
Forest Perspectives

The woodland vegetation of Ireland, past, present and future

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Setting the scene

In the middle of Clongawny bog in south Offaly where I live there are five islands, tree-clad oases surrounded on all sides by an ocean of deep peat. These are the tips of moraine hills the encroaching bog never quite overwhelmed. Many lesser summits still lie buried beneath the peat. About forty years ago the great machines of Bord na Móna moved onto Clongawny and began their slow work of laying the grid of drains that would rob the bog of its life blood, skinning away its vegetation: and then patiently shaving away the peat, centimetre by centimetre. The wooded islands remained as silent watchers. Every spring a carpet of anemones bloomed under the oaks as they had done for tens of centuries, and no eye came to worship or admire.

Gradually, over time, the sea of peat retreated from the islands as the work of harvesting proceeded apace, and then an amazing thing came to light. On the slopes all around the islands, once their shallower blanket of peat was removed, there emerged a forest of fossil pines that had been entombed by the growing bog, their stumps still rooted on the slopes where they were growing before the encroaching bog engulfed them unnumbered centuries ago.

It would be hard to find a more startlingly tangible and immediate demonstration that vegetation, the assemblage of plant communities, has a *history*. This history: the story of Ireland's changing vegetation, and of the shaping influence of humans, is chronicled in the pages of the pollen archive preserved in bogs and lakes. In the half century or so since Frank Mitchell published his inspiring Littleton pollen diagram (Mitchell 1965) the ever-expanding archives preserved for us and presented in the language of palynology chronicle that interplay between ourselves and the natural vegetation of the island. An outstanding example of that ever-growing precision of penetration and detail is a pollen diagram recently prepared by Michael O'Connell and his colleagues at the Palaeoenvironmental Research Unit in NUIG for an area in which the cumulative cultural impact on the forest over time could hardly be more dramatic: for this is Inis Oírr, and is perhaps the most detailed Irish pollen profile to date, with the full post-glacial time span of 11,500 years: from the end of Late-glacial to the end of the 20th century (O'Connell et al. 2005).

What we are seeing in these diagrams is in part a successional process, but not in an otherwise unchanging environment. Strongly superimposed on the succession to

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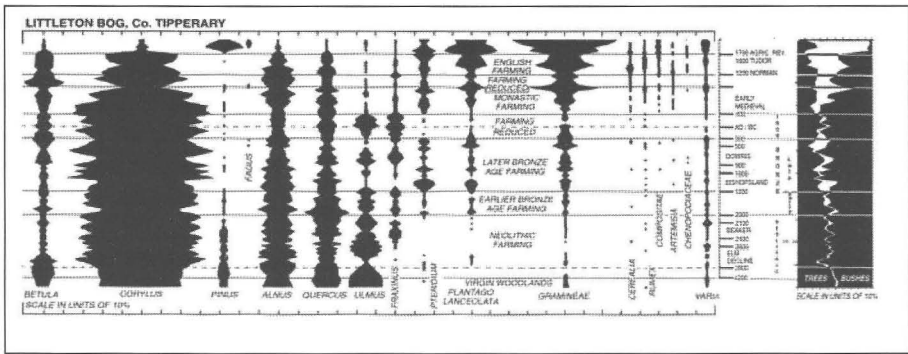


Figure 1. The Littleton pollen diagram (Mitchell 1965). The width of the black bands is proportional to the abundance of the various species in the sample. The width of the white strip on the right, sandwiched between the trees and bushes, corresponds to the extent of open land.

woodland that would have occurred anyway is the powerful shaping and directing influence of the changing climate that followed the Ice Age. And then, at first no more than a faint echo of approaching thunder if you like, the hand of man upon the forest.

Between the palynological runes of these diagrams we can delineate, as though in a parallel text, the uses of timber: we can hear not only the symphony of sound in vanished woods and use our ecological insight to conjure up the anemones and pine martens and bluebells, but hear the fall of the axe and see the explosion of primroses in the felled clearings: and (archaeology coming again to the assistance of imagination) the superstructure of timbercraft enmeshed in these ancient woods.

The drama of the human story through time has, since our arrival on the scene five million or so years ago, increasingly had an impact that is more immediately apparent. So the pattern of vegetation, and more specifically of woodland, was increasingly shaped by this impact, overlain upon the more fundamental shaping forces of geology and climate. When the pine forests of Clongawny were growing the adjacent clay soils beyond the reach of encroaching bog were farmland, in the case of Clongawny tilled and grazed at one time by the prosperous Bronze Age communities whose annual ritual offerings to the dark, revered waters on the edge of the bog grew to what archaeologists would in the course of time label the Dowris Hoard. There are no wooden artefacts in the Dowris Hoard, though we do find the bronze axes for felling and working the trees of the surrounding forests. I often think it is highly appropriate that one of the earliest archaeological finds in the midland bogs should have been a cache of tools belonging to a worker in wood (found in 1786): ‘large wooden bowls, some only half made ... with the remains of turning tools; ... obviously the wreck of a workshop’ (Commissioners for Bogs (1810-1814).

