Messrs Lees and Nixon, timber merchants, Belfast, acquired the timber on the estate of Glenfarne Hall, Co Leitrim. So extensive was the operation, with six sawmills operating, that a railway was laid down through the estate to carry the timber to Glenfarne Station on the now-defunct Sligo, Leitrim and Northern Counties Railway, from where it was transported to Belfast and Derry (McGrath 1959).

William Bulfin (1907) wrote: 'The problem of deforestation is tragically eloquent of the evils of foreign rule in Ireland. A wise native Government, drawing inspiration from national needs and national interests, would derive from Irish forests a permanent and considerable revenue. Under foreign rule Ireland is being denuded of her beautiful woods. The axe and crosscut are at work in all directions. A mania for tree slaughter seems to have afflicted the landlords. Hundreds of acres of pine and ash and oak are felled every year and in very few instances are any trees planted to replace the ones that have been cut down. Twenty years ago one of the landlords of the West was asked why he did not plant trees on his waste land and he replied:

[24] Extract from Ulysses, Episode 12 Cyclops reproduced with permision; © Copyright the Estate of James Joyce.

"What! Plant trees to give cover to my damned tenantry to fire slugs at me? Not much."

A few days ago I asked a farmer in southern Offaly why he did not plant, and he said:

"Plant, indeed! Why should I? Is it to give more cover to the landlord's pheasants and hares? Besides, he would come down on me some day and claim all my trees as he is doing now."

'He was not aware that under one of the Land Acts a tenant can make good his claim to all the trees he plants by merely registering them.'

The political sector was also concerned. Seán MacBride, in responding to an invitation to become an honorary life member of the Society of Irish Foresters, wrote (1984) 'I think I can say that I have been keenly interested in the whole question of the reafforestation of Ireland ever since my childhood days[25]. The aim of pursuing an active afforestation policy was an integral part of the Sinn Fein movement in the early portion of the century. Bulmer Hobson, Arthur Griffith, George Russell, James Stephens and my mother [Maud Gonne MacBride] were always emphasising the importance of a re-afforestation policy. The failure of our governments to give adequate recognition to the importance of forestry and forestry-related industries the priority it deserves has been one of the great disappointments of my life.'

The subject of afforestation in the early part of the twentieth century brought some rather bizarre reactions. John Eglinton, in an essay entitled *Reafforestation*, after some eight pages of mystical verbal rambling, comes to what may be his main point 'Have we wandered from the subject of Reafforestation? Not perhaps so very far. We are in quest of the tree-like man, whom our civilisation has hitherto failed to produce, nor does it appear that the seed of him is sown in those "sacred nurseries of blooming youth", our universities' (Eglinton 1917).

In 1936 Bulmer Hobson wrote about Forestry and the Gaeltacht: 'There is one way, and one way alone in which the Gaeltacht can be made prosperous. That way is to turn it into a great national Forest. Such poor agriculture as there is should be left until it is displaced by a more profitable employment, but all the land not used for tillage, and on which timber can be grown, should be planted with fast growing conifers for the supply of commercial timber. In this way alone can Donegal, Mayo, Galway, Clare, Kerry and West Cork produce additional wealth sufficient to maintain their present and future population at a satisfactory economic level.' He quotes Howitz in support of his proposal (Hobson 1936).

[25] See the section on the *Landes* afforestation, above.

In December 1937 John Mackay, an energetic and forceful proponent of forestry, presented a paper, *The Forest and the National Life*, couched in flowery language, to a meeting of An Rioghacht (The League of the Kingship of Christ) in Dublin. Following a list of the percent forest area in eleven European countries he states, without any indication of his source 'Ireland, these Twenty-six Counties, 0.29, or less than one-third of one per cent.' He also appears to be unaware of the existence of a forestry degree course in Dublin, and refers to 'our original Irish pine and spruce'. He also wished 'to emphasise, that once planted there is no second planting' (Mackay 1938).

Clear (n.d.) in the course of a symposium in 1944 tried to restore a sense of sobriety. 'I would like to stress here and now that few of the benefits claimed for afforestation will be achieved unless we concentrate on productive sites…Old woodland sites are the most productive, as is land recently reclaimed from the forest. There is evidence to show that much of the 2,000,000 acres [800,000 hectares] of inferior pastures now gone largely to furze, bracken or rushes was under forest in historical times. This type of land, lying interspersed through or above the truly arable land and below the 1,000' [300 m] contour, might be expected to yield profitable forest crops under proper management.'

We will come later to the establishment of Avondale as a forester training school, but it had a second function described by Forbes (n.d.), which was to test the suitability of various species as commercial forest tree species in Ireland. Many of these had been introduced as ornamental specimen trees but had never been planted on a forest scale.

Forbes also described the laying out of the experimental plots. 'The higher ground was roughly bisected by a broad glade 3 chains [60 m] in width [subsequently known as "the big ride"]. On either side of this glade a row of trees, in which each tree represented the species present in the plots behind, was planted $^{1}/_{2}$ chain [10 m] from the edge of the plots…Right and left of this glade plots 10 chains [201 m] in length and 1 chain [20 m] in width, farming as nearly as possible 1 acre [0.4 ha], were laid off, the narrow side of each plot adjoining the edge of the glade.' In all 19 sections were laid out each consisting of from one to 14 plots, a total of 104 plots covering an area of $121^{1}/_{4}$ acres [49 ha]. Each section was planted with plots of various species of the same genus or group. The genera represented were maples (*Acer*), elms (*Ulmus*), beech, Spanish chestnut and hornbeam (*Cupuliferae*), oaks (*Quercus*), silver firs (*Abies*), spruces (*Picea*), pines (*Pinus*), larches (*Larix*), cedars (*Cedrus*), ashes (*Fraxinus*), chestnut [*Castanea sativa*] coppice, locust tree [*Robinia pseudoacacia*] coppice, Douglas firs (*pseudo-tsuga*), hemlock

'The Big Ride', Avondale 1937. A.C. Forbes's 'broad glade'.

Photo: Coillte

spruces (*Tsuga*), cypresses and junipers, *Thuia*, *Sequoias* and *Cryptomeria*, hickories, walnuts, London plane, tulip tree, etc., cherries (*Prunus*), and poplars (*Populus*).

After five years Forbes listed the species in descending order of merit as expressed in rate of growth and resistance to damage by winter or spring frost. His top ten, in order, were: *Pseudo-tsuga Douglassii* [*P. menziesii*] ('Oregon Variety') [green Douglas fir]; *Picea sitchensis* [Sitka spruce]; *Larix leptolepis* [Japanese larch]; *Larix Europea* [*L. decidua* European larch]; *Cupressus macrocarpa* [Monterey cypress]; *Pinus insignis* [*P. radiata* Monterey pine]; *Pinus laricio* [*P. nigra* var. *maritime* Corsican pine]; *Pinus sylvestris* [Scots pine]; *Abies grandis* [grand fir] and *Tsuga mertensiana* [*T. heterophylla* western hemlock]. (The terminology in the foregoing is that used by Forbes. Present-day equivalents are in square brackets.)

Many of those plots, and other stands dating from about the same period, still survive, and an Irish forester moving through them might understandably remember Samuel Johnson's reflection as he toured the Western Isles 'That man is little to be envied, whose patriotism would not gain force upon the plain of Marathon, or whose piety would not grow warmer among the ruins of Iona.'

A minute of 29 August 1907, signed by T.W. Russell, Vice-President of

the Department[26] appointing 'a Committee to inquire into and report upon the following matters relating to the improvement of forestry in Ireland, viz:

(1) The present provision for State aid to forestry in Ireland;
(2) The means whereby, in connection with the operation of the Land Purchase Acts, existing woods may be preserved, and land suitable for forestry acquired for public purposes; and
(3) The financial and other provisions for a comprehensive scheme of afforestation in Ireland.

'The Committee will consist of the following:

Thomas Patrick Gill, Esq., Secretary of the Department of Agriculture and Technical Instruction for Ireland (DATI) (Chairman);
The Right Hon. Lord Castletown of Upper Ossory, C.M.G., D.L.;
William Redmond, Esq., M.P.;
Most Reverend Denis Kelly, DD., Lord Bishop of Ross, member of the Agricultural Board;
Hugh de Fellenberg Montgomery, Esq., D.L., member of the Agricultural Board;
William Frederick Bailey, Esq., C.B., one of the Estates Commissioners;
William Rogers Fisher, Esq., M.A. Delegate for Instruction in Forestry in the University of Oxford;
Professor John Rich Campbell, B.Sc., Assistant Secretary in respect of Agriculture of the Department of Agriculture and Technical Instruction for Ireland.'

The committee sat on fifteen days from 3 October 1907 to 13 December 1907, took oral evidence from forty-eight persons and delivered its report on 6 April 1908. Together with the report extending to 60 foolscap pages it also published its Minutes of Evidence recording 5,660 oral exchanges together with 74 Appendices (Departmental Committee 1908a, Departmental Committee 1908b). Augustine Henry's robust independence of mind is apparent in one exchange with Professor Campbell who put it to him that 'The popular opinion is that we are wasting money in planting such things as exotic trees.' To which Henry answered 'As to popular opinion on the subject in Ireland, it is worth nothing, except as regards that of a few who have made forestry a special study. People ought not to talk about things they have not studied.' Campbell persisted 'Still we must have some regard to popular opinion?' – 'You must, but I need have none whatever' (Minutes 4054-5). We

[26] Executive head; the President was the political head, answerable to Parliament (Daly 2002).

also get an indication of the pronunciation of the name Elwes (joint author with Henry of the famous *Trees of Great Britain and Ireland*, published in 7 volumes between 1906 – 1913): in minute 4015 of Henry's oral evidence it is printed as 'Elles', presumably as it was recorded by the Committee's note-taker.

The Committee in its Report found that 'The [Land] Purchase Acts have…failed to make due provision for dealing with mountain and other so-called waste land, not part of tenants' holdings, which is being sold with estates, and a considerable proportion of which would be suitable for a national scheme of afforestation.' It quoted one witness (O.R. Jermyn, Manager of a Timber Company): 'When the tenant gets the land he sells the timber because he realizes some money and as he thinks improves his acres.' They also quoted H.C. Villiers-Stuart, an estate owner of Dromana, Cappoquin, Co Waterford: 'The future is too dubious for us except in the case of one's own demesne…. Five years ago I thought I would plant it all [3,000 – 4,000 acres, 1,200 – 1,600 ha], but then things turned up and I thought I would not get my money back.' An extensive timber merchant who 'had been through all the country north, south, east and west' told the Committee 'that in the majority of the cases where he buys there is no replanting. "The land is left derelict." In his opinion the process of cutting without replanting is now going on at "a terrible pace. We shall soon devastate the country."'

The Report suggested that the objects of a national scheme of afforestation might be stated as: 'The maintenance directly or indirectly of an area of woodland sufficient to produce the timber required by the country for domestic and farming purposes, for the development of industries and commerce essential to its prosperity, and for providing shelter needed for successful agriculture.'

It also pointed out that a Forestry Authority already existed within the Department of Agriculture and Technical Instruction 'and that funds only are needed to enable this authority to begin forthwith the work which we contemplate.' It proposed that among the duties of this Forestry Section should be 'to acquire…areas of land suitable for plantation, and existing woods' and 'to plant and manage directly such of those lands as might best be managed by the Central Authority.'

Financial estimates were prepared based on an assumption that 200,000 acres [80,000 ha] be acquired within 10 years, and that free advice and inspection of all privately owned woods and lands would be available.

It concluded generally '*That forestry has, in the past, been deplorably neglected by the Government in Ireland*; and that, in consequence, while the

country is particularly well suited for tree growing, the percentage of land under woods in Ireland is now the lowest of any country, save one, in Europe' [emphasis added]. And further 'That an area of at least 1,000,000 acres [400,000 ha] of woodland is essential for the agricultural and industrial requirements of the country.' And in its concluding remark it desired 'to express in the strongest way our sense of the obligation which lies upon the State to act immediately in this matter.'

Appendix 18 to the Minutes of Evidence provides lists of (a) instances of the felling of timber by vendors of land under the land purchase acts, and (b) instances of the felling of timber by tenant purchasers under the land purchase acts. Among the former is the Ryan Estate, Whaley Abbey, Co Wicklow, where 'the vendor sold all the timber (or nearly all) to a timber merchant for the sum of £1100.' Among the latter is the Fitzwilliam Estate, Co Wicklow. 'On this estate the tenant purchasers are clearing off the timber as rapidly as possible. In one instance of a holding vested two years ago, since then the tenant purchaser has sold £1000[27] worth of timber off it, and planted none…On many other farms on this estate the timber is being sold out of the hedgerows and groves.'

Data 'compiled from Agricultural Statistics' assembled by Forbes on the area of woods in Ireland showed a national total of 119,417 ha, 102,627 in the present Republic of Ireland, 16,790 in the present Northern Ireland, representing respectively 1.41%, 1.46% and 1.19% of the total land area (Departmental Committee 1908b, Appendix 43).

Nisbet (1909) in his introduction to the second edition of his book on forests and woodlands in the United Kingdom of Britain and Ireland (as it was then) recorded that 'during the last five years the most practical steps towards formulating proposals for afforestation and timber-planting have been taken in Ireland' and summarised the relevant activities. He goes on 'So far as Great Britain is concerned, action has neither been so prompt nor so practical'.

The Dublin Department appointed an Advisory Committee on Forestry under the chairmanship of the then Vice-President, Sir Horace Plunkett, which resolved, on 9 April 1906, that 'this Committee are of the opinion that the work of afforestation in Ireland, as a general scheme for the country as a whole, should be undertaken by or under the supervision of the State; and that the Department of Agriculture and Technical Instruction [DATI] and the County Councils should be provided with adequate funds and powers for the

[27] More than €70,000 in modern terms.

purpose.' It further resolved that 'this Committee are of the opinion that special encouragement is justified in the case of private owners who undertake tree-planting, inasmuch as the profits of such planting, unlike the profits of ordinary crop cultivation, are enjoyed by succeeding generations, and not by the actual planters.'

The Act of 1899 which set up the DATI also established a Council of Agriculture, a nationwide consultative body of 102 members. At its meeting on 27 and 28 November 1906 it resolved that 'a Forestry Branch of the Department of Agriculture and Technical Instruction, working locally through the County Councils, should be established to reafforest Ireland; that all the accumulated monies derived from the Crown and Quit rents[28] in Ireland should be apportioned for this purpose; and, in addition, a liberal free grant from the Imperial Exchequer ought to be given as a part of the restitution due to Ireland through over-taxation, in violation of the terms of the Union, as proven by the verdict of the Financial Relations Commission' (Departmental Committee 1908b, Appendix 1, Daly 2002).

In the event, the County Councils did not feature to any great extent in subsequent forestry activities with the possible exception of that of Co Kildare.

Following the Avondale purchase, woods were also taken over from the Land Commission at Ballyfad, Co Wexford; Dundrum, Co Tipperary; Camolin, Co Wexford; Bailieboro, Co Cavan; and Ballygar, Co Galway. Following the report of the 1907 Committee and a vote of £6,000 from Parliament, land was bought at Ballykelly, Co Derry; Knockmanny, Co Tyrone; Castlecaldwell, Co Fermanagh; Kilrush, Co Clare and Woodford, Co Galway. Prior to the 1914-18 war further mountain land had been acquired at Baunreigh, Co Laois; Glendalough, Co Wicklow and Ballyhoura, Co Cork (FitzPatrick n.d.).

In July 1916, towards what was assumed would be the end of the war of 1914-1918, the Ministry of Reconstruction in London appointed a sub-committee chaired by F.D. Acland, M.P. 'To consider and report on the best means of conserving and developing the woodland and forestry resources of the United Kingdom, having regard to the experience gained during the war.' The only Irish member appointed to the Committee was Lord de Vesci; A.C. Forbes was added in September 1916.

[28] Crown rents were the rents for lands granted by the Crown, and arose under grants made between the reigns of Henry VIII and Charles I. Quit rents were rents payable to the Crown under the Acts of Settlement and Explanation, out of the lands forfeited after the Rebellion of 1641 (Departmental Committee 1908b, Appendix 6).

The Committee held 31 sittings and did not examine witnesses. Its Final Report, the Acland Report, was published in 1918 (Ministry of Reconstruction 1918). It acknowledged the work of the Irish Departmental Committee and allowed that it was 'of importance to British forestry in indicating the trend of expert opinion', and repeated the Irish committee's opinion that 'the subject was one with which the State alone could satisfactorily deal'. The summary of the British report stated that 'Dependence on imported timber has proved a serious handicap in the conduct of the war. The United Kingdom cannot run the risk of future wars without safeguarding its supplies of timber as every other Power that counts has already done.'

