

Items of Forestry Interest from the Irish Statutes Prior to 1800 A.D.

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However desirable or unavoidable it may be to have revolutions and changes of government in any country, it is important from a forestry point of view to try to secure as reliable and unprejudiced an outlook as possible upon the history of forestry development in that country, if for no other reason than that forests have a faculty for living through several generations of men and even through a number of historical epochs.

The period between 1600 and 1800 A.D. is from the point of view of the forestry of to-day extremely important, because a very considerable proportion of the mature trees felled in recent years were either planted towards the end of that period or as a result of legislation passed during that period and certainly on the lines of forestry or planting experience gained during that period. A perusal of the Irish Statutes enacted by the Irish Parliaments between the years 1600 and 1800 is, therefore, of more than passing interest, and in the present article it is proposed to deal as fully as possible with all items of forestry interest contained in these statutes, whether of a silvicultural, management, protection or utilisation character.

A valuable paper (1) was read in January, 1903, before the Statistical and Social Inquiry Society of Ireland by C. Litton Falkiner called "The Forestry Question Considered Historically," which dealt briefly with some material from the statutes.

A further contribution to the history of Irish forestry was made by A. C. Forbes in a paper (2) read before the Royal Irish Academy in March, 1933, entitled "Tree Planting in Ireland During Four Centuries," but neither of these papers is quite complete in respect of certain rather important matters and they contain some inaccuracies.

1. The 10th Year of Charles I. Cap. XXII. 1634.

The first Act of interest is one which repeals the only other previous Act in the Irish statutes of forestry interest, namely an Act of the 12th year of Edward IV. Cap. II., 1472, entitled "An act for bringing bowes into this realme from the realme of England by merchants and others." The actual wording of the earlier Act is of some interest, and this Act of 1634 is also interesting as an illustration of how laws are unmade. The original Act runs as follows:

"At the request of the commons, whereas the land of Ireland is desolated of bowes, to the suportation of the said lands, and defence of the said commons against the Irish enemies of the King and English rebels of the same it is ordained and enacted that every merchant and passenger bringing merchandizes into this land of Ireland out of England to the summe of 100£, shall buy and bring with him into the said land in bowes to the value of 100 shillings, and so following after the rate under or over to the summe of 20£; if he brings no bowes to pay value of the bowes, half to the King and half to the searchers of the same."

The Act of 1634 tersely says that "the use of bows not being so needfull now as it was and there would be no vent or utterance for the same, said statute is now repealed and made utterly void."

From a list of rates of duty chargeable on merchandizes in this reign it is specifically stated that "Trees of all sorts are free"—the only item so favoured in the list.

2. The 10th Year of Charles I. Cap. XXIII. 1635.

This is a curious Act in some respects, but it shows that the authorities were already alive to the need for preserving such woods and plantations as then existed. It need not be assumed that the Irish people generally were any more inclined to injure property maliciously than those in other countries at that time. This Act was actually a copy of an English statute of Elizabeth. The title of the Act is "An Act to avoyde and prevent misdemeanours in idle and lewd persons in barking of Trees, etc.", but, as will be seen, the Act is of quite a general nature for the protection of landed property. The main section reads as follows:

Forasmuch as unlawfull cutting and taking away of corn and graine growing, robbing of orchards and gardens, digging up, or taking away of fruite trees, breaking of hedges, pales or other fences, cutting or spoyling of woods or underwoods standing and growing, barking of growing trees, and such like offences, are now more committed by lewd and meane persons than in former times, and that the said offences are great causes of the maintaining of idlenesse . . . be it enacted. . . That all and every such lewd person and persons, which from and after the first day of May now next following shall pull up, or take up any fruite tree or trees in any orchard, garden, or elsewhere . . . or shall barke any tree or trees that are growing, or shall cut or spoile any woods or underwoods, poles or trees standing, not being felony by the laws of this realme, and their procurer or procurers and receiver or receivers knowing the same, on conviction shall pay recompense or if not able to pay eftsooones committed to the constable to be whipped."

I give this in full to show how carefully and precisely these Acts were worded. The second section provides that any constable refusing to punish is to be committed to gaol and the third section very fairly stipulates that no justice of the peace or head officer is to execute this statute for offences done to himself.

3. The 9th Year of William III. Cap. XII. 1697.

Section XII. of this Act is of some interest in respect of what it prescribes concerning boundaries and hedges. It runs as follows:

"The mears of lands between propriety and propriety . . . shall, at equal charge of the proprietors thereof, or their tenants, be enclosed with good ditches, where earth sufficient may be had to make the same, and thereon one or two rows of quick sets shall be planted, and where earth shall be wanting, such other fences shall be made as the nature of the soil shall permit."

It would be interesting to know if this Act has ever been repealed. A later statute is concerned with the same thing.

4. The 10th of William III. Cap. XII. 1698.

This is undoubtedly the first really important legislation of a true forestry character in the statutes, and it has a special silvicultural interest. A point to observe is that the coming into force of the Act was post-dated for five years to the 25th of March, 1703, obviously to give persons concerned time to grow the trees required, which had to be four years old (not five as Litton Falkiner has it). As we shall see, even this time was not enough.

The explanation of the necessity for this statute, and it shows how phases of forestry history tend to repeat themselves from time to time, is as follows:

"Forasmuch as by the late rebellion in this Kingdom, and the several iron-works formerly here, the timber is utterly destroyed, so as that at present there is not sufficient for the repairing the

houses destroyed, much less a prospect of building and improving in after times, unless some means be used for the planting and increase of timber trees. . . ."