We sometimes think Ireland was a land of forest when the first people set foot here. Irish mythology contains hazy recollections of a distant, forgotten time when Ireland was covered by dense forest. The earliest name given to Ireland (by a scout of the people of Nin) was *Inis na bhfiodhbhadh*, Island of the Woods. When he

landed – this, of course, is not history – the only place he found which was not forest was *Magh-n-ealta* (Moynalty). According to ‘ancient record’, Ireland was cleared of woodland and subsequently re-afforested three times: ‘Three times Éire put three coverings and three barenesses off her’ (Keating 1902). The picture of the first farmers landing on an empty island clothed in primeval forest is one which has survived for a long time. And until recently, even archaeologists did not see the Mesolithic eyes peering curiously out from between the trees.

Human communities were to be found throughout Ireland within a few centuries of the retreat of the glaciers, in other words long before woodland succession had reached its climax: and each of the succession of cultures that followed one after the other in Irish prehistory was bound to the woods by *need*. Timber was absolutely central to their essentially self-sufficient rural economy. A minimal need in the beginning, in the long era before people started to farm, little greater perhaps than that of the animals with which they shared the land.

The role of trees and woodland in prehistoric farming

What is often forgotten is that Ireland only lost the last of its woods in the turmoil of the 16th and 17th centuries (Feehan 2003). Before this, and especially in earlier centuries, native trees and the woods that sheltered them were held in an esteem that owed much to the essential part they played in a self-sufficient rural economy, but included also elements of admiration, affection and indeed a reverence whose echoes recur again and again in early Irish literature.

In an earlier Ireland our relationship with trees and woods was vastly richer and more detailed than it is now. Every tree had its uses and everybody knew which trees could be used for what purposes. Woodcraft was not merely the skill of a sort of ‘priesthood of the forest’ managing a fenced estate, as it is today. It was a community skill, and woodland a community resource, albeit hedged about with protective prescriptions to ensure sustainability. Because timber was so important, the use of woodland resources was carefully regulated. This is well exemplified by the way trees are classified in the Laws of Ancient Ireland on the basis of their usefulness, and the network of penalties and prescriptions that surrounded them (Kelly 1999). Woodland was strictly protected by law. There were severe and very specific fines for damage, and for illegal hunting or trapping. But there were also specific common rights (*dilsi cailli*), such as the right to gather enough wood for a fire, or a handful of ripe nuts if they were needed, and so on. Woods were enclosed by walls or banks and ditches, as would be expected in a society which set such store by the economic value of the many resources they represented, and these early banks can sometimes be traced today. In other words, the access of animals to the woods was not unrestricted.

In Iron Age and Early Christian Ireland there was great skill in carpentry and woodcraft, because nearly everything on the farm was made of wood. A considerable diversity of specialised wooden vessels was needed for the dairy: buckets, churns, tubs, troughs and mugs of various sorts. Wooden bowls and plates were made on a quasi-industrial scale from alder, ash, aspen, and other woods (Lucas 1962-63); pottery seems to have been utilised to a very limited extent.