The report also concluded that 'Apart from economic considerations the condition of our woods has been greatly influenced, in England and Ireland at least, by sporting and aesthetic considerations. Mixed open woods with good game cover have been preferred to dense clean-grown woods, with consequent loss in the quantity and quality of the timber produced. Furthermore, the abundance of ground game [hares and rabbits] has rendered protection of young plantations expensive, and has been a powerful deterrent to replanting.'

In an appendix (No. 2) it quoted from a report submitted by the Development Commission referring to 'afforestation by the State (Ireland)…Forestry operations have been concentrated on the three centers of Ballyhoura, Co Cork; Slieve Bloom, Queen's County [Laois]; and Aughrim-Glendalough, Co Wicklow. Working plans for these areas were prepared and approved…'

That report led to the Forestry Act, 1919, which established the Forestry Commission.

In the proscribed first Irish parliament (Dáil Éireann 1919-1922) Art O'Connor, a qualified engineer and with a farming background in Co Kildare, became Minister for Agriculture, serving from 1920 to 1922. O'Connor 'while wishing to protect mature woodland, emphasised that it was not automatically a crime to cut mature trees' (Daly 2002), a fact often lost sight of in recent times. A similar concern was expressed by Professor Campbell in his evidence to the Departmental Committee; 'I don't understand the objection some people have to see old or fully-grown trees cut down, and their idea in preferring to let them stand until they decay' (Departmental Committee 1908b, minute 2137).

The new Irish Free State, established in 1922, began in 1923 with a modest planting programme of 388 ha, increasing slowly until 1934. In that

year the effects of the Anglo-Irish economic war, which had been triggered by the 1932 decision of the de Valera government to withhold the payment of land annuities due to the British government as reimbursement of advances made to buy land under the successive Land Acts, caused that government to impose special duties on imports of cattle and dairy produce from Ireland. The result was a slump in Irish agricultural activity leading to a drop in the price of land, thus rendering more and better land available for planting under the existing price regime. From 1934 to 1941 planting proceeded at an average of 2,615 ha per year. The rate dropped during the war years because of the relative unavailability of imports of tree seeds and fencing materials, and a reduction in the rural labour force due to greater employment opportunities in Britain, with a lowest programme in 1946 at 1,456 ha.

With the 1946 Forestry Act (see Chapter 3) on the Statute Book the policy decision of 1948 to plant a million acres was the start of a new resurgence in planting activity. The 25,000 acre (10,000 ha) annual target was achieved in 1960 and maintained until 1964 with the exception of a slight shortfall in 1963.

Accession to the European Common Market in 1973 with the benefits of the Common Agricultural Policy boosted Irish Agricultural activity with a concomitant increase in land prices. This led to a permanent lowering of annual state planting programmes. In August 1982 the Government confirmed 'as an overall policy objective the maintenance of an annual planting target of 10,000 hectares (*but now including reforestation* and the planting of privately owned land)' [emphasis added] (Rea 1985).

In the late 1980s a sharp decline in the condition of the public finances led to a curtailment of funds for land acquisition by the Forest Service and the Service was instructed to find land for its planting programmes from its existing land bank. This consisted of an accumulation of unplanted land, land which had been acquired over the years by the specialist acquisition section as plantable, but on which local management had second thoughts. In 1987 it amounted to some 80,000 ha.

The Government also, in July 1987 'directed that Bord na Móna's cutaway bogs suitable for forestry should transfer to the Forest Service'[29]. Bord na Móna, The Turf Development Board, had been set up in 1946 to develop the bogs. Under its management large areas of peat had been harvested for electric power generation leaving a class of land known as cutaway bog. This consists of varying depths of residual peat over a more-or-

[29] The Government may have been mindful of the fact that not long previously Bord na Móna had submitted a proposal to Government that the Board should take over all the assets of the Forest Service, except its staff.

less undulating mineral soil floor. In 1988 and the following years about 4,000 hectares of this land was planted, predominately with Sitka spruce. A survey in 1994 showed that a high proportion of the Sitka spruce crops had suffered severely from spring frosts, with additional damage caused by competition from local vegetation (Jones and Farrell 1997).

The million acre target set in 1948, to be reached in forty years, 1988, was finally achieved in 1991, a creditable achievement in respect of a long-term government target. This achievement, surprisingly, was not accompanied by any overt publicity or jubilation.

In the foregoing no account has been taken of the areas subject to reforestation, defined as 'regeneration of an area from which a stand of trees has been felled' (Forest Service 2000). It is general practice in developed countries that land under trees is deemed to be permanent forest, and that the revenue derived from a final harvesting operation or clearcut will also cover the cost of regenerating the next rotation. That also appears to be the clear policy behind the provisions of the Forestry Act, 1946. Government accounting policy, on the other hand, deems that all exchequer revenues shall be subject to an Oireachtas[30] decision as to the object of their disbursement, whether for reforestation or other projects.

Even following the introduction of planting grants in 1930 private planting did not represent a significant element in the national planting programme. The outcome was less than 100 ha each year (annual average 56 ha over 20 of the 21 years) until 1951 with the exception of 1943 when 158 ha was planted by private owners. There is no specific record of the reason for this aberrant outcome, but it may well have been the result of an accumulation of replanting conditions in respect of land which had been cleared during earlier war years.

In 1958, under Erskine Childers as Minister, 'special measures were taken to ensure as substantial an increase as possible in the level of planting undertaken by private landowners.' Those measures included a doubling of the planting grant to £20 per acre and intensive publicity and propaganda campaigns. This brought about a sustained but not massive increase in the annual rate of private planting. The first substantial increase in private sector planting was associated with the EEC-funded Western Package, introduced in 1981 with the aim of stimulating agricultural development and improving farm incomes in the west of Ireland. This was followed by further country-wide programmes of incentives which led to levels of private planting not

[30] The national legislature, comprising the President and lower and upper houses of assembly.

previously contemplated (Ministers' Reports on Forestry, *Passim*).

The earliest notice offering 'large scale planting contracts expertly handled' was placed in *Irish Forestry*, Volume 7, dated December 1950, by Power Seeds Ltd., Waterford. Following the introduction of the Western Package the number of forestry contracting companies increased, and by 2004 sixteen such companies were listed in the Forestry Yearbook published by the Irish Timber Growers' Association.

Cumulative planting in the Republic of Ireland, both state and private, from 1923 to 2003 is shown in Figure 1.

Figure 1 shows a steep decline after about 1994 in new state planting, i.e. planting by Coillte on bare land. This need not be of national significance provided that:

i) the great bulk of Coillte felling is carried out on the authority of a general felling licence, with its attached replanting and maintenance conditions;
ii) the replanting and maintenance conditions are fully and efficiently implemented;
iii) private planting is maintained at a level which will result in a satisfactory overall forest estate.

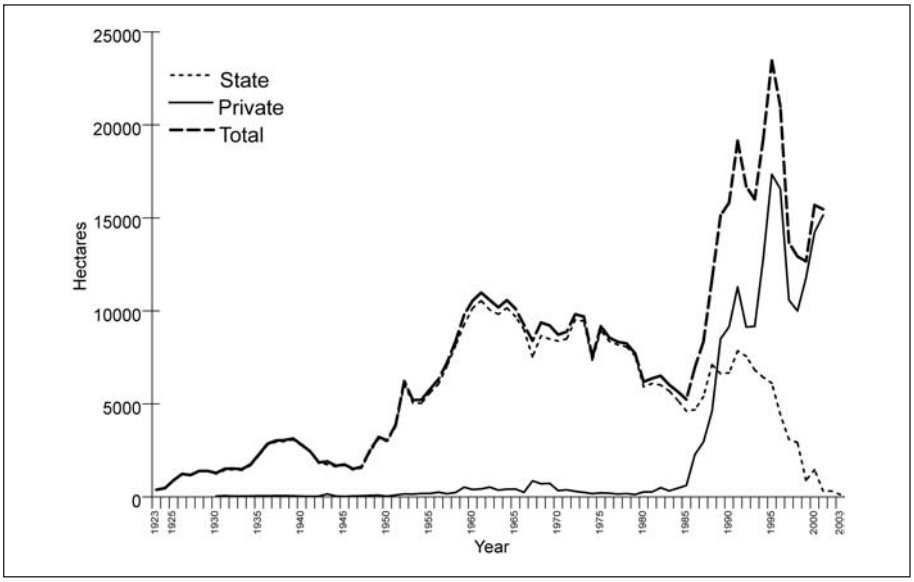


FIGURE 1: Annual new planting, 1923 – 2003.

3.
THE LAWS AND THE POLICY

Following national independence in 1922 the Oireachtas (deliberative assembly) proceeded with its own legislative programme.

The first item of national legislation concerned with forestry was the Forestry Act, 1928.

The long title was ‘An act to make further and better provision for promoting afforestation and for that purpose to amend the Forestry Act, 1919, to restrict the felling of trees, and to make other provisions connected therewith.’ It is probable that A.C. Forbes was closely involved in drafting the preliminary bill.

The act starts off, as is usual, with definitions: ‘The word “tree” includes a tree of any age or at any stage of growth but does not include any fruit tree or osier; The word “timber” means wood which is the product of any tree; The word “wood” save in the foregoing definition includes a plantation.’

For the first time the state took power to control the felling of trees. Section 5 made it unlawful to cut down any tree, with certain defined exceptions, without a licence - a provision not enacted in Britain until 1951, although felling had been controlled under wartime Defence Regulations from 1939 (Anderson 1967, James 1981). The Act also established the right to attach replanting conditions to any license (Section 8 (2)). In a debate on the Bill on 27 June 1928 the Minister, Patrick Hogan, stated ‘I could understand the point of view of people who say that if a farmer wants to cut a tree on his own land, let him do it, and do not bother about scenery or any other considerations. That is a point of view I sympathise with. There is a lot to be said for it, and I do not know that it is not sound. On the other hand, it was the general opinion that we must do something to stop the indiscriminate felling of trees. If the State must do that, you must have more bureaucracy.’ The Bill was enacted. Among those voting against it were Frank Aiken, Gerard Boland, Thomas Derrig, Eamon de Valera, Seán F. Lemass and Seán MacEntee. All of the foregoing were members of the Fianna Fáil Government that passed into law the Forestry Bill, 1946, which contained all the provisions of the 1928 Act, with some others added.

In more general terms the Minister had power, under Section 12, to grant ‘a general permit…to cut down or uproot any trees in any specified wood or

on any specified land in the ordinary course of thinning or clearing such wood either with a view to replanting or in accordance with the general practice of good forestry,' a prescription which might be described as a licence to practice good forestry.

The Forestry Act, 1919, had empowered the Forestry Commission, in the course of its duty to promote 'the interests of forestry, the development of afforestation, and the production and supply of timber', to 'make advances by way of grant…' but…'provided that any advance by way of grant under this section shall be subject to the condition that any profits resulting from the operations in respect of which the grant was made shall, after allowing for a return to the owner of four percent compound interest on the cost incurred by him (exclusive of the amount of the grant), be charged with the repayment by him to the forestry fund of the amount of the grant together with compound interest at four per cent.' The 1928 Act repealed the 'but' condition which had required that the grant to be repaid with interest, out of any profit arising from the project (together with some other provisions of a technical nature), leaving the Department free to give planting grants unconditionally and without repayment obligations. The first planting grants were made available in 1930.

A policy to exclude land of any agricultural utility from state afforestation had been in place from the outset. This was made clear by Gray (1963) quoting from the Annual Report of the Minister for Agriculture for 1925-26: 'The Department do not desire to acquire for afforestation land fit for agricultural purposes which might be used to form new holdings or to enlarge existing ones. With a view, therefore, to prevent such land from being acquired for afforestation they have fixed a maximum price at such a figure as to render its sale to the Department for this purpose an uneconomic transaction.' And he comments 'this policy has since been maintained.' It was policed and enforced by a corps of Land Commission Inspectors seconded to the Forest Service, one to each local acquisition office. Initially the maximum price which the Forest Service was allowed to pay for land for afforestation was set at £4.0.0[31] per acre (£10.0s.0d per ha or about €450 - 500 now), increased to twice that amount in 1949 with the adoption of a new forestry policy (OCarroll 1987).

Scepticism about afforestation existed at a high political level. James Dillon T.D., later Minister for Agriculture, speaking in the Dáil on 1 March 1940 on a supplementary estimate for forestry said 'It appears to me that the

[31] In an internal memorandum of October 1935 Anderson informed the Secretary that the average price paid for land was £2.10s (£2.5) an acre, equivalent to perhaps €360 per hectare in 2003.

root of our difficulty in Ireland in this connection is that any land which will support a forest to maturity is also capable of reclamation for the accommodation of congests in that area. Now, you have got to choose between trees and men…It may be that some of the land on which men can live would yield a larger return in cash if the men were put out and the trees installed in their place, but even if that land did yield a larger return in cash on that basis, I should still advocate leaving the men on that land and displacing the trees…I do not anticipate that you are ever going to see in this country spectacular expanses of forestry until you can devise some method of making the land which is available, and which is incapable of supporting human life, capable of supporting trees.'

Influenced by rapidly increasing land values and inflation a new approach to land valuation for forestry was adopted by the Forest Service in 1967. This made use of the NDR (net discounted revenue) approach under which the sum amounting to discounted revenue, less discounted fixed costs, minus discounted variable costs was calculated. This sum was then adjusted by a 'linkage formula' with the purpose of maintaining valuations lower than those which would be obtained in an open market deal. Initially the formula was specified as £10 + NDR/5. Subsequent changes in the land market led to an approach under which values were 'altered by a series of complicated adjustments' (Forest and Wildlife Service n.d.). In more recent years, with the Forest Service no longer involved in land acquisitions, ordinary market conditions have prevailed.

The Forestry Act, 1946, was probably largely influenced in its main provisions by Dr M.L. Anderson, Director of Forestry since 1939. Although complex in its detail, it was little more than a repetition of the Acts of 1919 and 1928, with some elaboration as to detail and a few additions. One of the latter, as explained by the Minister, was 'The statutory obligation to replant land, where its clearance with a view to replanting is authorized by a general felling licence, is new but needs no defence' (27 February 1946).

Section 49 (3) of the Act requires that 'there shall be attached to every general felling licence…conditions that the licencee shall, within a …period of not less than twelve months from the end of the period during which the authority conferred by the licence is exercisable…plant, in accordance with the general practice of good forestry and to the satisfaction of the Minister, trees on the land so cleared.' It also requires that those trees be preserved and protected for a further period of ten years. These conditions apply to private owners and to the state forestry company Coillte.

That reforestation requirement is a reflection of the general policy to

maintain the productivity of forest lands. As explained in Chapter 7 this principle appears to have originated in central Europe in the fourteenth century. The question of state control of forestry on privately owned lands is discussed by Troup (1938): 'A discussion of the question of State control must be based on the acceptance of the old Roman legal maxim *Utere tuo ne alteram noceas*, that is, to use one's property in such a way as not to injure another party. This principle may be taken to apply not only to restrictions between private persons but also to those imposed for the purpose of protecting the interests of the community in cases where they would suffer by the unrestricted exercise of individual rights. In other words, where the welfare of the general community is affected, restrictions should be based on the rights of the few…

'Sound forestry implies sustained yield management, with a correct distribution of age-classes from the youngest to the mature stand. It requires continuity of management extending over a long period of time and demands the constant attention of a trained and competent manager. These conditions may be fulfilled by one owner or even a succession of owners but the time must inevitably come when through extravagance, ill fortune, or other causes, the continuity is broken and over-cutting and devastation occur.' The fate of the native and man-made forests of Ireland in past centuries provides ample evidence in support of this conclusion.

The 1908 Departmental Committee on Irish Forestry (see Chapter 2) went even further in arguing that 'a national scheme of afforestation cannot be undertaken by private individuals…Forestry conducted on scientific and economic principles, commercial forestry, requires as an absolute condition for its success continuity of management for a very long period, a scheme settled and carried out for at least eighty years. That condition cannot be guaranteed by the private owner, who has no guarantee that his successors may not entirely disregard, or fail to carry out, the principles of his scheme; and whose successors, moreover, are subject to temptations such as those connected with succession to property, which are dangerous to settled schemes of forest management. The state is a proprietor who never dies.' It also argued that while a profit will accrue to the private forest owner, 'the far more valuable indirect returns, economic and social, go to the community as a whole, and [the private owner] cannot be expected to take these into account as a reason for locking up his capital from investments producing earlier and perhaps larger cash returns' (Departmental Committee 1908a). Much of the foregoing could also be cited in favour of substantial subsidisation by the state of forest establishment and maintenance on privately owned land, and the statutory protection of that investment.