The first section of this statute enacted, that from 25th March, 1703, all persons, being residents within Ireland, having estate of freehold or inheritance therein to the annual value of ten pounds or tenants for years of which eleven had still to run, paying a rent of ten pounds, should plant every year at seasonable times of the year for 31 years. . . .

" . . . ten plants of four years' growth, or more, of oak, firr, elm, ash, walnut, poplar, abeal or elder, in some ditch or elsewhere, on the said lands."

It was also provided that the planters should preserve the trees. In addition, every person or society having iron-works had to plant 500 yearly every year he or they had the said iron works. Incidentally, Forbes (2) is in error in saying that the amending Act of 1705 (the fourth, not the fifth year of Anne) extended the trees by adding walnut, poplar, abeal and alder. The first three of these were already included in this Act and the last was meant to be, but by mistake "elder" was substituted for "alder." Silviculturally, the list is interesting for comparison with later lists. It is not clear whether the word "firr" may have embraced other species than Scots pine. Forbes (2) comments on the omission of beech and Spanish chestnut.

The second section provided that occupiers of 500 acres or more (plantation, i.e., Irish measure), other than tenants in common, over and above the aforesaid 10 trees, should enclose and plant one plantation acre thereof in seven years from November, 1698, with a good, sufficient fence of stone wall, ditch, hedge, pales or rails and. . . .

" . . . plant one plant, at least one foot above the ground when planted for every ten foot square contained in such area in such method as he, she or they shall think fit."

The acre had to be preserved for twenty years. I take it that the height of the plants was to be at least one foot and not that the base of the tree was to be perched up on a mound a foot high. The planting distance, it will be observed, was very wide and works out at 435 trees per statute acre (705 per Irish acre).

The third section provided that every person, body politick or corporate in possession of any lands or anyone in possession of lands in dower, jointure, by courtesie, or who had possession of land as mortgagees or as creditors or by any other ways or means, should be liable to plant a . . .

" . . . proportion of 260,600 trees of oak, elm or firr of the age and size afore-mentioned yearly for 31 years from 25th April, 1703, in such manner and proportion as hereinafter is expressed."

The proportions are then given in Clause IV., as follows:

Antrim	... 9,750	Kerry	... 4,600	Monaghan	... 4,500
Ardmagh	... 4,750	Kildare	... 7,150	Queen's Co.	... 3,950
Catherlogh	... 3,250	Kilkenny	... 9,000	Roscommon	... 6,500
Cavan	... 4,600	Do. City	... 700	Sligo	... 5,200
Clare	... 7,800	King's County	3,900	Tipperary and	
Cork	... 26,600	Leitrim	... 3,250	Holy Cross	18,200
Donegal	... 8,350	Limerick	... 9,600	Tyrone	... 6,500
Down	... 8,400	Do. City	... 1,300	Waterford	... 6,550
Dublin	... 31,900	Londonderry	6,500	Do. City	... 1,050
Do. City &		Longford	... 2,600	West Meath	... 6,600
Liberties	21,500	Lowth	... 5,200	Wexford	... 6,500
Fermanagh	... 4,550	Drogheda	... 650	Wicklow	... 3,250
Galway	... 11,800	Mayo	... 6,500		
Do. City	... 1,300	Meath	... 18,200		

It is not very clear upon what basis these proportions were calculated, but presumably not upon the suitability of the various counties for planting. It was more likely on a basis of their financial capacities and in relation to the number of occupiers, free-holders and tenants in the various areas. Observe, too, that the species are now reduced to three—oak, elm and fir. This was amended later.

Section V. provided that the Grand Jury in 1702 should apportion the number to be planted in each barony and subdivide the figure over the various parishes; the apportionment to be certified by the high constables.

Section VI. provided that each high constable should deliver the list showing the trees to be planted in each parish to the ministers and church wardens, who then had the task of making the final adjustment amongst individuals, after discussion and agreement at a vestry, all within a prescribed time. Forbes quotes the record (3) of an instance in County Down where, at a vestry held on 9th March, 1708, in the parish of Seagoe, it was agreed that 137 persons, holders of 30 acres each (in accordance with the amended Act) should carry out the provisions of the Act. If each person in that parish alone planted his ten trees *per annum* they would have completed 1,370 out of the 8,400 trees allotted to the county. There are now 67 parishes in the county, so that Seagoe was undertaking to shoulder a high proportion of the task in that county. No doubt efforts were made elsewhere to comply with this unique Act. It is very probable that the mathematics of the statute were not on a sound basis and the scheme may have been impossible to work on account of its lack of concentration.

Subsequent sections in this statute provided for tenants, mortgagees and creditors in possession securing compensation from landlords, on the latter resuming the lands, to the extent of . . .

“ . . . twopence per tree planted under the Act which shall be found growing on the lands in good condition for timber, not being cut, broken or thinted, but well fenced and preserved, according to the intent and meaning of this Act.”

The word “thinted,” now obsolete, does not occur in any dictionary I have consulted. Failure to pay compensation was to result in a levy upon the estate under warrant if necessary, supported by two credible witnesses, if necessary. Further, a lessee with less than twenty years of his term of lease to run when he planted his acre could claim . . .

“ . . . the sum of ten shillings yearly towards the maintaining and supporting of the fence,” besides being allowed to deduct the yearly value of the acre from his rent.

An important section number XII, stipulated that no sheep or cattle of any sort must be allowed to graze or trespass on the land so inclosed. The penalty on conviction for the offence was to be twenty shillings, half of which was to go to the poor and half to the informer.