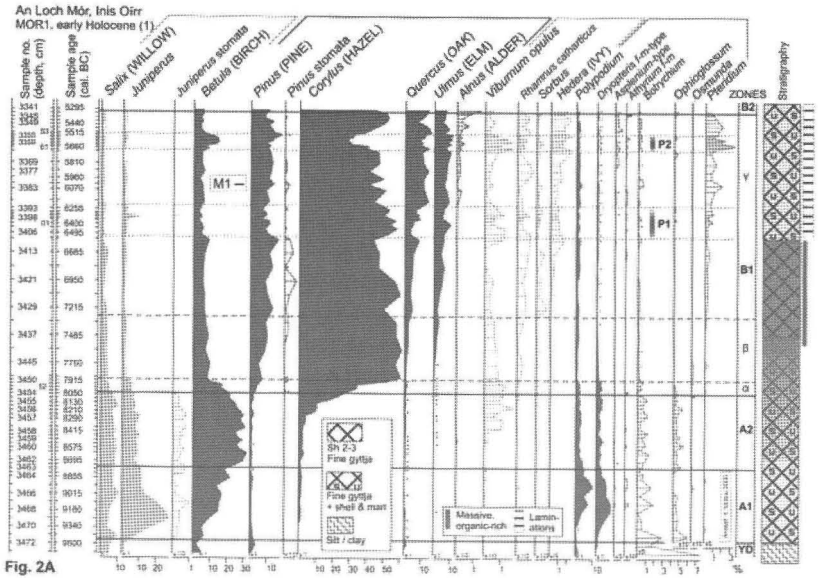


Fig. 2A

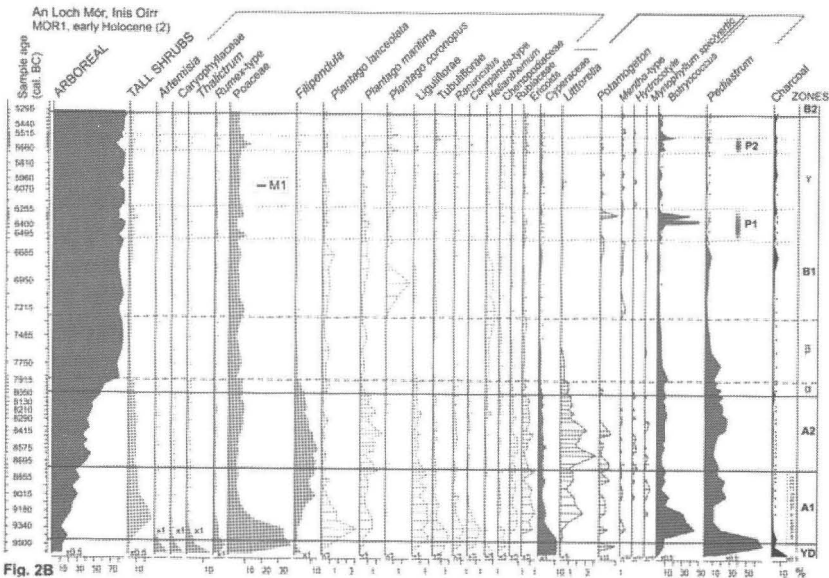


Fig. 2B

Figure 2. Holocene pollen profile for Inisheer (Inis Oírr) in the Aran Islands. This shows the full Post-glacial sequence (11,500 years) from the end of the Late-glacial to the end of the 20th century. It demonstrates dramatically the extent to which native woodland dominated what is today an almost treeless landscape throughout that time (O’Connell and Molloy 2005: reproduced by kind permission of the authors).