A specific example of the application of the principle of state control of forestry on privately owned land in Washington State, US, and its confirmation up to and including the US Supreme Court, the only such case to reach that level, is described by Cubbage and Siegel (1985). It involved a land-owner who, in 1947, had refused to apply for a felling permit and also refused to implement a State law requiring that all ponderosa pine trees under 16 inches in diameter be left uncut. The Washington State Supreme Court found in favour of the State and in the course of its judgement referred to a concept outlined by the 18th century Irish statesman and political writer Edmund Burke. His words are given verbatim in Chapter 7. The Washington court finding was confirmed by the US Supreme Court in 1949 without further comment.

In the debate on the Bill which became the Act of 1946, on 27 January 1946, General Richard Mulcahy, leader of Fine Gael in opposition, said 'The Minister was quite right to appreciate that, in the matter of the establishment of State forest areas and the continuance and development of that work, there is no division of opinion in the House.' After a considerable number of amendments related to detail the Bill was passed without a vote. The Act repealed the Acts of 1919 and 1928 and set out in more detail the procedures to be followed in the course of compulsory acquisition of land for forestry – a procedure apparently never used for fear of consequent sabotage – and of felling controls.

A replanting condition attached to a general felling licence is 'binding on the licensee and on each of his successors in title to the land to which the licence relates' or on successive occupiers of that land. A notable feature is the fact that, once a replanting condition has been attached to a general felling licence (Section 49) to be officially registered as a burden on the land (Section 54), there is no power, either with the minister or with the Department, to rescind that condition, a fact which has caused some degree of commercial frustration in recent times.

There appears to be a perception abroad that the requirement to obtain a felling licence applies only to trees over ten years old. This has been asserted by both FitzPatrick (1985) and Maguire (2001). It is not the case. Section 37 of the Forestry Act, 1946, makes it clear that the exemption of trees under 10 years old applies to uprooting only, and that is quite logical, otherwise forest nursery operations could fall into a situation of chaos. It is possible that the 10-year age limit is a convention generally applied but not legally provided for: if so the present writer is not aware of any formal adoption of such a convention.

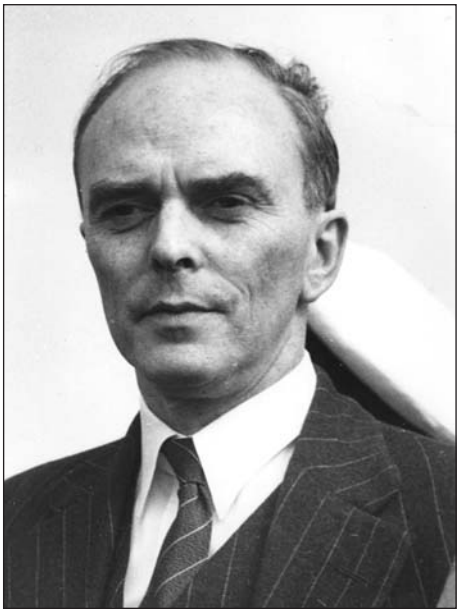
Section 55 of the Act provides that 'There shall be established and maintained for the purposes of this Act a panel of referees consisting of such number of fit and proper persons as shall from time to time be found necessary for the purposes aforesaid' the members to be appointed by the Government and each member to hold office for five years. The purpose of the referees was to report to the Minister on disputed aspects of felling licences. There is no record of the appointment of such referees until the controversy about the felling of Tomnafinnoge Wood on the Coolattin Estate at Shillelagh, Co Wicklow. Charles Haughey, on his re-election as Taoiseach in 1987, involved himself actively in that controversy. Soon afterwards a panel of two referees was appointed: a barrister and the owner of a garden centre with a horticultural background. In the event no aspect of the Tomnafinnoge affair was referred (although one referee was subsequently involved in an entirely separate dispute). It is of interest here to note that in the Dáil debate at the Committee stage of the Forestry Bill, 1945 (the Act of 1946), on 28 March 1946, a Deputy Cogan asked the Minister, Seán Moylan, about the qualifications of the referees to be appointed, pointing out that there was 'no provision in the Bill calling for any special qualifications for these referees'. The Minister replied: 'The referee appointed must be a landowner with a knowledge of woodlands.' When Deputy Cogan again pointed out that 'that is not stated in the section,' the Minister said 'Apparently it is not. It is evidently understood.'

Section 40 deals with the granting of 'limited' felling licences, relating to individual trees.

The Act requires that the Minister, if he refuses a limited felling licence, must, if requested, 'state in writing the ground on which he so refuses the application' (Section 30(7)). It also provides that he 'shall not refuse an application for a limited felling licence solely for the purpose of preserving amenities…' (Section 44(2)).

The history of Irish forest policy from 1948 to 1959 was assembled by Rea (1985). This emerges as a sorry tale of lost or elusory documents and of confused activities. A significant finding was that a decision on the extent of the state planting programme was arrived at before the completion of a national survey of plantable land.

The anecdotal history of the development of the policy is possibly not far from the true story – it is at least highly plausible. Following the general election of 1948 there was a change of Government. A Fianna Fáil majority government gave way to a coalition government ('inter-party' as it was known – the term 'coalition' was out of favour) made up of Fine Gael,



Seán MacBride, Cabinet Member 1948-1951, had a major influence on modern Irish forest policy.

Photo: G.A. Duncan

Labour, National Labour, Clann na Poblachta ('party of the republic'), Clann na Talmhain ('party of the land': The Farmers' Party) and some independent (non-party) deputies. The leader of Clann na Poblachta was Seán MacBride (1904-1988), who had been chief of staff of the illegal Irish Republican Army in the 1930s. He was a strong advocate of forestry, possibly the influence of his French upbringing[32]. It is said that when he met the Taoiseach-in-waiting, John A. Costello, to discuss the coalition policy his main emphasis was on afforestation, rather than the expected 'republican' demands. Costello is said to have been so pleasantly surprised that he readily agreed. The Fine Gael party, traditionally seen as the party of the big farmers, would not have been expected to be sympathetic towards large-scale spending on state afforestation.

It was claimed that the Fianna Fáil policy on forestry, adopted in 1946, to plant 10,000 acres [4,000 ha] a year was based on the conclusion of a sub-committee that the country would need 600,000 acres [240,000 ha] of forest, to which was added 100,000 acres [40,000 ha] ('for protective purposes' apparently not detailed) in addition to the existing forest cover of 115,000 acres [47,000 ha] of state and 85,000 acres [34,000 ha] of privately owned forest.

[32] See the account of the *Landes* afforestation scheme in Chapter 1.

In its 1948 general election campaign the Clann na Poblachta party promised to plant 1 million acres [400,000 ha] in five years (Rea 1985). In government this became a programme of 25,000 acres [10,000 ha] to reach a total of 1 million acres [400,000 ha] proposed in a white paper setting out the government's intentions under the post-war European Recovery Programme known as the Marshall Plan. This programme was approved and agreed by the Fianna Fáil party in opposition.

The Report of the Minister for Lands on Forestry for the years 1953 to 1957 stated that this 1948 policy followed 'a national survey of potential forest land' but Rea established that the survey in question began in January 1949 and was completed in January 1950.

It is significant to note that the policy was introduced in the white paper issued by the Minister for External Affairs, Seán MacBride, whose departmental authority did not include any aspect of forest policy. Mr Thomas Derrig, Minister for Lands in a Fianna Fáil government in 1952 refers to 'the document issued by the Minister for External Affairs as a white paper to the [European Recovery Programme] on December 20th 1948' as being the first public pronouncement regarding the 25,000 acre programme and 'for which I cannot find any authority at all from the technical officers responsible to me…the Department of Lands knew nothing officially about it'. Two points may be referred to here: at that time 'technical officers' were closely disciplined in the matter of official silence, and also to the personal interest of Seán MacBride in forestry policy.

Rea also quotes Mr Blowick, Minister for Lands and in charge of forestry during this period, describing 1934 as being 'marked by the settlement of an annual planting target of 10,000 acres' in conflict with Mr deValera's claim in 1956 that that target was set in 1946.

The new programme was rapidly put into effect. The rate of planting increased by an average of 14.3% per year for the next ten years, and finally reached the target at 25,100 acres [10,162 ha] in 1960. Gerard Sweetman, Fine Gael Minister for Finance in the second inter-party government of 1954-57, who provided the funds during that period, was notorious for his 'hair-shirt' (deflationary) budgets.

The change of government in 1957 began with a motion proposed by Seán MacBride (up until then a supporter of the Government) on 21 November 1956 reiterating the necessity of a 25,000 acre per year planting programme and requesting the Government 'to take all necessary steps to ensure the implementation of this minimum annual rate of plantation as soon as possible'.

In support of the motion he stated that: 'though successive Governments may agree as to the desirability of pushing forestry ahead, none of them have really made, until recently, any serious effort to do it and thus we have the position in which, over the last 35 years, we have planted at the rate of some 5,500 to 6,000 acres a year on average.'

MacBride proposed a further motion which would request the Government to consider the transfer of responsibility for afforestation to one of four different bodies. The alternative which appealed to him most would be a transfer to Bord na Móna. One of his reasons for this preference was the potential of dovetailing the work on a seasonal basis, forestry work having its peak in winter and Bord na Móna in summer.

The Minister, Mr Blowick, expressed particular concern about the last suggestion because of Bord na Móna's powers of compulsory land acquisition which he thought were sometime exercised in an arbitrary fashion. 'Deputy MacBride,' he said, 'gives certain reasons why Bord na Móna should be in charge of forestry but, despite the reasons he advanced, that is the last thing I would like to see happen' (*Dáil Éireann Reports* Vol. 160, 1956). The proposal to transfer the Forest Service to Bord na Móna was floated again by Charles Haughey in the late 1980s.

In the event the Dáil was dissolved. The fall of the government is ascribed by Jordan (1993) to a motion of no confidence put down by MacBride on 28 January 1957. The ensuing general election in March 1957 returned a Fianna Fáil government.

The Forestry Act, 1956, dealing primarily with land acquisition procedures, was repealed by the Wildlife Amendment Act, 2000. The Act of 1946, however, empowered the Land Commission to grant a right of way over private land, and to the grantee to construct and maintain a road on that land to allow for the removal of timber from a land-locked wood. However, in the case of a private woodland the owner of the land over which the road had been constructed had a further right to be compensated and could also require the woodland owner subsequently to remove the road materials from the land. The right of the owner to require the land to be restored to its previous condition did not apply to rights of way granted in relation to woodland held by the Minister (Sections 20 and 21).

In 1950 the Government invited the Food and Agriculture Organisation (FAO) of the United Nations to advise on its policy decision to plant 25,000 acres (10,000 ha) annually over a period of 40 years, which would result in the planting of extensive areas of what were then used as 'rough mountain grazings'. The Forestry Adviser involved was Mr Roy D. Cameron. His

report was presented in February 1951 (FAO 1951).

Cameron 'proposed to establish as a basic figure that 200,000 standards of sawn softwood per annum would meet any possible need of the population of the twenty-six counties now comprising the Republic of Ireland'. 200,000 standards converts to 935,000 m^3. According to Bacon (2003) consumption of Irish conifer sawnwood in 2000 was 1.24 million m^3. By 2002, according to FAO statistics, that figure had advanced to 1.405 million m^3, with a further 0.147 million m^3 of hardwood, most of it imported.

Cameron recommended division of the afforestation programme 'into two categories, a commercial forestry programme designed to meet minimum requirements for sawn softwood in times of emergency [estimated at 100,000 standards per annum] and a social forestry programme for soil conservation, stabilization of employment in congested areas, and reclamation of idle lands'. The social programme was never explicitly accepted as policy although the emphasis on planting in the eight western counties in the Ministers' Reports from 1960 onwards suggests that such considerations were not entirely dismissed: each year's report from 1959-60 to 1988 – the last year of operation of the Forest Service as forest enterprise responsible for state planting – reported the individual areas planted in counties Clare, Donegal, Galway, Kerry, Leitrim, Mayo, Roscommon and Sligo. Cameron also recommended 'a new and separate *Department of Forests*…to be subject as to general policy to a sub-committee of the cabinet, which would constitute a Board of Review for the programme'. That recommendation was not implemented.

Government policy on land use, enforced by restrictions on the price paid for land for state planting, remained a difficulty in respect of the purchase of good forest land, while the Knockboy experience dictated caution at the lower end of the plantability scale. Accession to the European Economic Community in 1973 brought a boost to farming under the Common Agricultural Policy. This further exacerbated the difficulty of buying plantable land at the allowable prices, and the rate of state planting continued to fall, reaching its lowest level of 4,625 ha in 1985.

No decision on the future of forestry emerged from the Coalition Government which had received the report of the Review Group on Forestry[33] in November 1985. Following the General Election of March 1987 a Fianna Fáil Government came into power. It decided to assign state production forestry to a new semi-state body and work began on the drafting of the necessary Bill, later to be the Forestry Act, 1988. The Act was entitled 'an Act to make provision for the development of forestry and to provide for

the establishment of a company for that purpose and for the assignment to the company of functions heretofore exercised by the Minister for Energy [the minister responsible for forestry at that time]; and to provide for certain related matters.' Section 10 (1) specified that 'The name of the company shall be Coillte[34] Teoranta or, in the English language, The Irish Forestry Board Limited'.

It is not known what, if any, consideration the Review Group's report got at cabinet level, but in the end the decision was reached to set up the semi-state company which finally emerged as Coillte Teoranta. The responsible Minister who introduced the Bill and saw it through its various stages was Michael Smith, aided by Joseph Holloway, his Departmental Secretary[35]. The principal function transferred was the ownership and management of all commercial state forest lands. The Forest Service, within the Department, retained responsibility for setting national forest policy (in the name of the minister of the day), promotion of private forestry, administration of planting and other forestry grant schemes, forest protection – mainly concentrating on preventing the importation of threatening pests and diseases, control of felling, and promotion of research in forestry and forest produce.

The bill which was enacted as the Forestry Act 1988 was modelled on the postal and telecommunications legislation of 1983. That act required the new organisations to perform their functions in an 'efficient' manner. After some brief but intense discussion it was agreed that the Forestry Bill should include the sub-section 12 (1) (a) which required the company 'to carry on the business of forestry and related activities on a commercial basis and *in accordance with efficient silvicultural practices*' (emphasis added) The company was also required 'to have due regard to the environmental and amenity consequences of its operations' (Section 13 (1) (*c*)).

The bill was signed into law on 13 July 1988.

Coillte has published annual reports since its inauguration. These are largely devoted to Statements of Accounts, as required by statute, but are not generous with operational detail. For 2001 Coillte recorded a profit of €18.46 million on a turnover of €115.47 million: the outcome reported for 2002 was a profit of €18.74 million on turnover of €144.13 million and for 2003 profit of €25.51 on turnover of €172.12.

In recent years the policies underlying serious forestry have come under intensifying attack from a variety of groupings, invariably self-styled

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33 See Chapter 5.

34 Irish language term for woods or forests.

35 A title now altered to Secretary General.

'environmentalists'. These generally comprise individuals who appear to hold the opinion that the function of the countryside is to provide for their recreation and to satisfy currently fashionable aesthetic standards. Such individuals have most likely never viewed the stacks of imported timber on our quay sides, or considered its cost, still less the additional cost of importing all of our timber needs were it not for our successful forest industry. Disregardful also of the thousands employed in forestry and its various downstream industries, the environmental benefits of increasing forest cover and the use of wood products they choose to continue to carp and criticise.

For an extensive thematic review of forestry and the environment, readers are referred to Chapter 5 of Joyce and OCarroll (2002).

4.
LEARNING

In his report of 1904 to the Department of Agriculture and Technical Instruction, J. Nisbet (Departmental Committee 1908b, Appendix 15) had recommended Avondale, Co Wicklow, former residence of Charles Stuart Parnell, as a suitable centre for the training of foresters. In a footnote he recorded a description of Avondale House as it was in 1903: 'The house consists of four rooms and entrance hall on the ground hall [*sic*], and five bed and two dressing rooms on the upper storey, while the kitchen and servants' bedrooms are in a gloomy vaulted basement and appear of a most unhealthy and depressing character. The sanitary arrangements are exceedingly primitive, and most inadequate, and the whole house is in a state of disrepair, while a trench would have to be dug round the basement, and led to the edge of the hillside, to keep the basement dry. With the exception of two large substantial stone-built barns (one of which could easily be transformed into a lecture hall, and the other, about 140 to 150 feet [46-49 m], into a forestry museum, school library and recreation room), the offices are in a very bad state of repair. There is a walled garden of two acres [0.8 ha] in extent, forming the fruit and vegetable garden for the house, but it is a dense mass of weeds at present…The former bailiff's house[36] and estate office near the mansion, could accommodate from 10 to 12 student foresters, or would be suitable as a residence for the person in charge of agricultural or horticultural experiments. At the edge of Ballytarsna wood there is an old sawmill on the Avonmore [river], which was worked up to about six months ago when the stock of marketable timber on the estate became exhausted (except in the ornamental demesne, and in the park timber); but it is now in disrepair, and the machinery is of little value. In the demesne wood there are the stone foundations of a small turbine sawmill, worked by the late Mr C.S. Parnell about 25 years ago, and the turbine itself is lying rusting in one of the barns.'