The next section, number XIII, seems to have been a genuine attempt, amongst other things to keep the goat in its proper place. The nuisance of cutting of trees for gads or gadds, that is, goads for driving plough oxen, etc., makes its first appearance and remains a sore point through several reigns. This section is:

“No person whatsoever shall strip bark from any growing or standing tree whatever, or shall cut, make, or sell any gads made of oak; or shall cut or place at their doors or elsewhere any green trees, commonly called May-bushes; or shall keep any goat or goats other than in mountains, under the penalty of forfeiting the same, and likewise of paying the sum of twenty shillings for every such offence, to be levied as hereinafter directed.”

Here again the informer and the poor of the parish were to go halves on the proceeds of the fine.

Section XIV. speaks for itself and gives some idea of how generally useful the forest then was.

“And whereas the bark of standing trees has been heretofore usually stript for tanning hides of stolen cattle in boggs and other private places, and for dying linnen yarn, thread and skins by persons in private houses”—for remedy whereof—“be it enacted that no broag maker or others, except publick tanners shall tan or keep in pit hides or skins nor any person except known dyers shall colour linnen yarn, etc., with bark.” The penalty was forty shillings.

Section XV. was designed to clear up certain points concerning trespass:

“And whereas several idle and vagrant persons do usually cut down or grub up the roots, upon presumption that such offence, being no more than trespass, they may escape punishment; for remedy whereof be it enacted—That from and after the 20th November, 1698, every person and persons, who between sun-rising and sun-setting shall saw or otherwise cut down any tree or trees, not being thereunto authorised by the person who has a right to such tree or trees, shall for every such offence forfeit to the owner treble the value and shall pay a fine not exceeding forty shillings and not under five shillings as the justice deems reasonable, in default of which”

—to the house of correction for three months. It is pointed out that cutting of trees after sunset and before sunrise was already a felony.

The comprehensive nature of Section XVI. is to be admired. From it one can conjure up quite a vivid picture of drama in country life. It runs thus:

“And whereas divers persons do hire themselves to work in noblemen’s, gentlemen’s and nurserymen’s gardens, with design to steal from thence trees, plants, greens, or flower roots or to give notice to their accomplices how and at what times they may steal the same . . . be it enacted—That all and every person, who shall be taken with or found having or selling any sort of fruit-tree, nursery plant, trees, green plant, flowers with their roots, or their roots alone, or any quantity of fruit, such person not having a nursery, flower garden or orchard of his or her own, or who does not publicly follow the trade of buying and selling fruit; or who shall be taken with beehives with honey or combs in them, or with fresh honey in combs, and not keeping bees of his or her own, shall be obliged to prove how he or she came by the same; and upon failure of such proof shall be deemed and taken to be guilty of stealing.”

Subsequent sections arranged for appropriate penalties for failure to plant. These were for every ten trees ten shillings, for every 500 trees, five pounds, and for every acre not enclosed and planted, five pounds. The trees had to be preserved till the end of the lease and if the occupancy changed hands, the new occupier became liable. Curiously enough, the proceeds of the penalties and fines levied and paid, other than those specially specified above, had to be applied to the encouragement, not of planting, but of the linen and hempen manufactures, after defrayment of the necessary charges of the several sessions.

We may regard this Act as a valiant attempt to encourage and protect forestry activities, however small, and to discourage malicious damage and check harmful trespass in woods. It shows that the fundamental needs for successful planting were fully appreciated at that time. The statute, apart from being compulsory, had its great weaknesses, however, and it had its opponents, who were not long in bringing pressure to bear to have it modified. (See item 6.)

5. The 2nd Year of Anne. Cap. II. 1703.

This Act is of special significance as it very definitely attributes the destruction of the forests to the home iron industry; proposes to encourage the importation of iron from abroad and also that of bark, barrel staves and other forest produce, while at the same time ensuring, of course, her Majesty's revenue. The first section reads as follows:

"Whereas the great duties laid on foreign iron are a great discouragement to the importation thereof, and tend to the lessening of her Majesty's revenue, and to the destruction of the woods of this kingdom; and whereas there is great scarcity of all sorts of timber in this kingdom, and the great duties laid on hoops, bark, laths, and on staves imported for making barrels, pipes, or casks are a great hindrance to the importation thereof; for the remedy thereof be it enacted . . . after 1st November, 1703, all duties on unwrought iron, bark, hoops, laths, staves and timber for casks shall cease. . . ."

The new duties substituted were five shillings custom and five shillings excise per ton of iron imported and sixpence custom and sixpence excise per 1,200 staves for casks; one penny per 1,200 for hoops or laths and the same per barrel of bark.

The second section was designed to restrict export of timber by increasing the existing duties, as follows:

"And for the preventing the exportation of timber out of this kingdom to any ports beyond the sea, other than to the kingdom of England, be it enacted that there shall be paid over and above all duties now payable £2 10s. per ton for timber or planks and proportionally for any greater or less quantity; 5/- per 1,000 for laths; £3 per 1,000 for staves."

Timber made up as part of a ship or vessel was exempted. The last section is an illustration of the fallibility of the statute-maker. It provides that the word "elder" in the 10th of William III., XII., should be amended to "alder."

6. The 4th Year of Anne. Cap. IX. 1705.

This was an explanatory Act to explain and put into execution items 2 and 4 above. The first eight sections made important changes in 10th William III., XII.

In the first place the liability to plant ten trees annually was to be determined on an area basis in place of a valuation basis, namely:

"such person as hath or holdeth 30 acres of land or more in manner aforesaid and no other person or persons whatsoever."