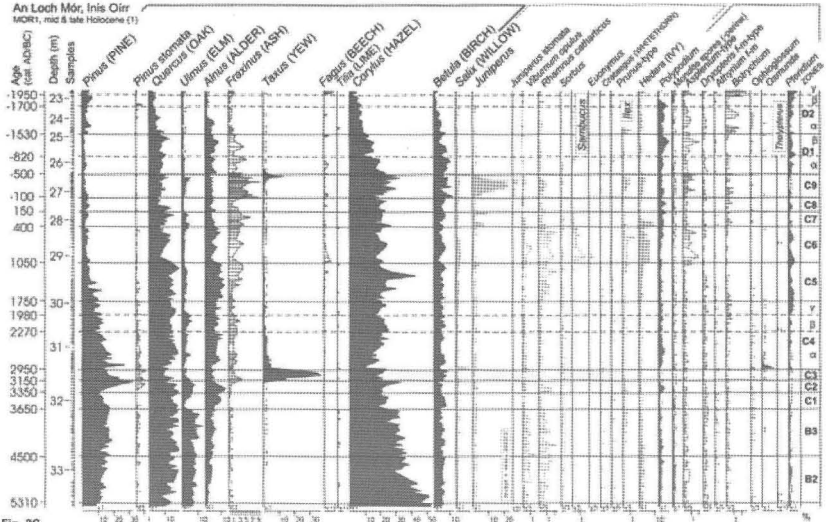


Fig. 2C

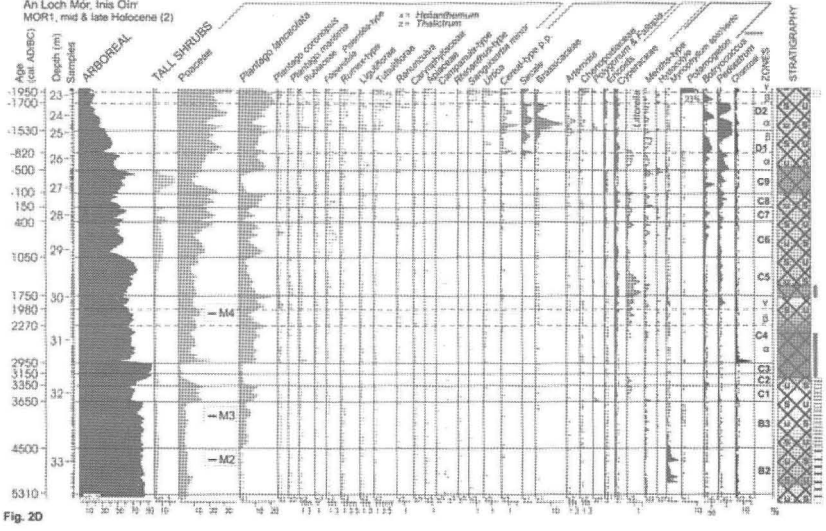


Fig. 2D

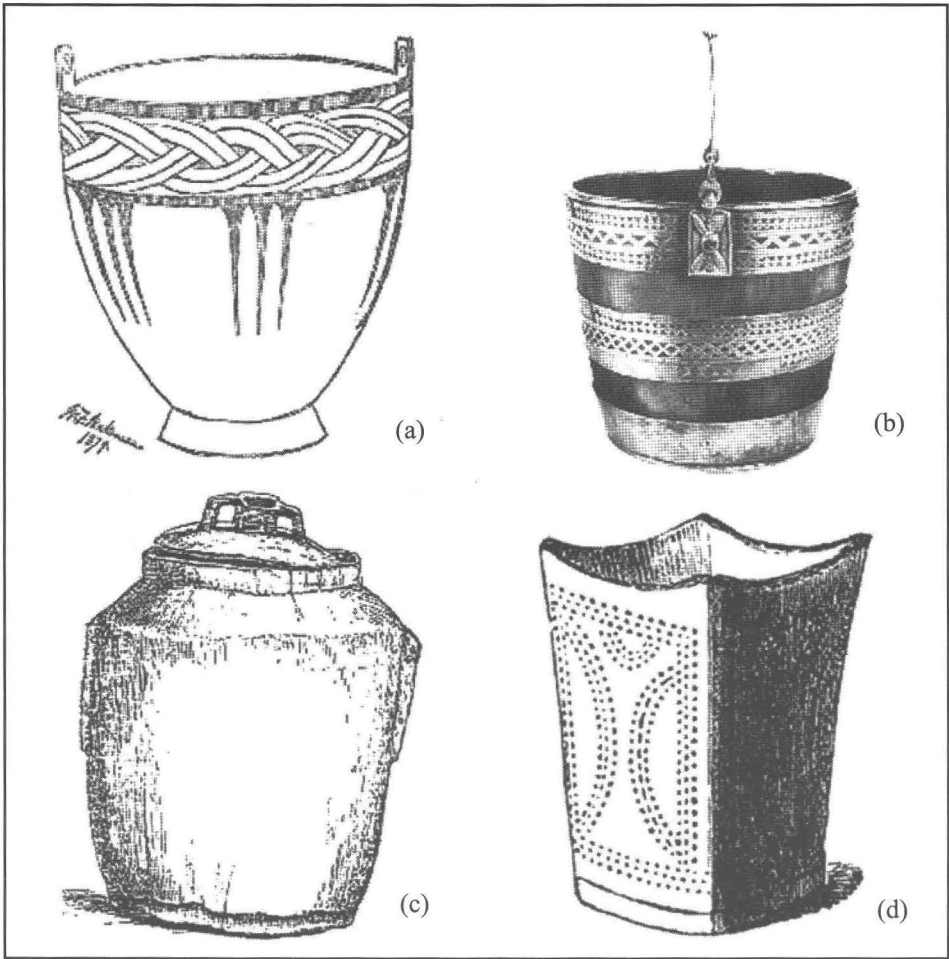


Figure 3. In Early Ireland sustainable management of woodland was essential to maintain the supply of the various timbers necessary for the making of tools and utensils. (a) wooden vessel of oak, with an alder base: from a bog at Cavancarragh, Co Fermanagh; (b) yew bucket from Derrymullan, Co Laois; (c) butter churn made from a solid piece of pine, from a bog in Co Derry; (d) Drinking vessel made from yew: from Tamlaght O'Crilly in Co Derry.

The woods were also important for pasturing cattle. A poem by the 14th century poet Maol Seachluinn Ó hEoghasa on the death of the Cavan chieftain Tomás Mag Shamhradháin (Magauran) tells us that after Tomás's death 'wasted and barren now is every cow in his wood after the death of round-eyed Mag Shamhradháin; few are the fields showing sustenance for a cow now that Tomás is gone'. The suggestion is that these woods were important farm assets not only because of the timber they produced, but for the pasture and shelter of animals – though as we have seen access

was not unrestricted. Nor should we ignore the information in placenames. Although places with such names as Moynure (*mágh an iubhair* – plain of the yew), Aghanure (*áth an iubhair* – ford of the yew) or the multitude of places with *derry* (oakwood) in them often stand in a virtually treeless landscape today, their names carry an echo of a time when woods of yew or oak were so prominent as to merit calling the townland after them. People knew and valued their trees, and names like this will not have been given casually.

As long as the woods remained central to the farming economy, they were safe, and so was much of the fauna that lived in them. But however ancient in origin or in their degree of ecological continuity, they were greatly modified by farming practice. One major affect of stock must have been its restricting influence on natural regeneration. These woods will have been essentially clear of undergrowth, and the composition of the ground flora strongly influenced by the grazing preferences of pigs, cattle and goats.