Avondale opened as a forestry school in October 1904 with eight 'apprentices' (Departmental Committee 1908b, Appendix 1). Charles Stuart Parnell's brother, John Howard, appears to have had misgivings about this: 'Little did he ['Charley'] expect to see his home in the hands of the English Government, under the Board of Agriculture…which now, since it has been

[36] Known as 'Casino', it was taken by the family of J.M. Synge as a holiday house in the summer 1897 (Edward Stephens. *My Uncle John*. OUP 1974). It was later used as a residence for the Superintendent at Avondale. It was demolished to make way for a car park when the house and grounds were opened to the public in the 1960s.

converted into a School of Forestry…, has much altered in appearance.' The same 'Charley' had an interest in trees and forestry. He ran a profitable sawmill at Avondale, and in the course of a trip to the United States his brother records 'a delightful walk through the great forest [in Alabama], with the pine trees sighing over our heads, and the delightful perfume of resin pervading everything, a scent that Charley was always fond of, saying that there was no life so healthy as that spent among the pine trees' (Parnell 1916).

The purpose of the Avondale school was to train working foresters and woodmen for employment in Ireland, and in September 1906 the department employed A.C. Forbes (1865-1950), an English-trained forester, to act as lecturer, and to give technical advice to forest owners and to landowners proposing to establish plantations. Forbes had been awarded a prize by the Worshipful Company of Carpenters for an essay entitled *The Adaptation of Land for Afforestation* (1904), and in the same year he published a book *English Estate Forestry*, on the title page of which he is described as 'F.H.A.S.; Lecturer on Forestry, Durham College of Science, Newcastle-on-Tyne, and Late Forester on the Marquis of Bath's Longleat Estate, Etc. Etc.'

In discussing the Avondale training Forbes emphasised that 'the forestry apprentice is a workman, first and foremost…' and agreed with Professor Campbell that the class of men admitted 'are those who have led a steady hard-working life on a farm or estate'. The course duration was three years and the apprentices were admitted in batches of six each year (Departmental Committee 1908b, Minutes 442-450).

Kilpatrick (1987) contrasts the approach at Avondale with that at Parkend Forestry School, Forest of Dean, England, also opened in 1904: 'Whereas Parkend allowed its students freedom from practical work to attend theoretical classes during the daytime, at Avondale classes were held in the evening after the end of the day's work so that no time was lost from practical work in the woods. This was the pattern which was set by A.C. Forbes and which commenced that foundation of hard practical work which was to be the hall-mark of both state forestry services for many decades to come.'

There is also reference, both in Forbes's oral evidence, and in the official Memorandum describing the Department's operations at Avondale, to 'the condition laid down at the outset, and clearly recognised all through the course, that the forestry apprentice is a workman first and foremost, and in consideration of this fact he is paid a fairly high wage for his services.' The course extended over three years, the final year being spent in any part of the country where appropriate experience was to be gained, a practice which was maintained while forester training courses existed. In addition to instruction

Avondale House, 1937. Otto Reinhardt (Director), Arthur Forbes (ex-Director) and guests.

Photo: Coillte

in general subjects such as English composition, business correspondence, arithmetic and basic sciences, forestry training was provided under the following headings: General character and distribution of forests; Fundamental principles of economic forestry; Biology of timber trees; Sylviculture [*sic*]; Organisation and management of woods; Protection of woodlands; Utilisation of forest products (Departmental Committee 1908b, Appendix 1).

Avondale as originally constituted closed in 1913. From then until 1936 foresters were trained in 'bothies'[37] in Counties Laois and Tipperary (OCarroll 1984). It is also believed that the house was used as a billet for soldiers, though of what army or when is not known. It is believed that damage to a Bossi inlaid marble mantelpiece, since restored, was inflicted at that time.

It appears that the purpose of instruction at Avondale was subsequently changed since in later Forest Service Reports the students are referred to as 'trainees' who were, after successful completion of the course, 'absorbed into the Department's Forester and Forest Foreman staff'. Some of its former students have been promoted to very senior posts.

[37] 'Bothie' defined in OED as 'a one-roomed building in which unmarried farm-labourers…lodge together'.

Kinnitty Castle, Co Offaly, at about the time of its commissioning as a Forestry School in october 1955.

Photo: Coillte

Personal memories and anecdotes of Avondale, together with contemporary group photographs of trainees, are to be found in Larkin (2000).

In the 1950s, with the expansion of planting programmes and the need for greater numbers of trained foresters, the school was transferred to reconstructed 'castles' at Shelton Abbey, Arklow, Co Wicklow[38], and Kinnitty, Birr, Co Offaly[39]. With dwindling needs for forest management staff Shelton Abbey was closed in 1968. Kinnitty finally closed when the embargo on public service recruitment in the 1980s made it redundant. Shelton Abbey became a prison and Kinnitty Castle a hotel.

In the Northern Ireland Forest Service newly recruited foresters were sent for formal training to either Benmore Forestry School in Argyllshire, Scotland, or Gwyder Forestry School in North Wales. In 1960 Pomeroy House and Estate in Co Tyrone were acquired and opened as a school in 1961. It offered three classes of course:

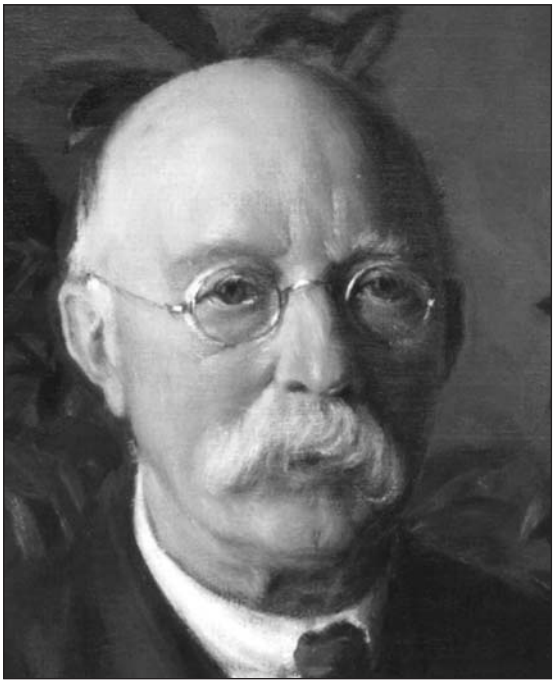
1. Three-week courses for forest workers and junior supervisors.
2. One-week courses for Foresters and District Forest Officers.
3. One-week courses for specialist operators (lorry and tractor drivers, mobile and chain saw operators).

[38] Former residence of the Earls of Wicklow.

[39] Former location of a stronghold of the OCarrolls of Ely OCarroll, one of whose descendants, Charles Carroll of Carrollton, Maryland, signed the American Declaration of Independence in 1776 (Hoffman 2000).

In 1971 a new purpose-built school was erected alongside the old building (Kerr 1965, Kilpatrick 1987).

University training in forestry began in 1912[40] when Augustine Henry was appointed Professor of Forestry in the Royal College of Science for Ireland, an institution subsequently incorporated into University College, Dublin. Henry (1857-1930) had qualified as a medical doctor in 1879 and in 1881 set out for China as a customs officer. Following years spent assiduously collecting plants in China he began to take an interest in forestry and entered the School of Forestry at Nancy, France, in 1901. He was subsequently appointed as Reader (lecturer) in the new forestry department at Cambridge (Pim 1966, 1984). In forest research Henry pioneered artificial hybridisation among poplar species. One or two of his poplar hybrids later grew in his private garden at Sandford Road, Dublin. Upon Henry's death in 1930 the Dublin professorship lapsed, not being restored until 1959 with the appointment of Thomas Clear, who had been Lecturer in Forestry since 1938 and Statutory Lecturer since 1944.



Augustine Henry. Dundee-born Irish forestry expert. Professor of Forestry, Royal College of Science for Ireland, Merrion Street, Dublin, 1912-1931.

Photo: National Botanic Gardens

[40] Extracts from lectures on forestry given by A.C. Forbes at the Royal College of Science, Dublin, are in Departmental Committee 1908b, Appendix 31. It is likely that these were given in the Faculty of Agriculture there.

Thomas Clear, Lecturer in Forestry 1938, Statutory Lecturer 1944, Professor 1959-1981, University College Dublin.

Photographer and date unknown

Clear (1911-1994) qualified in forestry in University College, Dublin (UCD) in 1935. He was fortunate to spend some time studying at the renowned forestry school at Eberswalde, in Brandenburg, Germany. Eberswalde Forestry College was founded in 1821 as an offshoot of the University of Berlin. It was the initial home to Robert Hartig, father of forest pathology.

The forestry degree course in UCD took five years to complete, including one 'practical' year which the student normally spent as a forest worker in one of the state forests. Some students chose to gain their practical experience working abroad. The practical year afforded the student an invaluable opportunity, not only to learn and experience the relevant manual work on the ground, but also to learn to share the outlook of forest workers generally, including their view of the various classes of superior persons.

There was a trickle of graduates from Dublin until 1957; since then candidates have graduated in forestry with increasing frequency. Early graduates in forestry included D. McCaw (1913); M.O'Beirne (1914); A.C. Forbes (1923)[41]; H.M. FitzPatrick (1927); T. Clear, M.J. Feehan, O.V. Mooney, S.M. O'Sullivan (1935); E. Barry, C.A. McCormack, J. O'Carroll (1938); P.J. Finnegan, T. O'Carroll (1939); C. McGinley, Denis Quirke, M.H.

[41] Doubtless an honorary award. Details not available.

Swan (1940); Timothy McEvoy, Dermot Mangan (1941); J.J. Maher (1942); E.C. Curran, W.F. Flanagan, E.C. O'Rourke (1943); P.J. Butler, P. Hackett (1944); T. Almack, N. Morris (1945); L. Condon (1946); S. Campbell, J. Conway (1947); J.J.W. Bell, A.M.S. Hanan, J.E. Johnson (1948); J.H. Cantillon, P.M. Joyce (1949); Thomas M. Pryal (1950); Alan Mitchell (1951); E. Burns, C. Fahy (1952); T. Rombaut (1953); W.J. Dallas, Neil Murray, J.G. Sinclair (1954); and the present writer (1956) (Anon. 1962).[42]

While the Forestry Act, 1946, empowered the Minister 'to make or aid in making…inquiries, experiments and research…' (Section 9 (1) (*j*)), that authority remained unused for eleven years. Cameron subsequently pointed out that 'The development of a strong forestry research organisation is not only essential for the maximum efficiency of technical operations but is demanded as an insurance measure' (FAO 1951).

A research section was established within the Forest Service in May 1957. Having spent its first few months preparing for the forestry section of the British Association for the Advancement of Science, which held its annual meeting in Dublin in September of that year, it then undertook its real work. Initially it concentrated on silvicultural experiments, many of a long-term nature, and on the initiation of an inventory of state forests. The section expanded through the years and was eventually transferred to Coillte in 1989. Among its more useful findings were the demonstration that potassium deficiency was a major cause of unthriftiness in crops on midland fen peats, a disorder not previously suspected in Irish forests (OCarroll 1966); an empirical proof, by means of a field experiment, that the lighting of cooking fires within the forest could trigger the initiation of outbreaks of group dying (De Brit and OCarroll 1967), which led to the prohibition of traditional 'boiling-up' fires within the forests; and the demonstration that basal sweep, a major defect in certain crops of lodgepole pine, did not develop in crops derived from direct seeding (Pfeifer 1982). The last pointed to a possible technique for economically regenerating large areas of low quality crops of lodgepole pine.

Research has also been carried out on many aspects of silviculture including seed provenance, tree breeding, crop establishment, species trials, improvement of unsatisfactory crops, forest protection from disease and insect pests and the effects of harmful climatic factors, weed control, crop spacing, thinning and pruning, and timber testing. The last has been commissioned from the body currently known as Enterprise Ireland.

[42] The names are transcribed in the form in which they are listed in the source.

Forest Service Research staff grew steadily: in March 1970 it stood at 17 Forestry Inspectors (University graduates) and 21 Foresters in the regions (Forest Service n.d., Forest and Wildlife Service n.d.[a]).

The Council for Forest Research and Development (COFORD) was founded in 1993 and is funded by the Irish Government. Its function is to support and co-ordinate national forest research and development, and to transfer results into practice. COFORD has run three national forest research and development programmes since its inception. The programmes have dealt with issues in all sectors of the forest industry and related environmental issues, such as biodiversity and carbon sequestration. Publication of research results and forestry textbooks has been a particular feature of COFORD's work in recent years[43].

It is not COFORD policy to confine research to short-term experiments, but because research funding is tied to five to six year programme cycles it is recently becoming normal that forest research projects are funded on a contract basis, usually of a maximum of five years duration. Some silvicultural experiments need to run for a large proportion, if not all of a rotation, or even a succession of rotations to fully test the hypothesis under investigation. Mechanisms to support long-term field-based trials are therefore desirable.

The current short-term-contract system of funding forest research projects leads to a possibility that researchers operating under such contracts will devote considerable attention to planning their next contract proposal, and so reduce the likelihood of the planning of very long-term experiments, and perhaps even lead to a reduced concentration on the research in hand.

Forestry research in Northern Ireland began with the appointment of a Planning and Research Officer in 1954. Research was carried out in co-operation with Ministry of Agriculture's Research Division and with the Departments of Geography and Botany in Queen's University, Belfast, and also with the Meteorological Office (Kilpatrick 1987). Research in Northern Ireland has tended to concentrate on the establishment of forests on peatland and on tree spacing and the thinning of forest stands.

There was an Irish Forestry Society in existence early in the twentieth century. Its representative, St.C.M. Dobbs, J.P., gave oral evidence to the Departmental Committee. In his first reply he said 'I have not had an opportunity of consulting with the other members of the Society, so that the views I put forward are almost entirely my own.' He farmed about 6,000

[43] At the time of writing COFORD maintains a web site, www.coford.ie, where many of its publications can be found.

acres in Co Antrim with 200 acres of commercial plantation in Glenariff. When asked about his opinion on hedgerows he replied '…I think the necessity is for planting in large blocks, not in detachments and hedgerows. It seems to me that if all the soil in Ireland were to be utilised to the greatest advantage the first class land would be mainly grazing; the second and third nearly all tillage; the hillsides and the fourth class would be all planted, and the tops of the hills and exposed slopes would be under black-faced sheep and game. There would be no hedgerows, only big strips and blocks of planting on suitable localities.' Mr J. Scott-Kerr, Honorary Secretary of the Society, also gave evidence.

A press cutting of 1939 (source not identified) among the Chief Inspector's papers refers to a Mr. Owen Mulholland of 205 Clontarf Road, Dublin, as Hon. Secretary, Irish Forestry Society.[44]

The Society of Irish Foresters was founded in 1942, probably strongly encouraged by M.L. Anderson, then Director of Forestry in Dublin. His name, Mark Louden Anderson, Director of Forestry, with an address at 14 St Stephens Green, Dublin, appears as entry No. 1 in the original Roll Book of the Society. Anderson was the Society's first president. His influence may be seen in the Scotticism 'timeous' in the first version of the Society's Constitution and Rules, where the editor of the journal is charged with 'timeous appearance and efficiency of each part'. In the 1971 version that was changed to 'timely'. Similarly the object of the Society was defined in the first version as 'to advance and spread in Éire the knowledge of forestry in all its aspects', changed to 'in Ireland' in the 1971 version, and in 1992 dropping any mention of a geographical context.

Anderson's Roll Book entry has, under 'remarks', 'Resigned. 34[*sic*].12.'46', perhaps implying that he wished on his departure to promptly terminate all connection with forestry in Ireland. Referring to his own career in his massive *A History of Scottish Forestry* (1967) he recounts how, having served as research officer in Scotland, he 'unwillingly transferred to England, removed at the first opportunity and ultimately returned to occupy the Edinburgh Chair of Forestry until his death in 1961' The final item there was presumably supplied by the editor, C.J. Taylor. It is perhaps notable that there is no mention of Anderson's service in Ireland[45].

[44] Forbes, on the occasion of his election to Honorary Membership of the Society of Irish Foresters, referred to a Forestry Society founded in 1906 and disbanded by him in 1916 (*Irish Forestry* 1,41). Another record has it founded in 1902 and extant in 1920 (*Ibid* 55, 157-8).