Secondly, the following areas were specially exempted from liability—the city of Dublin, the city and suburbs of Londonderry, either within them or within one mile of them, and any area within one mile of any city or town corporate. We can only surmise why this attitude, which is the antithesis of modern ideas on town planning, was adopted, but it may have been for local defence reasons.

Thirdly, certain penalties which individuals had incurred under the previous Act by reason of the shortness of time allowed for planting were remitted, and fourthly, an extension was allowed for planting to those not now exempted up to 25th March, 1708; that is, an extra five years.

Fifthly, the omission of ash in Section III. of the main Act was rectified and ash was included along with oak, elm and fir. Why will these legislators not take and act upon the advice of their technical advisers?

Sixthly, people holding land in several parishes were allowed to do all the planting for which they were liable in one parish, and the

penalty for not planting was reduced from one shilling per tree to "twopence and no more, for every tree not planted." That amendment may have done more to kill the Act than anything else. It must have cost a great deal more to grow or buy and plant a decent-sized tree, even in those days.

The seventh section opened a rather wide loophole for evasion and gave much scope for differences of opinion. It enacted:

"That where lands are mountainous, and of a nature that will not nourish trees, or so very near the sea that trees cannot thrive or grow, the occupiers of such lands may appeal to the quarter-sessions of the peace in the respective counties."

As a result of the appeal in such cases, the Grand Jury were given powers to acquit owners or occupiers of any penalty for not planting trees.

The eighth section affirmed, with a view to removing all doubt as to liability:

"that all and every person in actual possession and occupation of the several lands in this kingdom, whatsoever estate such person shall have in the lands, shall be obliged and liable to the planting. . . ."

Section IX. returns to the charge concerning gadds, now accompanied by withs, and is once more solicitous of the future of the hempen manufacture. It runs as follows:

"And whereas great quantities of young trees are daily destroyed by the making of gadds and withs, and that it will very much conduce to the encouragement of the iron and hempen manufactures, that gadds and withs be no more used in this kingdom, be it therefore enacted . . . that from the 1st November no person or persons shall make or use in plowing, drawing of timber, or other work whatsoever, or in wattling the walls of houses, or cabbins, or out-buildings, any kind of gadd or gadds, wyth or wyths, of oak, ash, birch, hazel or other tree whatsoever. . . ."

Section XI. was intended to reinforce the 10th Charles I., XXIII. and is interesting for its expanded list of minor forest products. It enacted:

". . . . that if any person or persons unlawfully, and without consent of the owner or owners, possessor or possessors, shall from and after the 1st of August, 1705, take, cut or spoil any kind of wood or underwood, poles, or young trees, clap boards, barrel staves, shingles, gadds, wyths, wattles, willows, or shall dig or pull up any fruit trees or other trees or break or cut any hedge, pales, rails, or fence . . ."

shall pay ten shillings to the poor over and above satisfaction to the aggrieved party. Where the satisfaction exceeded ten shillings, the offender was to be bound to the next sessions, and in default to be committed for one month or whipped; for a second offence, three months or whipped; for a third offence, two years and deemed to be an incorrigible rogue. The authorities were obviously getting vexed. This Act further provided that—

"any person by warrant of a justice may search suspected houses and places for any wood, under-wood, poles, trees, clap-boards, barrel staves, poles, rails, stiles, posts, gates or for any gadds, wyths, willows, hedge-wood, bark, rind or coat of any tree, unlawfully barked as aforesaid. . . ."

Buyers or receivers might have to pay treble to the injured party if the value was less than thirty shillings, otherwise the case came before the sessions.

Before leaving this statute finally and passing on to the next item, it is important to note that although tenants and occupants, other

than those who held in fee simple, were liable to plant trees, the right to the trees vested in the landlord. The only compensation allowed was to be twopence per tree found growing in good condition when they gave up the land, and in respect of the planted areas an abatement of ten shillings *per annum* on the rent for upkeep, *plus* the yearly value of the acre planted. As we shall see, quite a struggle ensued before the position of tenants was so modified as to make them really interested in the fate of the trees, and so enthusiastic planters.

7. The 9th of Anne. Cap. V. 1710.

The Irish councillors of Anne were having a good deal of bother over William's Act and found it necessary to produce "An Act for the further explaining and putting into execution of an Act for planting and preserving timber trees and woods."

The first section of this Act was meant to bring pressure to bear on the clerks of the Crown and the high constables to see that all individuals concerned in the planting under William's Act were advised to that effect and of their responsibilities. The officers had to do this on penalty of a forty-shilling fine within a stated period and in each parish a book with the list of the persons liable to plant, which could be consulted as required, was to be provided—at the cost of the parish. For their trouble these officers were to be entitled to a fee. Failure to comply with the Act was attributed either to the non-observance of the methods prescribed for proportioning the trees or to the fact that the methods had not answered the good intent and meaning of the Act.

The second section provided for the remittance of penalties for not planting, under the main Act and under 4th Anne IX., already incurred by any person whatsoever, for not planting any sort, number or quality of trees as required by these Acts.

The following section again post-dated the time allowed for execution for four more years until 25th March, 1712. Not much progress had been made in the fourteen years since the inception of the scheme.

The fourth section is of peculiar interest, as it shows that some effort at least has been made to comply with the Act of William and also provides evidence of the existence of a tree nursery trade. It reads:

"Provided always, and be it further enacted by the authority aforesaid, That all trees, hereafter to be planted pursuant to the several acts herein before mentioned, be planted out of nurseries only, and not from woods and other places as have been too frequently practised, to the destruction of woods and timber: and in case any person or persons do or shall plant otherwise than as is hereby directed and required, he or they so planting shall, for every tree or trees so planted from the woods, forfeit the sum of two pence for each tree, to be recovered in a summary way by civil bill at the assizes by such person or persons, who shall prosecute or sue for the same."