Woodland remained an integral part of the farm landscape in many areas until the 16th century. There were still great forests which remained to some extent outside agriculture, but there were also smaller woods in every district which were managed as a necessary part of the resource base of the early farm. Woods at this time were still extensive enough to harbour wolves, deer and wild boars as well as fox, badger and the smaller mammals. Woodland is everywhere in the medieval lives of the Irish saints: trees, birds and wild mammals are their constant companions. The ghosts of these managed local woods survived in some few places into the 18th century.

The respect for trees in early Ireland

But this early relationship with trees and woods was not shaped by need only, though of course because of their economic value trees occupied a special importance in the Gaelic experience of the world; they were the dominant voice in the living language of landscape. A wonderful reflection of this is seen in the way in which, at the time writing was introduced to Irish, at first as ogham and then through the Latin alphabet, the druids reached for trees in their attempts to try to convey the magic of the written word. When a written Irish alphabet was first adopted, the names given to the new letters were the names of trees (Kelly 1976, Feehan 2000).

Several species were considered to have magical properties and powers, notably yew, hazel, hawthorn, elder and mountain ash. The hawthorn was linked with spring and with marriage. Individual trees of stature and meaning were revered in a particular way, and the penalties for damaging sacred or privileged trees were higher than for other trees. We so hardly ever see and experience majestic trees any more that we can hardly appreciate the awe they rightly evoke.

People were so surrounded by nature that it provided much of the imagery for poetry and the sagas, and trees are prominent in this imagery. But there was an element of something else in the old Gaelic attitude to trees which is deeply woven into the mythology of early Europe. Celtic society was a rural society, without cities or towns, and the religion of the Celts – and indeed of the peoples who were here before them – was essentially animist, a nature religion in which sacred places in the

wilderness, usually associated with forests or water, took the place of temples. The sacred places of pre-Christian Ireland were not the caves and buildings of stone which Christianity inherited from Rome, nor were they like the temples of the other great religions. For the Celts the sacred place was the *nemeton*: the grove of trees, living, full of spirit, whispering of things in our own spirit we can hardly comprehend and barely articulate.

Groves and individual trees played an important role in the lore of the druids, and there is no doubt of the pre-eminence of the oak, the tree which of all trees was most full of symbolism for the European druids and the Celtic people they served. The druids belonged to the caste of those who studied the science and mystery of the world in order to guide their communities in life. In the early agricultural world in which they had their beginnings the oak was at the heart of such science in an immediately practical way.

However, what survives of the early Irish lore of woods and trees is only the faintest whisper, because pre-Christian Ireland was not a literate society and that lore was communicated orally. But if we look carefully through the dense screen which early Christianity has thrown up between pagan Ireland and our time, we can see a little more. The reason for this is that the sacred groves of pre-Christian belief were carried over into the Christianity of the 5th century. It is more than likely that many or even most of the early Christian churches were founded on the site of druidic oaks or other sacred trees, which still echo faintly in the names of these places: *cill dara* (Kildare), *dair-mhagh* (Durrow), *doire Calgaich* (Derry). It is no accident that where the epithet 'cill' (church) occurs in a placename, it is more frequently associated with the name of a tree than with any other topographical feature. In all probability, every church and monastic foundation in the early Christian centuries had its sacred tree (*bile*) or its *fidnemed* – the word for a sacred grove in early Christian Ireland – which were the Christianised descendants of the sacred groves that went before.

Woodland disappears from the farm landscape

There was extensive woodland cover over the whole of medieval Ireland. According to Giraldus Cambrensis woodland occupied more ground than open grassland in his time. Some of this was forested wilderness, but much more was productive woodland within the farming economy. It is estimated that by the 1400s 12% of Ireland was still forested, mainly along the river valleys of the lowlands, and as we have seen woodland remained extensive until the early 16th century. There were still extensive forests in most upland areas and on the undrained floodplains of the larger rivers at this time, and beyond the confines of the Pale woods had been allowed to overgrow many of the old highways which ran through them (Falkiner 1904).

However, the remaining forests began to dwindle during the Elizabethan wars, when woods were cleared because they were seen as the hiding places of rebels and priests, as well as a refuge for wolves. By the end of the century most of these woods had gone. The Pale had lost most of its timber long before this. A law had to be passed in 1534 obliging every farmer 'to plant twelve ashes within the ditches and closes of his farm.' In Stafford's time, extensive woods remained in Laois, Wicklow,

Wexford and Carlow, but these declined as the 17th century advanced, and little remained by its end.

With the collapse of the old farming system in a new economic and cultural climate, the ancient Gaelic tradition under which woods had been managed for numberless centuries broke down. A market price was placed on trees as the doors of a modern economy opened on Irish farming, and timber was one of the principal exports from Ireland in the decades that followed. This onslaught on the remaining woods was due in large measure to the high market value of trees for the manufacture of pipe staves, barrels and great quantities of charcoal for iron manufacture (Boate 1652). Such were the quantities of pipe staves exported that 'this last commodity hath wasted much the woods in Ireland for want of good husbandry' (*ibid.*). With the loss of the woods, people now turned to the bogs for their everyday firing. In his journal Thomas Dinely wrote: 'The wars and their rebellions having destroyed almost all their woods both for timber and firing, their want is supplied by the bogs' (Dineley 1870).