[45] Which is odd since, according to Taylor (1992) 'It seems that this was a happy period in his life as he had the opportunity to use his initiative'

Among the notable names which appear as Associate Members in the Roll Book are the Coolattin Estate Company, Sir Basil Goulding, Alice ('Mrs Augustine') Henry, Rt.-Hon. Lord Inchiquin, Prof. Joseph Johnston, Sir Shane Leslie, Con Lehane, T.D., Edward MacLysaght, Tomás O'Deirg (Minister for Lands), Eoin O'Mathamhna ('the pope' O'Mahony), Aodogan O'Rahilly, Timothy O'Brien (Secretary, Department of Lands), Lord Ross, Stephen Rynne and Kees Van Hoek.

It also elected as Honorary Members 'persons who have rendered notable services to the advancement of forestry or who may be deemed worthy of such recognition for any other reason consistent with the objectives of the Society'. These have included A.C. Forbes (1943), John Crozier (1944), Mrs Augustine Henry (1946), J.A.K. Meldrum (1953), T. Donovan (1966), D. Stewart (1966), D.M. Craig (1975), T. Clear (1984), Seán MacBride, (1984), O.V. Mooney (1984), C.S. Kilpatrick (1992), W.H. Jack (1995), M. Cosgrave (1995), D. Mangan (1997) and Lily Furlong (1999). Apart from Seán MacBride and D.M. Craig, all of these worked with the state forest services, north or south. MacBride, as already described, was the prime instigator of the new forestry policy in the 1940s[46], and Douglas Craig, a professional accountant, acted as Honorary Auditor to the Society from its foundation until 1972. That position was filled after 1973 by Dr W.H. Jack, then retired from the post of Permanent Secretary of the Northern Ireland Department of Agriculture. Lily Furlong, though not a forester, was for many years the main organiser of Society occasions and study tours.

The Society arranged indoor and field meetings, an annual study tour either in Ireland or abroad and published the journal *Irish Forestry*. In all it provided a useful service to its members at a time when in-service training was largely in the future, and it continues to provide these services to its members.

The Society was particularly proud of its status as an all-Ireland 32-county organisation when such an arrangement was uncommon.

[46] A fact not universally acknowledged. Speaking in the Dáil on 20 July 1961 the former Minister, Mr J. Blowick said: 'I feel very proud of our forestry development, although I feel a little embarrassment in speaking on this [forestry] Vote each year, since I was largely responsible for bringing forestry to what it is today. That, however, will not prevent me from giving advice to whatever Minister is in office and from taking an active interest in forestry and trying to ensure that the baby I had in my charge for a while is thriving, thanks, not so much to the Minister, but rather to the officials of his Department who know their job and do it well'.

5.
CORPORATE MATTERS

The Department of Agriculture and Technical Instruction for Ireland (DATI) began its work on 1 April 1900. It had been set up by the British Government of Lord Salisbury following an initiative proposed by Sir Horace Plunkett in 1895[47]. It was given powers to introduce measures to assist agriculture, technical instruction and rural industry. An official memorandum on the operation of the DATI submitted to the 1907 Interdepartmental Committee opens with 'The Department have been advised by the Law Officers that afforestation comes within the definition of "the purposes of Agriculture and other rural industries" in Section 30 of the Agriculture and Technical Instruction (Ireland) Act, 1899…The Department of Agriculture and Technical Instruction for Ireland can under this Act [Irish Land Act, 1903] acquire lands capable of afforestation…As the lack of skilled woodmen presented a serious obstacle to the development of Irish forestry, the Department, acting on the advice of Dr Nisbet, late of the Indian Forest Service, acquired an estate at Avondale, Co Wicklow, and established there a school for the training of working foresters' (Departmental Committee 1908b. Appendix 1).

The Departmental Committee in its report pointed out that a Forestry Authority already existed within the Department of Agriculture and Technical Instruction, 'and that funds only are needed to enable this authority to begin forthwith the work which we contemplate.' It proposed that among the duties of this Forestry Section should be 'to acquire…areas of land suitable for plantation, and existing woods' and 'to plant and manage directly such of those lands as might best be managed by the Central Authority' (Departmental Committee 1908a, paragraphs 56 and 57).

Following the report of the Acland Committee in 1918 (see Chapter 2) the Forestry Act, 1919 led to the setting up of the Forestry Commission, with powers to acquire and manage land for forestry purposes, and the appointment of Assistant Commissioners for England and Wales, for Scotland and for Ireland. A.C. Forbes was appointed Assistant Commissioner for Ireland when the Commission took over the forestry functions of the

[47] Plunkett (1854-1932), pioneer of agricultural co-operation in Ireland. George Moore, in his quasi-autobiographical *Hail and Farewell* (1911-14) has Æ (George William Russell) describing the Department to (a pseudonymous) Plunkett as ' that dreadful place where all is vain tumult and salary'.

Cecil (C.L.) Kilpatrick, Former Chief Forest Officer, Belfast, and historian of the Northern Ireland Forest Service (1987).
Photo: John Fennessy, COFORD

Department of Agriculture (Ryle 1969). The work of the Commission in Ireland was disrupted by the war of independence, and after the treaty with partition and an independent Free State the work of the Forestry Commission in Ireland was assigned separately to the two separate Departments of Agriculture, north and south. Forbes was appointed Director of Forestry in the Dublin Department and, after some to-ing and fro-ing between London, Belfast and Dublin, David Stewart (1885-1970) was appointed to the equivalent post in Northern Ireland (Kilpatrick[48] 1987, Raphael 1970).

The Irish Division of the Forestry Commission appears to have been a rather tightly controlled organisation. Howard (2003) recalls seeing papers dealing with a matter of travelling expenses. One Forester chose to use a motor-cycle for his official duties. The trouble arose when it transpired that while there was an allowance for bicycle use and a mileage rate for motor-car travel there was no provision for motor-cycles. The matter was eventually referred to Forestry Commission HQ in Savile Row, London, for a definitive ruling.

Forestry Service [*sic*] Regulations (unpublished) of 1932 reflected the social mores of the time:

[48] Cecil Kilpatrick was Chief Forest Officer, Northern Ireland Forest Service, 1977-1983.

'Foresters and Foremen on transfer from one Forest to another in the public interest may be allowed:-

(1) The travelling expenses of the officer, his wife and children (i.e. boys under sixteen years of age and unmarried daughters) are defrayed. The travelling expenses of a servant (third class) if she travels with the family may also be included.'

After independence and the establishment of the Irish Free State responsibility for forestry was assigned to the Department of Agriculture, with Patrick Hogan as Minister. It had the official status of a Division within the Department, with its own specific Vote in Dáil Appropriations-in-Aid. Forbes became Director of Forestry. He was described by MacLysaght (1978) as 'an Englishman, who is, by the way, devilish uninteresting outside the subject of forestry'.[49] Forbes retired in 1931 and was succeeded by John Crozier (1864-1952), likewise characterised by MacLysaght as 'a typical Scot of pawky[50] humour and very inelastic ideas on forestry'. Crozier retired in 1933.

In 1933 responsibility for forestry was transferred from the Department of Agriculture to the Department of Lands.

John Crozier. Acting Director of Forestry, 1931-1933.

Photo: Coillte.

[49] Described by Anderson (1967) as 'only half Scots'.

[50] *Pawky*: tricky, artful, sly, cunning, shrewd (OED).

MacLysaght was a member of the selection board appointed to recommend a successor to Crozier, which in the event he seems to have regarded as an unwelcome interruption to his watching Davis Cup tennis at the Fitzwilliam Club in Dublin. He described the process in some detail. There were about 65 applicants for the job, most of whom were clearly unsuitable. Of those interviewed the one that MacLysaght preferred was 'the only Irishman on the list: a genuine Irishman with an O name, hailing from Co Limerick. In voting for him I was in a minority of one.' He does not give the candidate's name, although he later refers to him as 'Mr O'F.', and it has not since been possible to identify him. The final selection was a German forester, Otto Reinhardt. MacLysaght continues: 'In fact he was only a moderate success and when the War broke out in 1939 he returned to Germany and the senior permanent official, a dour Scot called Dr Anderson, was automatically promoted to the Directorship. After a while he resigned [in 1946 to take up the position in the Department of Forestry in the University of Oxford], only to be succeeded by another official, again a Scot [see below], but not a dour one, an able after-dinner speaker who potters along awaiting his Civil Service Pension.' That last was J.A.K. Meldrum. While sailing close to the *argumentum ad hominem* MacLysaght appears to avoid actually crossing the bar.

There are stories of murky dealings after Anderson's departure. According to Thomas Clear, *via* Joyce (2002), Anderson had brought in S.M. Petrie from Scotland and was grooming him as successor, but he was pipped by S.M. O'Sullivan, the son of a former Cumann na nGaedheal Minister for Education, 1926-1932. It was rumoured that a behind-the-scenes tussle between the Freemasons and the Knights of Columbanus was in progress with the latter now achieving the ascendancy. Appointments and promotions in the Civil Service were not always as squeaky-clean as might have been thought.[51]

Information about Petrie has proved elusive, but he was a founder member of the Society of Irish Foresters. His name appears in the Society's Roll Book from 1942 as an associate member, the entry '1 Tech.' having been struck out, with addresses in Clonmel, Clontarf and later as employed by the Forestry Commission at Benmore 'Forestry Training School', at Dunoon, Argyll. His retirement from the Society is recorded as 23 November 1954. He published two papers in *Irish Forestry* in 1943 and 1945. In the list of

[51] In Mervyn Wall's novel *No Trophies Raise* (1956) a young man, recently inducted into a mutual assistance organization called 'The Warriors of the Cross' enquires about the meaning of the term 'other things being equal' used in connection with 'getting and giving fraternal assistance' and is told 'Don't let that bother you. Other things are always equal'. Wall (1908-1997) was a career civil servant.

Councillors for 1944-5, but not elsewhere, his name has the addendum 'B.Sc.'

J.A.K. Meldrum had been Chief Inspector since 1940. He was born in Carlisle, in the north of England and was therefore not a Scot, as assumed by MacLysaght. He studied Forest Engineering and Assessment in Vancouver, British Columbia, before returning to work with the Forestry Commission and subsequently coming to Ireland.

After Meldrum's retirement in the early 1950s the Director post was not filled and the head of technical services devolved upon P. Barry who had been appointed Chief Inspector in January 1947. Following Barry's death in 1948, S.M. O'Sullivan became Chief Inspector.

The position of Chief Inspector, suppressed in 1957, was restored to Timothy McEvoy in 1973. He had been an Inspector General since 1966. The top professional post was again reduced to that of Principal Inspector following the retirement of the incumbent Chief Inspector in 1995 (Department of the Marine 2000), but the title was subsequently restored to that of Chief Forestry Inspector (McAree 2004).

In the early to mid 1950s there developed what was essentially a power-struggle between the administrative and technical sides within the service. This centred initially on timber sales. A note written at that time begins 'The traditional Forestry Division arrangements governing the sale of timber left the whole initiative with the Forester and Inspectorate staff. The Secretariat staff was never charged with responsibility for seeing that *any* effort was made to initiate the sale of available produce and Secretariat functions were confined to the routine clerical work arising, the approval or submission for approval of sale arrangements recommended by the Inspectors and the onus of seeing that money due was received. The higher grade staff in the Secretariat did occasionally raise questions as to methods of sale, etc., but there was no fixed system of control by Secretariat to ensure that efforts were made to sell timber.

'There has been no basic departure from these arrangements up to the present but rather more searching enquiry has been made in recent months in particular cases, and in the process it has come to light that under present arrangements timber is not being put up for sale with adequate expedition, there is inadequate control and check of available material and no sound means of settling whether offers received are adequate.'

Specific instances of dilatory approaches are described and much emphasis is placed on the loss resulting from the drying out of pulpwood left lying in the forest.

There is, of course, the inevitable disclaimer that 'it *could* [emphasis added] be quite improper [underlining in original] to assume that the situation itself arises from laxity or dereliction of duty on the part of the Sales Inspector or his Assistant. These officers have enough to do to look after their field inspections without being expected to operate an intensive check system on produce availability. It is clear that the Secretariat must undertake this responsibility, which it should in any event bear, and the Secretary has now directed that arrangements are to be made accordingly.' That seems to carry some hint of the principle enunciated by the Queen in *Alice's Adventures in Wonderland*: 'Sentence first – verdict afterwards'. (The 'Secretariat' in this context would be more familiarly known internally as 'the administrative side'.)

The document goes further to quote: 'an example of the looseness of valuation it may be stated that on one file…two Inspectors quoted values of £428 and £1,537 for one lot of timber which was felled and extracted [from the wood] at a cost of £680 and sold for £300.

'It is imperative, if serious consequences are to be avoided, for the Secretariat to become fully alive to, and conversant with, the problems of our sales of timber and they must be encouraged to enquire fully into all aspects of these questions. It must be appreciated by all concerned that such enquiries are essential and not to be taken as affronts to Inspectors or anyone else. It is unfortunate that there is some misapprehension on this score as evidenced, say, by the remarks on file…already mentioned.' (The preceding passages are from a carbon copy retained among the Chief Inspector's papers. Authorship and date are not recorded but it refers to incidents dated to 1953 and 1954.)

There was a saying in circulation within the Forest Service to the effect that 'this forestry was a gentleman's game until timber sales came into it.'

It appears that the power transfer was confirmed in 1957 by the suppression of the Chief Inspector post and its replacement by two mutually independent 'Inspectors General': one, S.M. O'Sullivan, responsible for land acquisition and forest research, and the other, Thomas Manning, responsible for forest operations and production management.

This internal struggle did not emerge in public apart from a letter which appeared in *The Irish Times* of 19 December 1954, under the heading Trees for Ireland and signed 'Rubus Strigosus'.

The letter criticised the Secretary of the Department of Lands as having lent his name to an allegedly misleading letter in that paper claiming that the forestry advisory service then in place was 'pretty widely used'. It then went on to quote from the report of the FAO Forestry Mission to Ireland

(Cameron) with some of its recommendations, and characterised the 'vitally important forest service' as 'administered by a collection of variously styled clerks, not one of whom knows an oak from an auk…'

The full text of the letter is given in the Appendix.

Many years afterwards it was ascertained that the letter was written by Thomas OCarroll, then Superintendent of Avondale Forestry School, with the help of his elder brother, Michael OCarroll, a man well capable of bitter sarcasm. It is difficult now to appreciate the degree of risk to his career and even his livelihood which the writer incurred by publishing that letter.

The comparison between forestry graduates and non-graduates in their suitability to perform at forest officer, i.e. Forestry Inspector, level rumbled on for many years.

In November 1941 M.L. Anderson, Director of Forestry, wrote: 'The six officers in the Service in 1934 had all University training. Of the twenty appointed since eight had University training and the remaining twelve have been promoted from the Forester grades. When it is remembered that there have been two abnormal periods of expansion of the work of the Division…and when it is remembered that, for such abnormal expansion men of the widest experience are necessary, the proportion of non-graduates cannot be regarded as too high.

'The question of what renders a man fully qualified for forestry appointment may be a debatable one but there is no doubt in this Division that the mere taking of a University degree in Forestry does not qualify a man for immediate service. Forestry is not a profession which can be taught at a University any more than farming can be so taught and it takes at least three years of actual experience of Departmental procedure and administration before a man can be regarded as qualified for responsible work. The experience gained by our Foresters who have served in the Department for anything up to twenty years is considered to more than balance the lack of *so-called* [emphasis added] theoretical training provided in the University…

'It is not true that University trained men were excluded from appointment under the recent advertisement.

'It is not suggested that the University forestry course is of no value but it should be realized by those responsible for its conduct that openings for men with that type of training are extremely limited indeed and that not more than one University man could be appointed to the State service every three or four years and that therefore graduates in excess of that number must look elsewhere for posts. The problem appears to be essentially one for the University authorities' (Chief Inspector's papers).

It may be noted in the context of the foregoing that at that time Anderson was the only forester in Ireland who held a higher academic qualification, a D.Sc. from Edinburgh University, awarded for a thesis on tree form.

In the late 1950s Erskine Childers, Minister for Lands, March 1957 to July 1959, sought ways of improving the flow of graduates in forestry into the Department. In an internal memorandum of a meeting with Thomas Clear in March 1957, H.J.G.[ray, Principal Officer] wrote: 'I availed myself of the interview to discuss with Mr Clear our unhappiness about the poor standard of Forestry graduate material. Mr Clear has no illusions about that standard. He feels that lack of regular recruitment prospects for the State Forest Service may have been a factor in lowering the standard of available material but he stresses particularly that students who have been successful in securing County Council University Scholarships have not been taking up forestry. He thinks that such students are by and large the best of the material available to the Faculty of Agriculture in the University.'