The question is: Who would?

Section V. made another attempt to put a stop to the cutting of young growth for "gads or withs," as follows:

"and whereas the cutting and using gads or withs is found to be very destructive to all young plantations of woods; be it further enacted . . . that any person or persons who shall from and after the first September, 1711, cut or make use of any gads or withs on his or their plows, carrs, carts, harness, tackle or otherwise; or in whose custody or possession any gads or withs shall be had or found, either selling or using the same, shall for every gad or with so cut, sold or found, forfeit the sum of two pence, to be immediately paid to the informer by the said offender or offenders. . . ."

The offender could not get away with a blank refusal to pay, for, if he did, by warrant of the nearest magistrate the sum could be secured from him by levy, and if there was no convenient magistrate the constables could claim payment, and, if that was refused, could hail the offender before the next justice to levy double the sum and if the offender had no means of paying the levy he could finally be whipped. Prosecution, however, had to be within one month of the offence.

All this bother about these small items may seem trivial now but it should be remembered that nearly all the trees planted were broad-leaved trees and that the planting distance was very great and it must have been very galling to planters to see their young trees cut and removed just when they were beginning to grow.

8. The 2nd Year of George I. Cap. XVI. 1715.

So much for Anne. Coming now to the first George, we find that his councillors were extremely interested in the matter of butter-boxes, a subject first dealt with by the third William in Cap. II. of his tenth year in 1698, an Act for reforming abuses in the making of butter-casks and preventing of false packing of butter. This laid down that the casks were—

“ . . . to be made of sound, dry and well seasoned timber in different sizes for firkin, half barrel, three-quarters barrel and barrel, and every such cask, hereafter to be made, shall be made of three hoops in each quarter, to be set on with twiggs or sufficiently notched, and have two heads to be put into riggles and made tight, so as to hold pickle. . . . ”

Forestry interest in these Acts relating to butter-casks lies in the kinds of timber specified. William's Act does not specify any species.

The title of the Act now under consideration brings the butter-cask problem and the planting problem together. It runs thus: “An Act for the more effectual amendment of the law in relation to tallow and butter casks, and of an Act for planting and preserving timber trees, and woods, etc.”

The first section prescribed that the tare of the casks should be branded on the sides and bottom and gave the main reason for the Act. Complaints had been made by merchants and traders in butter and tallow that these commodities had been brought into great disrepute abroad, and did not command their just price, because of the fact that in spite of several Acts of Parliament:

“ by the fraudulent dealing and practices of coopers, in making the casks for packing of butter and tallow of unseasoned timber; and of farmers, owners and packers of the butter and tallow in packing their butter and tallow in casks, weighing more than by law they ought to do. . . . ”

Section II. goes on:

“ And for the preventing the fraudulent practices of coopers in making casks of unseasoned and boggy timber, be it further enacted —That from the 24th of June, 1717, no butter casks shall be made, or butter exposed for sale in any cask but such as are made tight and will hold pickle and made of well-seasoned timber, either of oak or ash, and to be of the sizes and dimensions following (viz.) the firkin containing half a hundredweight of butter at the head and bottom of the cask to be of the breadth of $10\frac{1}{2}$ inches, at the bung $11\frac{1}{2}$ inches, and the length within the cross 16 inches and to contain 7 gallons and no more . . . etc. . . . etc. . . . (up to two hundred-weight casks) . . . at the heads and bottoms of the said casks to be set into the cross and the cantils to be dooled, and every cask, so to be made, shall be with hoops twigged and no other . . . and no other cask to be made and exposed for sale.”

Sections III. to VII. dealt with tallow casks, and Section VIII., complaining that, notwithstanding Section V. of Anne's Act (item 7): "great quantities of gadds and withs are daily sold in markets and fairs to the great destruction and almost utter ruin of the young growth of wood in this kingdom; for the better preserving whereof . . ."

further enacted:

"Any one may seize gadds or withs found in any fair, market, town or place to his own use and any in due possession found, to be brought before the justice to be whipped."

It is not at all clear under this and other acts just who were empowered to do the seizing and who were to be subjected to it.

9. The 4th Year of George I. Cap. XII. 1717.

The authorities had put their foot in it by departing from the safe procedure of not being too explicit in their definitions and this statute was enacted to amend the preceding one. It arranged for changing the specifications of the butter-casks and for allowing the casks to be larger or smaller, because the dimensions specified were not sufficient to contain the quantity of butter directed by the previous Act to be packed in the casks, and it was found impossible to restrict coopers to the making of casks of one and the same size. How easy it would be to reconstruct the caustic comments of the said coopers on this point!

10. The 8th Year of George I. Cap. V. 1721.

This is a sequel to item 3 above and is worth recording, as it gives a good idea of the specifications of many of the boundary ditches and fences which still exist. The title is: "An Act to oblige proprietors and tenants of neighbouring lands to make fences between their several lands and holdings." They were . . .

" . . . obliged to be at equal expence in making good and sufficient ditches of six foot wide and five foot deep at least, where the same is practicable, well and sufficiently quicked in good husbandlike manner with white thorn, crab, or other quick sets, where the same will grow, and in ground where such quick-sets will not grow, with furz, and where furz will not grow, or where ditches cannot be made of the said depth and wideness, instead of a ditch with a dry stone wall, where stone can be conveniently had and where stone cannot conveniently be had with a clay or mud wall not under 5 feet high and 2½ feet thick at bottom, and 1½ feet thick at top and in wet low ground with sufficient trenches or drains, the banks whereof to be planted with sallows, alder or other aquatick trees, where such aquaticks will grow. . . ."