As the century progressed more and more of the surviving forests showed increasing signs of neglect and exploitation. Until this time, 'Ireland was not inferior to England in plenty of woods, fit for the repair or building of ships and edifices, till within these few years they were all wasted by ill husbandry ... For the natives and possessors of these woods, not observing any seasons nor dividing them into coppices, as they do here, they do always cut down the main timber in all times of the year for their private benefit. Much thereof was and is consumed in iron works there; in pipe staves, transported to Spain and France; and in building foreign navies' (O'Brien 1923).

In North Kerry, no high timber of a quality sufficiently good for shipbuilding remained by 1598, the time of the Desmond Survey, only 'underwood of the age of fifty or sixty years, filled with doted [decayed] trees, ash-trees, hazels, sallows, willows, alders, birches, whitethorns and such like.' In parts of Wicklow, north Wexford and east Carlow however, in spite of their continued exploitation for timber for ship-building and pipe-staves, the woods still had extensive stands of good oak timber at the end of the 16th century. Woods in which yew were dominant or prominent still existed along some of the rivers of Co Cork in 1600, and in such remote areas as the Curlew Mountains pine woods still hung on (Litton Falkine 1904). There were few woods left 'in the English shires near Dublin, in half Connacht, and in a great part of the other provinces' (O'Brien 1923). But some at least were still extensive enough to harbour the larger mammals and birds: 'Great store of great hawks, wild deer, wild boars and wild swine are there to be seen in the large woods, with the perquisites belonging to the same and enjoyed therewith' (*ibid.*).

As population recovered after the devastation of the 16th and 17th century wars, a new pressure on the remaining woods was the need for more farmland. In 1570 extensive forests of 'great oaks and much small woods as crabtree, thorn, hazel, with such like' were recorded in the Barony of Athlone; by 1637 they had all gone, except for those surviving on rocky and steep land, and on the inaccessible wooded islands

in the middle of the bogs. Gerald Boate recorded in 1654 that many areas well wooded in 1600 had been completely cleared in his lifetime. He recounted how ‘... in some parts you might travel whole days without seeing any trees save a few about gentlemen’s houses.’ This was especially so on the northern road, where for a distance of sixty miles from the capital not a wood worth speaking of was to be seen: ‘For the great woods which the maps do represent to us upon the mountains between Dundalk and the Newry are quite vanished, there being nothing left of them these many years since, but only one tree standing close by the highway, at the very top of one of the mountains so as it may be seen a great way off, and therefore serveth travellers for a mark’ (Boate 1654).

The second half of the 17th century saw the final act in the disappearance of Ireland’s forests, as the new landowners set about taking their farms in hand. Another cause of the devaluation and destruction of the remaining woods was the tendency of many of the Cromwellian soldiers who were allocated lands under titles of doubtful permanency to sell off the standing timber as quickly as they could. Only 10% of the woods that survived in the mid-17th century were still in existence two centuries later (Aalen et al. 1997).

The modern period

As the population soared in the 18th and on into the 19th centuries, woods disappeared from the countryside to an extent we would hardly credit today were it not for the numerous accounts left by contemporary travellers. An observation by Arthur Young in the late 18th century echoes the time when every townland had its ‘great wood’:

‘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. In the cultivated countries, the stumps of trees destroyed shew that the destruction has not been of any antient date’ (Young 1790).

Yet already by the time of Young’s visit the country had become denuded of trees. He instanced an area of 100,000 acres around Mitchelstown: ‘in which you must take a breathing gallop to find a stick large enough to beat a dog; yet is there not an enclosure without the remnant of trees, many of them large; nor is it a peculiarity to that estate: in a word, the greatest part of the kingdom exhibits a naked, bleak, dreary view for want of wood, which has been destroyed for a century past, with the most thoughtless prodigality, and still continues to be cut and wasted, as if it were not worth the preservation’ (*ibid.*).

A mature tree of any kind could hardly be seen outside the walls of the great demesnes, and in many places the only wood available for building was timber dredged from the depths of the bogs. There were no longer groves or great trees to relate to, and human need for the wild was perhaps the last thing people in their growing millions thought of in their struggle to make ends meet. The ancient reverence withered with the progress of deforestation and the smothering of tradition. By the turn of the century, woodland cover in Ireland had dwindled to half of one percent, the lowest in Europe.