The subject surfaced again in the 1960s in the pages of *Irish Forestry*, the journal of the Society of Irish Foresters. There appeared a lengthy article entitled 'The Philosophy of American Forestry Education', by W.G. Dallas, who was at that time a Forest Officer with the Northern Ireland Service. He emphasized the distinction between the graduate or 'professional' forester and the ranger or 'technician' grade forester. He goes on: 'The same segregation of grades within the profession that is common to Britain and Ireland exists in the United States. However, it is rigorously enforced there. The American "Forester" is similar to our Forest Officer grade except that he *must* be a graduate. The Society of American Foresters defines "Forester" as:- "a person who has been professionally educated in forestry, or who possesses qualifications for the practice of forestry essentially equivalent to graduation from a recognized school of forestry", and the terminology "school of forestry" implies university rather than vocational training' (Dallas 1965).

That paper evoked a sharp reply written by Michael Harbourne, on behalf of the State Foresters Branch of the Institute of Professional Civil Servants, who accused it of a 'complete lack of objectivity'. He points out that 'the non-graduate Forester in Ireland undergoes an intensive three-year course in practical and theoretical forestry, then spends at least a further five years as an Assistant Forester before he is considered ready to take charge of a forest. This is the man the author seeks to equate with the American technician who gets an eleven-month course under the kind of Boy Scout programme he found in America' (Harbourne 1966).

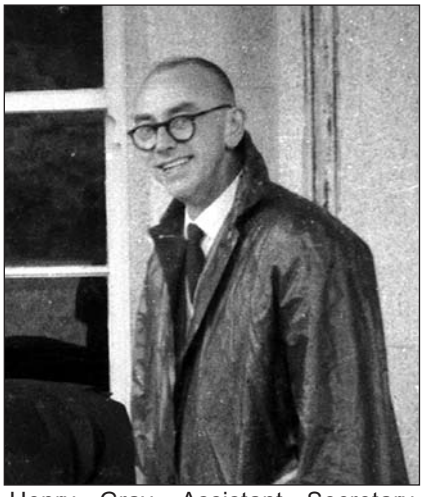
The passages quoted give some indication of the bitterness which

formerly existed over the graduate *versus* non-graduate question in forestry. There was a tendency among some graduates to favour a closed-shop policy in respect of the employment of Inspectors in the state service, while Department-trained (Avondale and Kinnitty/Shelton) foresters rejected any proposed restriction on their career prospects. With the more recent multiplicity of forestry employment opportunities, the choice of qualification of candidates is a matter for the open market.

It is not the function of this account to adjudicate between these two positions, but simply to record them as part of history, although it may be said that in general it seems to be overlooked that neither type of course leads in itself to the development of competent 'managers' in the broad sense of that term.

In the opinion of Padraic Joyce, Emeritus Professor of Forestry, University College, Dublin, 'the fault goes back to Mark Anderson and was continued by Henry Gray, in both cases because they felt that non-graduates would be more compliant.

'Anderson was a good silviculturist but something of an autocrat. According to Clear he resented Reinhardt [Director of Forestry 1935 – 1939] and was always looking for ways to undermine him, such as the time when Reinhardt wished to give foresters a uniform (similar to the continent) as a means of improving their lot without increasing their salary. Anderson immediately started a whispering campaign that Reinhardt was bent on creating a movement similar to the "Brownshirts" or "Blackshirts" and that killed the idea' (Joyce 2002).



Henry Gray. Assistant Secretary, Forest Service, 1967-1971.

Photo: Fergal Mulloy

It might be mentioned that in a discussion about Douglas fir with the present writer as a forestry undergraduate (1954-56) in the Albert College, then part of the Agricultural Faculty of University College, Dublin, the late Thomas Clear said 'Anderson didn't like Douglas fir, and if Anderson didn't like a species it was out. And by the same token if Anderson didn't like you, *you* were out too.'

In its report for 1957-8 the Forest Service reported the introduction of an incentive bonus scheme for forest workers. A firm of industrial consultants was commissioned to apply work-study techniques to forest operations. As a start it was necessary to introduce a national basic wage for forest workers. Under the new scheme each worker would earn a bonus if the output of his work-gang rose above a predetermined point. (There were no women forest workers at that time). Introduction of the scheme was completed in 1960-61 (Reports of the Minister on Forestry 1957-1961). It continued to contribute to efficiency and cost control in subsequent years.

In November 1984 the Minister for Fisheries and Forestry, Paddy O'Toole, appointed a Review Group with the following terms of reference: 'With a view to ensuring that the country's afforestation programme and, in particular, the substantial resource which it represents, is developed and exploited to the best national advantage, having due regard to the role and functions of the National Development Corporation where relevant:

(1) to examine the present structure, organisation and operation of the Forest and Wildlife Service of the Department of Fisheries and Forestry;
(2) to consider what changes, if any, are necessary;
(3) to make specific recommendations on such changes; and
(4) to submit a report to the Minister for Fisheries and Forestry by 1 June 1985.'

Paddy O'Keefe, editor of the *Irish Farmers' Journal*, was appointed chairman of the Review Group. The other members were Frank J. Convery, a professional forester who was Professor of environmental matters in UCD; Paddy Glennon of Glennons' sawmill, Longford; Ray Gallagher, an agriculturalist working with the co-operative movement; Brian Hussey, qualified as a civil engineer and now head of a forestry contracting company; Peter Cassels, a trade union official; Paddy Howard, Forest Service; Niall OCarroll, Forest Service; Bart Brady, Department of Finance; Eamon Rohan, Department of Industry Trade, Commerce and Tourism; and Joe O'Connor, Department of the Public Service. All of the Civil Service members were of Principal Officer rank or, in my case, its professional equivalent. John

McLoughlin, an Assistant Principal in the Forest Service, was appointed secretary to the Group.

It was clear from an early stage that the group did not favour the concept of a semi-state body – it being generally accepted that as national monopolies they were inefficient.

The Group delivered its report in November 1985. Essentially it recommended the setting up of a body very similar to the Forestry Commission of Great Britain, to be called the National Forest Enterprise (NFE) which **should be run on commercial lines** (emphasis in original). It also recommended that the new body 'should undertake non-commercial activities, such as amenity and nature reserve management, on a fee or contract basis' and 'be free to manage its assets and deal in them, subject to overall Government policy'.

One remarkable outcome presented in the report was the analysis of net discounted income and expenditure on the commercial element of state forestry compared with the current value of the asset, i.e. the growing forests. This concluded that the state investment in forestry had earned a compound interest return, over inflation, of about 2 per cent. This was remarkable despite the restraints placed on the Forest Service and the fact that it was all done under 'the dead hand of the Civil Service'.

As the report itself put it: 'The FWS [Forest and Wildlife Service] has built up an important national asset, achieved a return of up to 2% over inflation and provided highly valued recreation and amenity facilities.' (The cost of providing amenity forest areas was not included in the valuation exercise). A footnote pointed out that 'a study of the performance of a range of equities, gilts and property in Ireland for the period 1950 to 1982 indicates that to make any positive return after allowing for inflation for that period was unusual.

'Account must also be taken of indirect benefits to the national economy, such as provision of basic raw material, employment, balance of payments, etc.' (Review Group on Forestry 1985).

As already stated Coillte Teoranta – The Irish Forestry Board Limited – was established in 1988 to operate as the national forest enterprise. An account of the history of that body since then must await the attention of a historian more familiar with its detail and more *au fait* with its achievements and vicissitudes.

6.
SILVICULTURE

The term ‘silviculture’ in forestry is not, as might be assumed, analogous to the term ‘agriculture’ in relation to farming: ‘silviculture’ bears a relationship to forestry similar to that of ‘crop husbandry’ to agriculture.

We have very little information on silvicultural practice in Ireland before the twentieth century. Some indications may be had from the specifications issued by the Dublin Society (‘Royal’ after 1820) in respect of plantations to qualify for awards under its medal and premium (grant) scheme. An account of the scheme from 1766 to 1806 was published by the Society (Royal Dublin Society 1806). The introduction to that report includes ‘This country, once overgrown with wood, forty years ago had the most dreary aspect for want of trees’. The scheme was begun in 1765 and in the early years it specified only the species which would qualify, i.e. oak, white pine (‘commonly called Lord Weymouth’s pine’)[52], ‘Scotch fir’ (Scots pine), acorns sown, Larix [*sic*], beech, sycamore, ash, etc. For 1766-67 the Weymouth pines were to be ‘not nearer to each other than fifteen feet’; larix ‘not nearer to each other than fifteen feet; oaks ‘not nearer to each other than fifteen feet’; Scotch firs ‘not nearer to each other than ten feet, in coarse mountain land’; beech ‘not nearer to each other than fifteen feet’; sycamore, ash or Norway maple ‘not nearer to each other than ten feet, and [the planter] shall engage to cut them down close to the ground within twelve months after planting’. For 1768 the list included Spanish chesnut [*sic*] and black cherry. A note adds: ‘By planting out trees at the distance from each other required, the Society do not mean to exclude the planting of other trees or shrubs between the trees so planted, as shelter to them; but no premium will be granted for the intermediate planting.’ For 1769 the general planting distance was reduced to ‘not nearer to each other than eight feet’. The 1784 scheme included provision for the enclosure of at least ten acres to be planted with not less than 2,000 plants of a range of species per acre ‘and such trees as shall die be continually replaced, so as to keep up the number of one thousand [*sic*] trees on each acre, for ten years’. The specification for 1786 likewise requires the planting of two thousand oaks per acre and to maintain the stocking at 1,000 trees per acre for ten years. Assuming that the ‘acre’ referred to is the Irish acre, being

[52] *Pinus strobus,* eastern white pine or Weymouth pine, was introduced to Britain from eastern North America in 1705. It fell out of forest use in Europe because of its susceptibility to the blister rust fungus *Cronartium ribicola*.

1.6 statute acres, 2,000 trees per acre converts to 3,050 trees per hectare or a spacing of 1.8 m. The scheme continued but in 1800 the required stocking was increased to 8,000 trees per acre of larch or other species, 'sallow, poplar, birch or horse chesnut [*sic*] not included'. Emphasis throughout was on fencing adequate to exclude cattle.

It is difficult to detect the logic behind the earlier schemes with stocking rates expressed as 'not nearer to each other than…' Perhaps the intention was to grant-aid only the eventual final crop trees, or, alternatively, to produce the non-rectilinear timbers needed for shipbuilding ('knees', 'futtocks', 'breast hooks' etc.). According to William Marshall, quoted by James (1981), writing in 1796 'the distance recommended by authors for planting trees in a wood…is thirty feet upwards…the building of a seventy-four gun ship would clear, of such woodland, the timber of 50 acres'.

The next text dealing with silviculture is Samuel Hayes's *A Practical Treatise on Planting* (1794). Hayes, who built the present Avondale House, was a barrister and M.P. in the Dublin Parliament from 1783 to 1790. He was awarded a gold medal in 1768, under the Dublin Society scheme, for planting beech at 15 feet (4.6 m) spacing. He died in 1795 and bequeathed his estate to Sir John Parnell, a relative on his mother's side and ancestor of Charles Stuart Parnell (McCracken 1968). Hayes planted specimens of exotic tree species at Avondale. Some of them still survive, although now past their prime. Storms have also reduced their number.

Hayes recommends the beginning of May as the best time to plant oak, and quotes 'most experienced writers' as recommending that larch be planted 'just as they push out in spring.'

In the book (page 14) he proposes a classification of land for planting, the classes being:

1. Lay ground [permanent pasture] or tillage grown in a bleak exposure.
2. Natural woodland amongst shrubs and thickets.
3. A fertile soil with good shelter.
4. A dry shifting sand.
5. A shallow stony or moory soil.
6. A deep, dry, or heathy moor.
7. Actual red bog.

In dealing with these he concentrates on specifying the appropriate nursery treatment of trees intended for each class. In the matter of species selection he favours oak, walnut, Spanish chestnut, elm, and ash, 'planted at about twenty feet asunder…the plantation should then be thickened up with

any other sort of trees; placing Scots fir [pine] and beech in the most exposed situations, except in the neighbourhood of the sea, where the sycamore is observed to stand its effects better than either of the above.'

Further, 'Experience has proved, that where hazel and white-thorn [hawthorn, *Crataegus monogyna*] grow with vigour, almost every species of forest tree may be planted to advantage: it will only be found necessary to prevent the branches of the shrubs from over-topping, or interfering with the young shoots of the plantation.'

Also, 'In carrying out the work of planting, the largest trees of every sort are got in first; were they to proceed otherwise, the making of a hole for a large rooted tree, after the small ones were planted as thick as they ought to be would cause great confusion – Birch is generally the tree to begin with, as it bears removal perfectly well. At the height of six or seven feet, of those, or rather of a less size, three or four hundred are planted on one acre; and nearly the same number of their first sized oak; then the masses of larch, birch and Spanish chesnut, are got in; and some of the smaller size of the same species are inserted through the whole: then a number of smaller sized oak, and lastly, these are thickened with small seedling birch, the whole made up to about two thousand plants of different sizes and ages to the English acre [0.405 hectare], great care being taken to ensure that they are as free from straight lines and regularity as possible, both to give a natural air to the plantation and to avoid the effect of penetrating winds.'

Finally, as to the actual business of planting the trees, 'two men should always be together at putting in the plants; one should be on his knees, holding the plant and spreading its roots, whilst the other, with a spade or shovel, throws on the mould in such a manner that the fine particles are equally distributed amongst the fibres.'[53]

Most of the rest of the book is taken up with descriptions of remarkable or specimen trees on named estates throughout the country. Here it is recorded that 'The beech is not native to Ireland; those at *Shelton* [Arklow, Co Wicklow] appear amongst the first which were brought into this kingdom, and from their mast, most of our finest beech have been propagated.'

The changing approach to the choice of species by planters in the eighteenth and nineteenth centuries is summarised by Smyth (1997).

Before about 1820 broadleaf species were preferred, representing some 70 per cent of trees planted. Then a gradual change began and by the 1840s conifer species amounted to about 60 per cent, and in the 1850s stood at 80

[53] This prescription would hardly pass muster in present-day commercial operations.

per cent. (It is impossible now to judge whether this was due simply to a change in fashion or to increasing commercial perspicacity on the part of the planters.)

Among broadleaf species the most popular was ash, followed by beech, oak and alder. Other commonly planted broadleaves were sycamore, birch, elm and poplar. Mountain ash, horse chestnut and willows are also recorded.

European larch was the most popular conifer, followed by Scots pine and Norway spruce.

Smyth also points out that 'the biggest single group [of planters] were the strong "working" farmers, actively engaged in the business of improved farming and building ditches, hedgerows and shelters. These farmers planted less for ornamental purposes and much more for the protection of their cattle and crops, the better draining and hedging of their fields, for timber needs and for all the practical reasons associated with farm improvement current at the time.'

Lady Gregory of Coole Park, Co Galway, had her own shrewd ideas on silvicultural matters based on her personal experience. 'When choosing the sort of tree to plant it is wise to look round and note what does best in the neighbourhood, for trees are capricious as to soil.

'Ash is easily come by and easily moved, and its timber is useful in a hundred ways…Oak strikes deep, and its roots find their nutriment below the region of grass and crops…Sycamore will stand wind where nothing else will.

'If evergreen is wanted there is the [Norway] spruce, hardy, substantial, handsome…Scotch fir is hardy and brave, and so is Austrian, but Scotch is the more beautiful. Its red stem lights up a landscape when the sun shines on it. And when the sun is hidden and all is grey the gleam of the silver fir [*Abies alba*] like the silver lining to a cloud, keeps depression away. But the silver fir is gentle and likes shade and safety; it is with the Scotch, the sycamore, the elm we must hold the heights.

'When Wolfe Tone was in France, a hundred years ago, he noticed how the people there planted orchards, and their children looked after them, and he wished the example might be followed in Ireland. "But", he says, "he who can barely find potatoes for his family is little solicitous about apples; he whose constant beverage is water dreams neither of cider or mead. Well, if we succeed we may put our poor countrymen on somewhat a better establishment. We shall see." ' (Gregory 1898).

Cameron (see Chapter 3) also had advice to offer on technical matters. He recommended close observation of the development of crops of the exotic

species Sitka spruce and lodgepole pine. He accepted that 'the most important tree both from the standpoint of growth and area will undoubtedly be Sitka spruce for which there is every justification for assuming the adequacy of the fifty-year rotation' and that the same would hold true for Douglas fir and western hemlock. However he recommends an immediate and thorough investigation of the whole matter of rotation ages, pointing out also that a fifty-year rotation will produce knotty logs and that lengthening the rotation would give better quality lumber (FAO 1951).

Conifer planting in the early part of the twentieth century tended to concentrate on the more familiar and time-tested species, Scots pine, Norway spruce and European larch. Forbes's trial plots at Avondale (see Chapter 2) were designed to extend the gamut of species known to be suitable for Irish conditions. But short of the results of those trials becoming available certain decisions were necessary.