11. The 8th Year of George I. Cap. VIII. 1721.

The authorities had now come to the conclusion that the 10th of William III., XII. was really unworkable and ineffective and decided to repeal the main provisions of that Act, while at the same time trying to encourage planting by granting tenants some rights in the trees planted by them, or, as the title of the Act said to give "further encouragement to plant and preserve timber trees and woods"—a step in the right direction. Thus ended, after a period of twenty-three years the first attempt at compulsory afforestation.

The preamble confessed that the main Act in question—

"has in a great measure proved ineffectual and several persons who through inadvertence or want of ability have not complied with the directions in the said Act for planting and preserving timber trees

and woods, may have incurred great penalties and whereas . . . (etc.) . . . Sections I, II, III, XVI, XVII, XVIII. and XIX. are all repealed and all his Majesty's subjects discharged, released and forgiven all the fines, forfeitures, penalties, other than such as have already been paid. . . ."

Section XIII. in respect of bark, gadds, may-bushes and goats; Section XIV. in respect of use of bark for tanning and dying; Section XV. in respect of the cutting down of trees without the requisite authority between sunrise and sunset; and Section XVI. in respect of stealing or selling various commodities, were not, however, repealed at this stage. In fact, Section III. of the new Act enlarged somewhat on Section XVI. of the main Act.

In the meantime, an important and silviculturally interesting section, numbered II., enacted, for the better encouragement of plantations. . . .

" . . . That where any tenant or tenants for life or lives or years, of any lands in this kingdom of Ireland shall during his, her or their term plant in or upon the same any trees of oak, ash, beech, firr, walnut, alder, elm, poplar, abeal or birch and shall preserve the same, such tenant or tenants or his, her or their executors, administrators or assigns respectively, shall at the expiration of such term or estate be intituled to, and shall have liberty, and is and are hereby authorized and impowered to fell and carry away for his and their use and benefit one-third part of the several kinds of such trees so by him, her or them planted and which shall at that time be standing and preserved on the lands so held in lease as aforesaid."

We should note the addition to the list of approved trees of beech and birch and that beech is given third place.

The third section complains that several sapplings have been destroyed by making bows and back-bands for cars, and enacts:

" . . . that from and after the 1st January, 1721, no person or persons shall presume to make use of any part of any sapplin or tree as or for a bow for a carr, or any sapplin, gad or any piece of stick or wood for or as a back-band for a carr, or scollops of oak or ash for thatching of houses. or shall presume to make use of any oak-sapplin or sapplings for walking sticks, handles of whips or switches" . . . under penalty of forfeiting five shillings or being whipped.

12. The 10th Year of George I. Cap. IX. 1723.

This was another butter-cask statute and has a silvicultural interest for its mention of sycamore. Its Section VIII. enacted that—

" . . . such cask shall be made of good seasoned oak, ash or sycamore, whereof no part to be bogg timber and made tight that they will hold pickle, with head and bottom equally dooled and set to the cross, with 12 good fresh sufficient hoops on each cask, all well twigged with good fresh ozier twiggs."

13. The 12th Year of George I. Cap. V. 1725.

Again on the subject of butter-casks, Section V. of this statute prescribed that after 25th April, 1726, it would be "lawful to make up and pack butter in any cask or casks of good seasoned beech, birch, willow or sally, whereof no part is of bogg timber, as well as of oak, ash or sycamore." This would seem to show that sycamore had been planted for some time, probably from before 1700.

14. The 5th Year of George II. Cap. IX. 1731.

Only two of the statutes of the second George were concerned with planting, but each represented a step forward. This statute was "An act to encourage the improvement of barren and waste land and

boggs, and planting of timber trees and orchards." Section IX., referring to Section II. of item 11 above, provided that:

" . . . such tenant or person instead of such third part shall have an equal moiety of all such trees as he or she or they shall hereafter plant in pursuance of the said act."

A further sop was held out to tenants in respect of orchards and for each tree planted in an orchard by a tenant, he was entitled to receive one shilling from the reversioner, when his term was up.

15. The 9th Year of George II. Cap. VII. 1735.

This statute gave the executors or administrators of a tenant for life or tail title to a moiety of any timber the tenant had planted, except on an avenue or garden walks. He could leave his half share in any oak, ash, elm, fir or any other timber tree planted in his lifetime to his heirs on certain conditions. This was evidently done to round off the ninth section of the preceding Act.

16. The 5th Year of George III. Cap. XVII. 1766.

There is a wide gap of thirty-one years between the previous statute and this one. The reason for this may have been the enormous progress made during this period throughout the country in rural matters, to which Forbes has referred. The development and laying out of demesnes, which entailed a great deal of planting by landlords, must have done much to allay anxieties about a shortage of timber. No doubt timber imports also increased. From 1741 up to 1808 the Royal Dublin Society through its premium scheme for planting and the stocking of nurseries must also have helped on the good cause.

A number of important statutes were enacted in the reign of the third George which were very helpful and encouraging for forestry, because they set out to remove the remaining disabilities which prevented tenants who planted from reaping adequate rewards for their work. The one under consideration, entitled "An Act for encouraging the planting of timber trees" was the first to be so.