With the loss of the woods the ancient consideration accorded to trees was smothered and an ages-old tradition in woodcraft faded away. But the reverence survived as best it could in popular tradition. The traditional regard for great and special trees shrank to a superstitious reverence for those that grew on ringforts, and the ancient hawthorns that shaded the country's holy wells, of which over 3,000 still survived at the beginning of the 20th century. Great respect was always paid to 'lone bushes', generally whitethorn, growing alone out in the open, such as the so-called monument trees and bushes associated with funerals, the revered bushes which often stood at road crossings, or at places where some tragic event had occurred. It was not considered 'right' to cut these, and they were widely believed to be under the protection of the *sidhe*, the good people, and misfortune invariably befell anybody who cut them down.

The start of recovery

Numerous attempts were made to repair the destruction and subsequent neglect of the woodlands, which accompanied and followed the collapse of the Gaelic woodland management tradition and the arrival of a new landed order in the late 17th century, but there was no longer any sense of community responsibility for woodlands. It proved very difficult to stop people cutting the timber they required for everyday needs, and some few were quick to exploit this breakdown in tradition in an unscrupulous way. Time and again measures were passed in an attempt to put a stop to this, but for a long time they were ineffective.

Something more was needed to make the legislation effective. This was provided with the important Act of 1784-85, which gave the tenant the right to do what he liked (within certain limits) with any trees he planted. It also granted for the first time the right to enclose any piece of ground with coppice wood, and reinforced the obligation to register the details of what was planted. Some of these records must still survive, though few have come to light; the study of tree-planting in Derry at this period by the McCrackens gives a good idea of the detailed and fascinating information they can contain (McCracken 1971).

This persistent legislative and incentive effort did finally bear fruit. Although no detailed study has been carried out so far, a rough estimate suggests that some 50 million trees may have been planted under these Acts in the 60 years between 1790 and 1850, totalling in all an area of some 25,000 ha. Some 53,500 ha of woods were planted in the 18th century; by 1841 this had risen to 140,000 ha. (Aalen et al. 1997). For comparison, Forbes calculated that over a period of 40 years only 2,800 acres had been planted with premiums awarded by the Dublin Society (Forbes 1933). Most of the old trees still surviving in Ireland date to this period of active afforestation. Although broadleaved species were well-represented in the new plantings, pride of place often went to new conifers from North America such as Douglas and grand fir, along with Scots pine, European larch, and small numbers of Norway spruce; conifers accounted for considerably more than half the total of trees planted. The main broadleaved species – in approximate order of popularity – were ash, beech, oak, sycamore, alder, elm, birch, horse chestnut, Spanish chestnut, willows, poplars,

hornbeam, lime, plane and walnut. Most of the plantations were mixed; hardwoods were accompanied by nurse plantings of conifers, alder or birch.

The planting of new woods by improving landlords went some way towards restoring trees to a landscape now largely bare of woodland, but the new woods were sheltered within protective demesne walls, no longer part of the vernacular farmed landscape. Moreover, one of the most immediate results of the 19th - early 20th century Land Acts was that landlords and tenants, uncertain of the future, sold much of the timber in the growing woods to provide capital. The new tenants did not identify with tree planting; this was something associated with landlords and subsequently with the new State. There was 'wholesale cutting-down of trees' in the second half of the 19th century (Dennis 1887). By the early 1920s woodland cover in Ireland had declined to 100,700 ha.

It is understandable in the Irish situation that afforestation policy for so long focused simply on timber production, when one considers that only 1.5% of the island was under woods at the turn of the century. In a country denuded of trees, the need for timber took priority; once that was achieved maybe there would be time and space to think of less material aspects of woods. When Wolfe Tone was in France at the end of the 18th century he remarked with envy the orchards which people planted everywhere, and which the children looked after, whereas nobody was planting trees in Ireland. His explanation was that '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' (Gregory 1931). It is hardly surprising under the circumstances that the aim of government policy in the later 19th and early 20th centuries was timber at any cost, and yet planting was anathema on farmland, and so was largely concentrated on marginal land and the narrow range of alien conifers that would grow well under such limiting conditions.

But in recent decades there has been something of a conversion: the recovery of at least some elements of the earlier multifunctional valuation of trees – and indeed an appreciation of some new elements of value: the birth of a realisation that trees and woods serve a multiplicity of functions in all our lives: not merely the production of needed timber, but recreation and easing of the human spirit: and that these needs are better fulfilled by forest that approaches native broadleaf woodland in its composition. However, and hardly surprisingly, the production of timber and economic considerations still remain uppermost in the policy of Coillte and the Forest Service: except for the 15% of forest land that must be managed primarily for biodiversity.

But even our best broadleaved forests are not the woods that evoked the ancient reverence, or the awareness of how great trees are rooted in the mists of time and all that awareness carries with it for our human spirit. In an earlier time the yew was revered in Ireland not merely for its superb timber but because it was considered the most ancient of living things. We have very few trees like that today: yew or oak, elm or alder or any other. But we may have again, and there must be room in our forest policy, a small corner of consideration though it be, that will nurture the earlier

attitude of planting for a human future far beyond the horizon. The Oxford botanist A.H. Church once wrote that because there are so few really ancient trees in our midst we have almost come to doubt the records of the truly venerable trees we once had: 'The most majestic productions of the vegetable kingdom are rapidly disappearing, and will never be replaced. No future scheme of forest-cultivation will even countenance a tree growing to maturity in 500-1,000 years, and persisting for 3,000-4,000. The records of an older generation are already often regarded with scepticism. ... Modern forestry prefers a tree of 2 ft. diameter in 100 years' (Church 1920).