The 1907 Departmental Committee in its report did not deal with the question of choice of species, a matter which should, it rightly thought, be left to the free judgment of an efficient forestry section. It reported the suggested policy 'that the forestry section should adopt as its policy for the first rotation, that of covering the new forest area, as far as practicable, mainly with the quicker-growing varieties of coniferous timber, though mixed, of course, with other species, leaving it to those who have to settle whether to continue or to change the crop in accordance with the circumstances of the time. The chief reasons urged for this policy are that such timber will give the earliest returns; that the returns are more certain; and that conifers grow more successfully on inferior classes of land. There is now, and there is bound to be for a very long time to come, a sure demand for well-grown coniferous timber at remunerative prices. Without prejudicing the question by a positive recommendation, we may say that there appear to us to be good reasons for the policy suggested' (Departmental Committee 1908a).

Nor was there a great deal of discussion of the matter in the sessions of the Committee. Augustine Henry, Reader in Forestry, University of Cambridge, in his evidence, prefaced his remarks with 'Prejudice should not exclude foreign trees'. He went on: 'After I had gathered my facts as to exotic trees in Ireland I formed my theory, and my theory is this, that owing to the insular position, extreme mildness and rainy nature of the winter, the Gulf Stream, and the excessive rainfall, the climate of Ireland differs in every respect from the climate of Continental Europe or of the greater part of France. Where we have an analogous climate the same species of trees do very well. In British Columbia, Washington and Oregon there are a Gulf

Stream, a rainy winter, and a rainfall nearly parallel to that of the west half of Ireland. If you look at the rainfall maps you will see that the west half of Ireland is very rainy, and most of the waste land is in this rainy belt. In British Columbia, Washington, Oregon and California the forests are the greatest forests in the world in many respects, and certainly they are the greatest in the North Temperate Zone, and all the trees without exception that grow on the Pacific Coast have done extremely well in Ireland and Wales and the West of Scotland and the Southwest of England. The non-trial of the fast-growing trees on a large scale is simply due to the innate conservatism of these islands, backed up by imperfect knowledge of the remarkable and peculiar features of the climate of Ireland. The only parallel to the climate of Ireland is that of the Pacific Slope of North America and that of the maritime regions of Western France and Portugal.'

The climatic similarity was independently confirmed in a report to the Congested Districts Board by its member, Sir Horace Plunkett, on the possibility of relocating some Irish 'congests' to Canada. He wrote: 'There is undoubtedly much to be said for the climate of British Columbia, which resembles, but is in many ways an improvement on that of our own Atlantic coast' (Plunkett 2001). Interestingly, this view is also supported in a letter of February 1940 from the Canadian writer Elizabeth Smart to the expatriate English poet George Barker in which she informed him 'that she was going to the far west of Canada, to find a cottage on one of the islands of Vancouver Sound, where she might plant potatoes in peace and await the birth of their child: "it's spring there now and the climate is mild like England all year with no snow to speak of, and fertile soil"' (Fraser 2001).

Henry continued his evidence to the Committee: 'No countries are more different in regard to tree growth than Ireland and, say, Eastern France and all Germany. That these trees have not been grown on a forest scale in these islands is due to the fact that they have merely been planted as specimen trees here and there, as e.g. Wellingtonia [*Sequoiadendron giganteum*]. It should be tried upon a forest scale. I have seen it grown on a forest scale in England, and it seems to grow as fast as other trees. It should be tried as a timber tree in dense stands. Wellingtonia plants at first cost five guineas a-piece It is only on the Rothschild estate one can see them grown together in a big lot of 100 trees.' (Departmental Committee 1908b, Minute 4029). More successful have been some of the other species recommended by Henry such as Sitka spruce and Douglas fir (Departmental Committee 1908b, Appendix 32).

Henry was not on to a winner with giant sequoia (Wellingtonia) which has not been used as a forest species in Ireland but otherwise his 'theory' has

proved largely correct. Nevertheless, there have been some adventurous plantings of unusual species, as the small grove of deodar cypress (*Cedrus deodara*) at Glengarra, Co Tipperary, planted about 1880 (Mooney 1951), and that of Monterey cypress (*Cupressus macrocarpa*) at Ballintombay, Rathdrum Forest, Co Wicklow, dating from 1929 (FitzPatrick n.d.).

Sitka spruce has proved highly successful as a timber producer on many classes of site in Ireland (Joyce and OCarroll 2002) while Douglas fir has been successful on a more limited range of site classes (Horgan *et al*. 2003). Clear (1951) characterizes the species as 'prone to flatter but to deceive'. He describes experience with Douglas fir in Co Wicklow, and concludes that 'Douglas fir in heavily thinned stands improves enormously between the 20th and 40th year: that it gives promise of good yields on sites up to 700' [c 200 m] on northern slopes especially on deep loamy soils: that it appears to throw off the effects of *Phaeocryptopus gäumannii* [leaf cast disease] and to enter into a period of very vigorous growth after heavy thinning'. Other Northwest American species such as western red cedar (*Thuja plicata*) and western hemlock (*Tsuga heterophylla*) have also performed well but have been less widely used. Lodgepole pine (*Pinus contorta*) was a relative latecomer and has been useful but with a variable degree of success (see below).

The silvicultural practices of the early part of the twentieth century were recorded physically in the plantations of that period, and now reside mainly in personal memories, such as the (poorly growing) plantation of Scots pine in the Comeragh Mountains planted so accurately at 4 x 4 feet (1.2 m) square spacing that one could see the straight lines in several directions; the excellent plantation of beech planted at 10 feet (3 m) with a 3:1 nurse of European larch at 5 feet (1.5 m) planted in 1944 at Ballyarthur, Co Wicklow (the larch had been mostly removed by about age 45, leaving a fine crop of beech), or the plantations on midland fen peat of 3 lines of Norway spruce alternating with 1 line of Scots pine. Examples of M.L. Anderson's specification of groups of oak in a matrix of Norway spruce also survived, although few if any of them appear to have been sympathetically managed so as to allow the oak to thrive. This practice was also followed on infertile mineral soils such as at Forth Mountain, Co Wexford, and Old Red Sandstone soils in Co Tipperary, where a small closely-spaced group of desired species, such as Scots pine, spruce, etc., was planted on a cultivated bed, 2.1 m 'side', 5.5 m centre to centre in a matrix of lodgepole pine, resulting in an effect known as 'diamond beds', from the shape of the small groups (OCarroll 1958). This may have been a development of Anderson's 1930 proposal of 'planting by dense groups, spaced wide enough apart to leave temporary gaps in the stand [the mixtures were colloquially referred to as 'Anderson

groups']. It was argued that the advantage of close spacing would be secured without loss of stability or increased cost. The method has only been used experimentally so far and more so abroad than at home' (Anderson 1967).

Forest Service (Republic of Ireland) practice was that land acquisition for planting was carried out by a specialist corps of professional and administrative staff, controlled and directed from headquarters. The land value was estimated by the inspector, and a complex set of procedures, both legal and administrative, were invoked in order to ensure that the title to the land transferred was sound in all respects. It is notable, perhaps, that the forest production management staff, who would be responsible for planting and management of the acquired land, had no involvement in the acquisition process.

The first significant step after acquisition was the selection of the tree species to be planted. This was normally delegated to the local forest manager (the Forester-in-Charge) whose recommendations might be approved or modified by the District Inspector. No hard-and-fast specification was imposed here; the forester applied his own judgment as to what he considered the most appropriate species to be grown on any particular area. In the early years Scots pine was favoured, followed by the spruces, Norway and Sitka, and the larches, European and Japanese. A note in the Minister's Report for 1943 to 1950 states that 'Scots pine at high elevations suffered severely from defoliation due to exposure…The American species, *Pinus Contorta* [*sic*], resisted the effects of exposure much better and further use of this tree on difficult areas not suitable for other species seems desirable. As an improver of poor and exposed sites it has no equal and it is capable of producing poles at a relatively early age.' Any degree of complacency which might be inferred was later disturbed by difficulties arising from the great genetic variation in the species, and uncertainty as to which racial variant would best suit conditions in Ireland. However, its use in plantations continued to rise, reaching a proportion of 40 per cent of species planted in 1952, falling for some years thereafter, but reaching a further peak of 38 per cent in 1978, itself a reflection of the quality of the land available for planting at that time.

In 1975 the clear genetic variation in lodgepole pine (*Pinus contorta*) was acknowledged by the assignment of distinct official common names to the three recognized varieties. The varieties recognized were south coastal (vigorous, dark green foliage, LP (C)), Lulu Island (non-vigorous, profusely flowering, LP (L)) and inland (generally unthrifty, yellowish foliage, prone to disease in later years (LP (I)) (McEvoy 1975).

More recent years' experience with lodgepole pine has tended to indicate that varieties that grow fast produce low-quality logs while varieties producing better quality logs are unthrifty in volume production. Further, emerging land-use policy has allowed forestry to extend on to sites of better quality thus obviating the need for a pioneering species such as lodgepole pine. A summary of 30 years of research has produced recommended seed sources for different crop and site types, see Thompson *et al*. (2003).

Latterly there has been increasing public pressure, arising more from fashion and sentiment than from logic, to plant broadleaf species. More attractive incentives to encourage the planting of broadleaves has led at times to their use on sites less than ideally suited to them. There have also been substantial areas of broadleaf plantations established by private owners on former agricultural crop land, as those near Summerhill, Co Meath, Callan, Co Kilkenny and Crookedwood, Co Westmeath.

In an oral answer to a Dáil question on 7 February 1946 Minister Seán Moylan listed the area equivalents of the annual plantings of various species groups for the six years 1940 to 1945. These were: spruces 793 ha, larches 289 ha, pines and other conifers 636 ha and broadleaves 293 ha. As the Minister pointed out in a comment, however, 'It should be understood that the different species are not usually planted pure but in mixtures. The areas given above represent those which the different groupings would have covered if planted pure'. There is no question therefore that an average annual area of 293 ha of pure broadleaves was planted during the period in question. Broadleaves were normally planted as ornamental edge rows or on road margins, or in small groups.

Recognition of Sitka spruce as the valuable species that it was, and confidence in its potential on a variety of sites (Joyce and OCarroll 2002), gradually increased until it reached a maximum of 65 per cent of species planted in state plantations in 1984.

There appears to be no record of the internal operational policy of the Forest Service on species selection in the early years although its general approach may be deduced from two early publications, Forbes (1925) and Department of Agriculture (n.d.). The first of these proposes a scheme of species selection based on soil quality, elevation and drainage status, while the second includes descriptions of the vegetation classes to be met with on those sites, doubtless under Anderson's influence. Anderson's own book *The Selection of Tree Species* (1950) offered a comprehensive specification encompassing six fertility classes combined with four moisture classes, giving a total of twenty classes identified by their vegetation communities.

This scheme was first adumbrated in an earlier publication (Anderson 1932). At that time Anderson had no personal experience of Irish conditions although he acknowledges information on plant communities in Northern Ireland, prepared by David Stewart, Chief Forest Officer in the Northern Ireland Forest Service from 1922 to 1950. In his 1950 volume Anderson, having by then spent seven years as Director of Forestry in Dublin, indicates a range of tree species, both broadleaf and conifer, divided into hardy and tender groups for each of his proposed classes. This specification was adopted in teaching at both university and forester school level and became the ideal towards which foresters generally aimed for many years. But the niceties of such a refined scheme became eroded by the uniformly poor quality of the land available for state planting, resulting in the predominance of Sitka spruce in Northern Ireland and of Sitka spruce and lodgepole pine in the Republic.

The Department of Agriculture (n.d.) recommends the adoption of the practice of mound planting which 'should be used for all wet, low-lying sites where drainage is essential, or where a very shallow soil overlies an impenetrable subsoil'. Anderson (1967) records the introduction of this technique by Sir John Stirling Maxwell in his pioneering plantations on peat at his estate at Corrour, Scotland. 'One important development was his introduction of the so-called Belgian system of turf-planting, on the recommendation of the redoubtable Professor Augustine Henry, as applied in the high Ardennes.' He continues, without source reference: 'The method seems to have originated in Germany, but turf-planting had been used by Scots foresters in Co Derry before the year 1800 and no doubt elsewhere.' The method in practice is illustrated photographically in Figure 17 of Henry's *Forests, Woods and Trees in Relation to Hygiene* (1919) with the caption 'Belgian method of planting peat, four rows of inverted turfs between the drains.'

In the matter of initial tree spacing the Department of Agriculture (n.d.) in 1946 recommends 5 feet (1.5 m) apart for all species except pines which should be planted at 4 feet (1.4 m). At higher elevations and under poorer conditions these should be reduced to 3 feet (0.9 m) for Scots pine, lodgepole pine and mountain pine and 4 feet for all other species.

In later years spacing was gradually increased to 6 feet (1.8 m) then to 2 m and finally, for Sitka spruce and in the light of preliminary results from spacing experiments, to 2.5 m. However, in response to research which showed that an increased core of juvenile wood led to reduced wood quality the standard spacing was reverted to 2 metres (Joyce and OCarroll 2002).

Current stocking requirements are (Forest Service 2000):

- All conifers except south coastal lodgepole pine –2,500 trees per ha,
- South coastal lodgepole pine – 3,300 trees per ha,
- Oak mixed with European larch or Scots pine – 4,550 trees per ha,
- Beech mixed with European larch or Scots pine – 5,280 trees per ha.

Thinning practice and rotation age were usually delegated to local forest management, to be based on training and experience. In an Operational Directive of June 1977, the Chief Inspector of the Forest Service more precisely defined rotation age, with the immediate purpose of expediting the supply of wood to a developing sawmill industry. This involved a shortening of the rotation or felling age of crops of spruce and lodgepole pine to a proportion of the rotation of maximum mean annual increment, i.e. of that giving the maximum wood production per unit area. The effect of this felling policy began to be apparent straight away as increasing roundwood harvest (see Figure 2, Chapter 7). The result of the increased planting programmes from the 1950s onwards was also becoming manifest.

Boglands have always been a prominent feature in the Irish landscape. The total failure of the planting project at Knockboy, Co Galway, made foresters reluctant to try any further experiments. It was reported that in 1937 the Director of Forestry, S.O. Reinhardt, asked to report on the possibility of afforestation in the region of Cloosh Valley, Co Galway, drove his stick or

Manual work. Conifer thinning with a two-man crosscut saw.

probe to its full depth in the peat, and said '*Es geht nicht*' (Clear 1980) which may be translated into the modern idiom 'No way!'

The Research Branch of the Forestry Commission in Great Britain demonstrated that crops could be established on peat, and on heathland, by the application of adequate drainage techniques and the use of phosphorus fertilisers. Heavy ploughs drawn by crawler tractors were developed for this purpose (Zehetmayr 1954, 1960). A small fleet of tractor-and-plough units was imported and a start was made in 1951 with the planting of a small plot at Nephin Beg Forest, Co Mayo. The use of ploughing and fertiliser expanded rapidly on both peatlands and infertile indurated heathland soils.

In later years it was observed that trees planted on ploughed 'ribbons' of peat were more vulnerable to windthrow, an effect ascribed to the linear development of tree roots in the ribbons giving rise to tree/root systems shaped as an inverted T. Ploughing therefore gave way largely to mechanical mounding, a process similar to turf planting with the mounds excavated by mechanical diggers, and which facilitated the development of root systems having radial symmetry and inherently tending towards greater stability.

The bogs of Ireland are estimated to cover a total of 1,312,450 ha, of which 565,950 consist of high level blanket bog (Hammond 1979), which would not be considered suitable for forestry. It is not possible to generalise about the forest suitability of the remaining three quarters of a million hectares except to suggest that it would probably be possible to establish forest on some or all of it but with a high degree of variation in the productivity of such forests.

Considerable areas of peatland have been planted since the 1950s, but no data on the actual areas are available. It is generally agreed now that planting on virgin peatland is not an attractive commercial investment when more fertile sites are available.