By its first section it relieved tenants from being "impeachable for waste" in timber trees or woods, which they themselves had planted; that is, accountable for all materials used from these woods. The section reads:

"Whereas the distress, this kingdom must soon be in for want of timber, is most obvious; and it is equal to inheritors, whether tenants do not plant, or have a property in what they plant; be it enacted by the King's most excellent Majesty . . . that from and after the 1st day of September, 1766, tenants for lives renewable for ever paying the rents and performing the other covenants in their leases, shall not be impeachable of waste in timber trees or woods which they shall hereafter plant, any covenants in leases or settlements heretofore made, law or usage to the contrary notwithstanding."

The second section is of silvicultural interest because the following new species are added to the list of trees given—pine, chestnut, horse chestnut, quick or wild ash. It reads:

" . . . from the time aforesaid, any tenant for life or lives by settlement, dower, courtesy, jointure, lease, or any office, civil, military or ecclesiastical, impeachable of waste, or any tenant for years exceeding 12 years unexpired, shall plant sally, ozier or willows, the sole property of such shall during the continuance of the term vest in the tenant and he may cut and fell the same under the restrictions hereinafter mentioned; and if such tenant shall plant any timber trees of oak, ash, elm, fir, pine, walnut, chesnut, horse chesnut, quick or wild ash, alder, poplar or other timber trees,

such tenant during the tenancy shall be intitled to house boot, plow boot, cart boot. and carr boot of such trees by him planted, and at the expiration of the term, or where such trees shall have attained maturity, which shall first happen, shall be intitled to the said trees or the value of them according to the directions hereinafter mentioned, any covenant, etc., notwithstanding. . . .”

The third section stipulated that the tenant must lodge a certificate with the clerk of the peace giving the numbers and kinds of trees planted, their height and years' growth at the time of planting and a clear description of the place and manner in which they shall be planted.

The tenant was allowed one year after expiration of his term to fell, coal, that is, convert into charcoal, or manufacture the trees to which he was entitled.

The reversioner had the right, however, one year before the term of the lease expired to make a claim to buy the trees, whose value had to be determined by a jury. Certain special cases were also provided for.

17. The 7th Year of George III. Cap. XXIII. 1768.

“An Act for the further preservation of Woods and timber trees” was another attempt to protect woods and plantations, but its chief interest lies in the method of valuation adopted for small trees. The initial section reads as follows:

“Whereas several acts passed for the preservation of woods and timber trees have been ineffectual . . . be it enacted that from and after the 1st August, 1768, every person or persons who shall grub up, saw or otherwise cut down any tree or trees not being authorised by the owner or owners, shall forfeit the value to the owner on conviction, as follows: . . . every ash, elm, beech, or sycamore tree of $\frac{1}{2}$ inch diameter not less than 6 $\frac{1}{2}$ d.; of 1 inch, 1s.; 2 inches, 2s.; 3 inches 2s. 6d.; 4 inches, not less than 3s.; 5 inches, 4s.; 6 inches, 4s. 6d.; 7 inches, 6s.; 8 inches, 8s. . . . and every oak tree at double the value . . . over that size to be valued by two appraisers and the diameter of every such tree shall be measured at the butt end. . . .”

Other provisions of the Act were that receivers of stolen timber were to be gaoled; bark-stripping was to be penalised and the right of search for stolen goods granted. There was a right of appeal to the sessions.

18. The 15th and 16th Years of George III. Cap. XXVI. 1776-7.

This statute is obviously the result of a determination to tidy up existing legislation concerning forestry matters; to get rid of unnecessary and confusing material and to provide for the retention in a clearer form of the more essential enactments, with such amendments as were deemed desirable. This is made clear by the initial section, which reads:

“Whereas the several acts of parliament . . . have not had the desired effect, and to avoid confusion which may arise from the multitude of the laws relative to the same subject, it is thought expedient to repeal the said several acts and to make one new act containing all such parts of the said acts as are proper to be continued, with such alterations and additions as are herein after contained. . . .”

This Act, which was called “An Act for encouraging the cultivation, and for the better preservation of Trees, shrubs, plants and roots,” therefore repealed the following statutes: 10th William 3, c. 12; 4th Anne, c. 9; 9th Anne, c. 5; 8th George 1, c. 8, and 5th George 2, c. 9; that is, items 4, 6, 7, 11 and 14 above. The important new Act

of 1766—5th George 3, c. 17—was not repealed but was, indeed, amplified in a subsequent statute.

Section II. was concerned with the question of protection of woods and contained a good deal of new matter. It provided:

“ . . . that from and after the first day of May, 1776, every person, who shall wilfully cut down or break down, bark, burn, pluck up, lop, top or otherwise damage, spoil or destroy any timber tree, or fruit tree, or any young trees or shoots, or any part thereof, without the consent of the owner or owners thereof first had and obtained, or who shall be aiding or assisting in so doing, or who shall have in his, her, or their possession any timber tree, or any kind of wood, underwood, poles, sticks of wood, shoots or young trees, shrubs, plants or roots, and shall not give a satisfactory account, that he, she or they came fairly and honestly by the same, or who shall fix up in any church or chapel the green branches of any tree or shrub, or any part of tree or shrub, having the leaves on it, except holly, bay, laurastina, yew or ivy, and shall thereof be convicted . . . be fined an amount not exceeding £5 or imprisoned for six months.”

Section III. purported to be a definition of the term “timber trees” and is of special interest because of certain new items, namely, larix and sycamore—which come fifth and sixth respectively—cherry, lime, holly timber, saw, asp and cedar. Nineteen species are now named, thus:

“ Be it further enacted . . . That all oak, beech, ash, elm, larix, sycamore, walnut, chesnut, cherry, lime, poplar, quicken or mountain ash, holly timber, saw, asp, birch, cedar, pine or fir trees shall be deemed and taken to be timber trees, within the meaning and provision of this act and of any other acts in force in this kingdom relative to timber trees.”