We can think of the People's Millennium Forests as a first step in the recovery of a determination that though the experience of truly ancient woods is lost now to us, there will once again in time be woods in Ireland where children in May can wander amazed among bluebells and primroses beneath oaks of five hundred years.

Into the future

I am allowed to visit in my dreams, sometimes, the pinewoods of Clongawny and Derrinlough with which I began. Ordinarily that dreaming is as far as the reach of hope and imagination could hope to go, except for those few among us who can divine further and deeper in spirit. But here at Clongawny something special is about to happen. This is an area of exceptional landscape heritage interest; sections of it are already beginning to exhibit the high natural species diversity of decommissioned cutaway bog, and it is an area of special archaeological value and interest because it encompasses both the mesolithic site at Lough Boora, and the site of Lough Coura, beside which the Dowris Hoard was found in 1825.

There is a plan in hand to restore, in part at least, this forest that once was. The aim of a Future Landscape Plan is to ensure that the key values in a particular landscape are sustained, and to facilitate access to the areas and features that embody these values. Such access is mediated by the provision of infrastructure on an appropriately unobtrusive scale, and of appropriate explanatory documentation (Feehan and Egan, in prep.). Considered intervention may be necessary to enhance or maximise future landscape value.

The Future Landscape Plan for these bogs envisages a mosaic of wetland and forest, and this is a model which may also be applied elsewhere. When peat extraction ceases, the lower-lying areas between the moraine hills will flood, and this flooding will be promoted by blocking the drainage of the bog put in place forty years ago by Bord na Móna. On the slopes and summits of the land exhumed from the peat, the forest will be restored, Scots pine and oak, the idea being to restore something of the wooded landscape that was here before the bog had entirely overwhelmed the landscape. Indeed, the process of recolonisation by pine has already begun spontaneously.

The first layer of this landscape plan has already been prepared by Bord na Móna, pinpointing areas where the development of new wetland is ecologically feasible. Offaly County Council have incorporated a new Forest Service Neighbourhood Scheme into the plan that will involve the restoration of Scots pine forest to the

higher areas of the cutaway, above the water table. Conservation or restoration (as appropriate) of the small areas of broadleaved woodland that occur as islands of mineral ground in the bog will be implemented through the Forest Service Native Woodlands Scheme. All of these will be linked by a trackway that will follow the line of the Bord na Móna railway, which will become a permanent walkway when harvesting activity has ceased. It may be possible to incorporate areas of woodland on adjacent farmland at a later stage of the project.

The significance of the proposed forest of Scots pine is twofold. It dominated the landscape before the encroachment of bog, and appears a likely outcome of spontaneous ecological regeneration on extensive areas of cutaway in the future. The stumps of the ancient pine forests overwhelmed by the encroaching bog are still dramatically displayed in many places in the area, most notably perhaps at Drinagh and Clongawny. Secondly, it may be envisaged that the pinewoods were in existence in the Bronze Age, and therefore during the period in which the Dowris Hoard was deposited in the waters of a then greater Lough Coura, and subsequently entombed by the expanding raised bog. We propose to use the new forest to *facilitate imaginative access* to the Dowris Hoard and its Bronze Age world for the community at large. The native pines will be restored to the slopes of the island woods, and though perhaps not in our lifetime, our children certainly in theirs, will be able to walk again beneath the majestic pines we could only dream of before, in this Once and Future Forest.

Lough Coura itself, which was a splendid area of open water, with an island on which a tower house was situated, was drained in the second half of the 19th century – to the immense loss of future generations. No open water remains, although there is a considerable expanse of reedmarsh. Coillte owns the marshy land on its southern margins, and it is now proposed to develop the coniferous forest here in ways that will facilitate the physical and imaginative access already referred to, and to restore lost biodiversity in whatever ways are feasible.

We used to think that forestry would be a major land use on these cutaway bogs. The experience of recent decades has somewhat blighted that hope, in the short term at least, but that in fact has increased the possibility for forest that enshrines all the values other than the narrowly commercial, in an imaginative way: a haven for biodiversity, especially with the habitat mosaic envisaged; of enormous cultural and aesthetic value, enhanced by access along the Bord na Móna railways which will evolve into a public walkway in time; and as a long-term carbon store of significance. It is the image of Clongawny I have in mind as I sketch this future, but this is essentially a vision of a possible future for much of the Bord na Móna cutaway in the midlands, which is spread over an area of no less than 80,000 hectares (Feehan 2004).

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