7.
THE PRODUCE

Modern forestry in Ireland was at all times aimed primarily at the production of sawlog material to be sold to sawmills. From the beginning it was also necessary to find useful outlets for all the by-products of the sawlog production process and to effectively exploit its available assets. This policy is in full accordance with the Principle of Sustained Yield. That has been defined as 'the regular, continuous supply of the desired produce to the full capacity of the forest' (Osmaston 1968). The principle did not derive from the Bruntland Report (Bruntland 1987): foresters had been applying it for centuries. It was developed in continental Europe in response to fears of a timber famine and its origins may be found in 14th century Europe. 'The earliest effort to control utilization so that uniformity [over time] of forest yield might result, was made in the year 1359, at Erfurt, in Germany. The forest was divided into parts, one of which was cut over annually in rotation. Coppice shoots restocked the area by natural means, and the falls were so planned that a sustained yield was rendered possible.'(Schwappach 1904). Similarly the Ordinance of Mélun, France, in 1376, specified that fellings were to be by area rather than by numbers of trees, and that coupes[54] were to be clearly demarcated on the ground; standards (seed trees) to be maintained and all felling operations to be carried out with care to facilitate regeneration (Osmaston 1968). The concept has been 'borrowed' in recent years by a wide range of interests and extended to the more general principle of 'sustainable development'. This principle may be thought to have reached its definitive expression in the Irish statesman Edmund Burke's description of society: 'Society is indeed a contract…it is to be looked on with…reverence; because it is not a partnership in things subservient only to the gross animal existence of a temporary and perishable nature. It is a partnership in all science; a partnership in all art; a partnership in every virtue, and in all perfection. As the ends of such a partnership cannot be obtained in many generations, it becomes a partnership not only between those who are living, but between those who are living, those who are dead, and those who are to be born' (Burke 1790), a consideration that needs to be borne in mind in connection with any proposal to modify or dilute our state control of forest harvesting.

[54] Felling area. From the French *couper*: to cut.

The general concept of conservation as a policy may have originated with Gifford Pinchot, at least he claimed it to be so. Pinchot (1865-1946) was the first American-born head of the US Forest Service. He had received his forestry training in France, Switzerland and Germany. Pinchot, a man of considerable inherited wealth, was appointed under President Theodore Roosevelt, who supported forestry and enjoyed sojourns in the forests, even if his main purpose was to shoot large animals. He was sacked by President Taft because he strenuously opposed the sale of national forest land for mining by private companies. In his autobiographical *Breaking New Ground* (Pinchot 1947) he describes his developing thoughts[55]. 'It was my great luck that I had more to do with the work of more bureaus than any other man in Washington. This was partly because the Forest Service was dealing not only with trees but with public lands, mining, agriculture, irrigation, stream flow, soil erosion, fish, game, animal industry, and a host of other matters with which other bureaus also were concerned. The main reason, however, was that much of T[heodore] R[oosevelt]'s business with the natural resources bureaus was conducted through me.

'It was therefore the most natural thing in the world that the relations of forests, lands, waters, and minerals, each to each, should be brought strongly to my mind. But for a long time my mind stopped there. Then at last I woke up. And this is how it happened: In the gathering gloom of an expiring day, in the moody month of February, some forty years ago, a solitary horseman might have been observed pursuing his silent way above a precipitous gorge in the vicinity of the capital city of America. Or so an early Victorian three-volume novelist might have expressed it.

'In plain words, a man by the name of Pinchot was riding a horse by the name of Jim on the Ridge Road in Rock Creek Park near Washington. And while he rode, he thought. He was a forester, and he was taking his problems with him, on that winter's day in 1907, when he meant to leave them behind.

'The forest and its relation to streams and inland navigation, to water power and flood control; to the soil and its erosion; to coal and oil and other minerals; to fish and game; and many other possible use or waste of natural resources – these questions would not let him be. What had all these to do with Forestry? And what had Forestry to do with them?

'Here were not isolated and separate problems. My work had brought me into touch with all of them. But what was the basic link between them?

'Suddenly the idea flashed through my head that there was a unity in this

[55] In 1910 Pinchot visited Sir Horace Plunkett at his house 'Kilteragh', Foxrock, Co Dublin (burned down in 1923) where he 'rejoiced in the superlative greenness of the Irish spring, and nearly froze in its chilliness.' No doubt forestry was among the matters discussed.

complication – that the relation of one resource to another was not the end of the story. Here were no longer a lot of different, independent, and often antagonistic questions, each on its own separate little island, as we had been in the habit of thinking. In place of them, here was one single question with many parts. Seen in this new light, all these separate questions fitted into and made up the one great central problem of the use of the earth for the good of man.

'To me it was a good deal like coming out of a dark tunnel. I had been seeing one spot of light ahead. Here, all of a sudden, was a whole landscape. Or it was like lifting the curtain on a great new stage.

'There was too much of it for me to take in all at once. As always, my mind worked slowly. From the first I thought I had stumbled on something really worth while, but that day in Rock Creek Park I was far from grasping the full reach and swing of the new idea.

'It took time for me to appreciate that here were the makings of a new policy, not merely nationwide but world-wide in its scope – fundamentally important because it involved not only the welfare but the very existence of men on the earth. I did see, however, that that something ought to be done about it.'

Bruntland developed the concept to the more general principle of sustainable development. That is now most simply defined by the United Nations World Commission on Environment and Development as 'to meet the needs of the present without compromising the ability of future generations to meet their own needs,' which is not remote from the forestry principle as previously enunciated.

Back to more material products in Ireland. It is axiomatic that if forestry is to be economically viable it must have markets for its products.

At a very basic level early thinnings were used to construct corduroy roads.[56] 'Special road construction was put in hand to improve extraction where urgently desirable and at certain forests…unsaleable small thinnings were used to construct such roads over heavy wet ground with very satisfactory results' (Minister's Report 1933-38). Sales included sawlog, pitwood, poles (telegraph and scaffolding), fencing materials and firewood. In the 1950s Christmas trees began to feature. The first sale of pulpwood to 'a papermill [Clondalkin, Co Dublin] which extended its activities to the manufacture of mechanical pulp' is recorded for 1955-56. A chipboard factory was built in Scariff, Co Clare, in 1959 and began to buy roundwood in the autumn of that year.

[56] Roads made of poles laid transversely across the roadway.

With steadily increasing supplies of wood becoming available for harvesting the development of suitable markets became a major consideration, although difficulties arose due to fluctuating commercial conditions. In 1962-63 a new chipboard factory began production in Waterford. In 1978 the hardboard mill at Athy, Co Kildare, closed and there were further closures of pulpwood-using plants in 1979 and 1980. At around this time an entrepreneur imported novel (to Ireland) harvesting equipment and harvesting gangs and developed an export outlet for pulpwood to Britain, thereby re-opening a commercial market for first thinnings.

The Minister's Reports for 1980 and 1981 record the expenditure of sums of money for 'Assistance to Chipboard Ltd (in receivership)' and the report for 1981 records 'an improvement in the demand for pulpwood from the chipboard mill at Scariff, Co Clare, following its restructuring, with substantial capital investment by the State, in mid-year.' So far as can be ascertained this was the first occasion on which the power given to the Minister in Section 9(1)(*h*) of the Forestry Act, 1946 to 'aid in the establishment or carrying on of woodland industries', a provision repealed by the Forestry Act, 1988, was put into operation.

In 1981, following intensive negotiations involving the Industrial Development Authority (IDA), an agreement was entered into with the Medford Corporation of Oregon, USA, to develop a medium density fibreboard (MDF) factory in Clonmel, Co Tipperary, which led to a withholding of roundwood supplies for the export market in anticipation of the expected demand from the Clonmel factory. That factory began production in 1983, and the market situation improved further with the re-opening of the Scarriff chipboard plant under the new ownership of Finsa Forest Products. Spanboard, in Coleraine, Co Derry, has also manufactured chipboard since about 1960.

In 1985 an export market for decorative foliage, mainly noble fir to Germany, Holland and Denmark was developed.

The major development during all this period was the expansion and improvement of the Irish sawmilling industry with the active encouragement and assistance of the IDA. This was further facilitated in the late 1970s by (as already mentioned in Chapter 6) a prescribed reduction in rotation lengths for the three main species - lodgepole pine Norway spruce and Sitka spruce - in Forest Service plantations. This was based largely on emerging evidence that the internal rates of return would be more favourable on rotations shorter than those of Maximum Mean Annual Increment (MMAI). The MMAI rotation was specified to be reduced by a set percentage for each species, 20% for the

Sophisticated forest products such as oriented stand board (OSB), shown here in a flooring application, are now being manufactured in Ireland from Irish wood.

Photo: Smart*Ply*

spruces and 30% for lodgepole pine, south coastal. Thus Sitka spruce of yield class 18 ($m^3ha^{-1}yr^{-1}$) with a MMAI rotation age of 53 years would become eligible for clearfell at age 42.

Subsequently Coillte and Louisiana Pacific in a joint venture initiated an Oriented Strand Board (OSB) facility near Waterford, which began to operate in 1996, and the American-owned Masonite Europe established a facility at Drumsna, Co Leitrim, in 1997 for the manufacture of moulded door-facings from sawmill residues. The former uses small-sized and low-quality logs and the latter uses chips from the sawmilling industry, both thus improving the economics of sawlog production and marketing.

The annual production of sawlog material for sale from state forests is shown in Figure 2. While some material from privately owned forests was

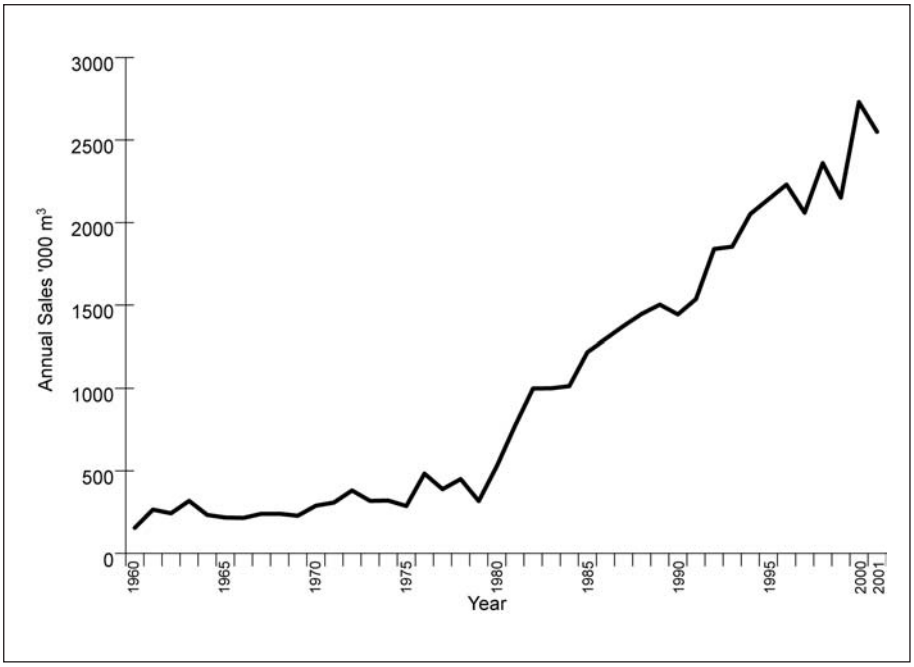


FIGURE 2: Annual sales of roundwood, 1960 – 2001.

also sold and while there is no official record of quantities it is not thought to account for more than 5% of the whole.

All of the foregoing products generated income to set against the cost of producing the wood, but other public benefits such as recreation facilities and landscape quality which are not amenable to valuation in money terms must also be seen as valuable products of the forest. These considerations are not new to the forestry profession. As outlined by Schwappach (1904) 'Woods may be intended only to beautify the landscape, or to add to the amenity of the district, and if they really serve their æsthetic purpose, this may be considered an end in itself. It does not follow, however, that a wooded area, managed simply with a view to the production of timber on economic lines, is necessarily unlovely. Sylviculture certainly is based on commercial principles, but in its results it often rivals for beauty the much less valuable productions of the landscape gardener.'

Henry (1919) described the former condition of the Landes region along the Bay of Biscay as 'reputed to be the most unhealthy region of France, the inhabitants being very subject to malarial fever, scrofula and pellagra [Henry was qualified as a medical doctor]. Since about 1850 the greater part of the Landes, some 1,800,000 acres [730,000 ha] has been afforested with

maritime pine; and these diseases have practically disappeared, and the district is one of the healthiest in France, the decrease in the death-rate being remarkable.'

The intangible and non-cash values of forestry have been mentioned. Attempts have been made to evaluate these in monetary terms, for example by Clinch (1999).

The meeting of the Statistical and Social Enquiry Society of Ireland, held in the Royal Irish Academy premises in Dublin, where Gray's 1963 paper on *The Economics of Irish Forestry* was presented, was chaired by Roy C. Geary. The present writer was in the audience. Geary (1896-1983) was the first director of the Irish Central Statistics Office. He went to New York in 1957 by invitation to take charge of the United Nations national accounts branch of the Statistical Office. In 1960 he became the first director of the Economic Research Institute (later the Economic and Social Research Institute -ESRI). Following Gray's presentation there was a lively discussion from the floor in the course of which many doubtless elegant and erudite ideas, mainly concerned with discount rates and related abstruse matters, were aired. But Geary offered as his final summing up: 'My word to you foresters is, go out and plant trees, and bless you'.

8.
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n.d: no date. Where the publication date is available from a source other than the item's publication data it is given in brackets.

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Appendix

Letter printed in The Irish Times, 19th December 1954.

TREES FOR IRELAND

Sir, - It must be now quite obvious to those interested in the reafforestation programme that all is not well in our forest service. At a recent meeting of the Trees for Ireland Association a plea was made for the provision by the State of a technical forest officer for each county, who would give advice on all aspects of tree planting and the silvicultural treatment of plantations. This plea resulted in a letter (*Irish Times*, November 2nd) signed by Mr T. O'Brien, Secretary of the Department of Lands. Mr O'Brien stated that his department already had a planting advisory scheme in operation which was 'pretty widely used'.

In the Report of the Minister for Lands on Forestry, April 1st 1950 – March 31st 1953 (page 38) some further information is available on this pretty widely used scheme, from the following table:

Year		Advice following Inspection		Advice by Correspondence. (!)
1950-51	..	30	..	153
1951-52	..	38	..	120
1952-53	..	9	..	108
	Totals	77	..	381
1947-50	..	58	..	432
1944-47	..	29	..	206

It is regrettable that the secretary of a State department should allow his name to be used in a deliberate effort to mislead the public in this matter. Someone is hoist with his own petard.

In the United Nations' F.A.O. Report on the Forestry Mission to Ireland, 1951, it is stated that a policy decision *had been* taken by the Irish Government, involving the establishment 25,000 acres of new forestry plantations annually over a period of 40 years. Nevertheless, the forestry division has reduced this moderate programme to what it calls an 'immediate target' 15,000 acres annually. This report also recommends the creation of a 'forestry commission or board on the lines of Bord na Móna or the E.S.B., or the establishment of a separate Department of Forests, with its own Minister as a member of the Government', to replace the present moribund Forestry Section of the Department of Lands. So far, neither of these recommendations has been put into effect, and we still have our vitally important forest service administered by a collection of variously styled clerks, not one of whom knows an oak from an auk. Worse still, these inept

babes in the wood would appear to be running the forest service without the steady and guiding hand of any technically trained personnel.

The F.A.O. report further states:

(a) 'The development of a strong forestry research organisation is not only essential for the maximum efficiency of technical operations, but is demanded as an insurance measure'.

The Professor of Forestry in the N.U.I. has frequently called for a State forest research organisation. Yet we have no forest research body whatever. If we had, it is not likely that *Pinus contorta,* which is practically worthless as a timber tree, would constitute 40% of the State's total planting for the years 1951 to 1953. (This figure is unbashfully given in the current report of the forestry division.)

(b) 'It may be taken for granted that a corps of professionally trained officers will have to be established and expanded as the programme goes on'.

The forestry division's answer to this has been to seal the forest service against forestry graduates, and at the present time there is no means whatever whereby a forestry graduate may secure entry to our forest service. Some of our forestry graduates are at present unemployed, while others have perforce taken the emigrant ship. The few who a few years ago were granted the great privilege of entering the sub-professional grade in the forestry division were given the munificent salary of £5 10s per week, with, of course the 3s a week increment. This is also the fat salary given to all our foresters on completion of their three years' course at the State forestry college in Wicklow.

The most disquieting feature of this whole sorry affair is that bodies such as the Trees for Ireland Association, the Society of Irish Foresters, etc., must be only too well aware of the deplorable state of the forest service administration, and yet a pall of silence enshrouds them all, in connection with these matters. Could it be that the throttling by officialdom of the forestry division, referred to recently by a former and potential Cabinet Minister and forestry advocate has, *virtute officii*, been extended to these organisations also?

The present Minister for Lands[57], whose genuine interest in forestry is an accepted fact, should hold a full enquiry into the administration of the forestry division, for which, after all, he is responsible, before irreparable damage has been done to Irish forestry. – Yours, etc.,

"Rubus Strigosus"[58]

Co Dublin. November 17th, 1954.

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[57] Joseph Blowick

[58] *Rubus strigosus* is the botanical name for an American species of raspberry. The Oxford English Dictionary defines raspberry as, *inter alia, 'slang*. A sound or manifestation of dislike or contempt'.

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