Section IV. is more or less a repetition of previous statutes in respect of theft, the gist of it is that anyone may be fined forty shillings or get three months in jail who is convicted, if he . . .

“ . . . wilfully cut down, or break down, pluck up, or spoil, harm or destroy, or take, carry or convey away any shrub, plant or root, shrubs, plants or roots, out of the nurseries, gardens, woods or fields of any other person . . . or aid in so doing . . . or who shall make use of any gads, withs, bows or backbands, made of wood, on his or their plows, harrows, cars, carts, harness or tackle or . . . found in his possession . . . or shall make use of any scollops of oak or ash, or any other tree for thatching of houses . . . or set up any bush . . . or keep bark or rind of trees, not being a tanner. . . ”

Section V. is of some importance. It prescribes a penalty against clerks of the peace for failing to file planting records in accordance with the provisions of the previous statute (item 16). This neglect led to the provision of very detailed instructions for registration in the following statute (item 19).

19. The 23rd and 24th Year of George III. Cap. XXXIX. 1784-5.

This statute, which may be regarded, as far as tenants were concerned, as the climax to which many of the preceding statutes had been leading step by step, greatly improved their position as tree planters. The first section, giving as the reason for the need of a further statute that “the laws for the encouragement of tenants to plant timber trees” had proved ineffectual, now provided that persons in the positions already defined in Section I. of item 16 (except that the unexpired term of a tenant for years was raised from 12 to 14 years), who not only planted, but caused to be planted any trees, was to be entitled, not only to cut and fell these for the provision of

materials for his own use, but also to dispose of the same, or any part of the same, not only at the expiration of his term or when the trees had attained maturity, but at any time during the term—subject to certain provisions.

Section II. dealt in great detail with the first of these provisions, namely, the registration of the planting, prescribing that—

“... any tenant so planting or causing to be planted, should, within twelve months after such planting, lodge with the clerk of the peace of the county, or county of a city where such plantations shall be made, an affidavit sworn before some justice of the peace of the said county, reciting the number and kinds of the trees planted, and the name of the lands, in form following:

I, A. B., do swear, that I have planted or caused to be planted, within twelve calendar months last past, on the lands of in the parish of held by me from the following trees (here reciting the number and kinds of trees) and that I have given notice to the person or persons under whom I immediately derive, or his, her, or their agent, of my intention to register said trees, twenty days at the least previous to this day, and that I have given notice of my intention to register such trees, by publick advertisement in the DUBLIN GAZETTE, thirty days at the least previous to the date hereof, *or else*, and that I have also given notice of the same in writing to the head landlord, owner or owners of said ground or his, her or their agent, twenty days previous to the date hereof (as the case may be).”

It may be observed, that, in addition to giving notice to the immediate superior or his agent of intention to register, the tenant had also, either to give notice in writing to the head landlord or his agent, or, where that was not possible—presumably owing to the latter being an “absentee”—by public advertisement in the “Dublin Gazette.” A very considerable number of these notices did appear in the “Dublin Gazette” for many years thereafter, and, while unfortunately they cannot be presumed to give a complete picture of all the planting carried out in the country, they do give some interesting silvicultural information, as will be described below. Evidently those plantings by the landlords themselves or by tenants where the landlord was not an absentee, were not recorded in the “Gazette.”

The second section gave further detailed instructions as to how the county clerks of the peace were to keep the records of registered plantings, and what fees they were to receive and what penalties they incurred by failure to comply. The records were to be open to consultation by anyone on payment of a fee of threepence. It would be of great interest if some of these old record books could be unearthed, if they still exist.

Section III. was a new departure in forestry legislation and gave tenants the right to enclose any piece of ground containing coppice wood. The wording is as follows:

“And be it enacted, That if any tenant as aforesaid, shall inclose any piece of ground containing coppice wood, which he is not bound by his lease to inclose or preserve, and which has not been inclosed or preserved from cattle for five years preceding, the said tenant shall have power to cut, sell and dispose of the trees, which shall grow from said coppice at any time during his term, leaving one timber tree on every square perch of such coppice where timber trees are growing.”

Section IV. provided for the giving of 12 months' notice in writing of intention to enclose to the landlord or his agent. Section V. provided that a map and a certificate should be lodged with the clerk of the peace within six months after enclosure. The gist of the notice was as follows:

"I, A. B., do swear, that I have inclosed acres roods perches of the lands of in the parish of which I hold from and that I have counted the number of trees exceeding six feet in height and which are now standing thereon, according to the best of my skill and judgment and that they amount to no more than trees of the following kinds (here naming the kinds of trees and the number of each kind which they do not exceed) or else and that there are no trees exceeding six feet in height, growing upon said lands so inclosed by me (as the case may be) and that I intend to preserve said lands so inclosed from cattle, for the space of five years, that the copse may grow."

The trees left standing to the number apparently of 160 to the statute acre, remained the property of the landlord.

Later sections of this statute deal with the safeguarding of the landlord's position. He could appeal against a fraudulent registration and have it investigated and made ineffective. They make provision for the tenant selling his right to the standing trees planted by him to his landlord, such sale to be in writing and a copy lodged with the clerk of the peace. In cases of tenancy for life or of uncertain term, a year had to be allowed after the expiration of the lease for the removal of the tenant's trees, subject to payment of compensation for damage done in the process, amount to be settled by arbitration, if necessary. Any landlord wishing to purchase the trees of a tenant had to give the latter six months' notice to desist from cutting them. The value of the trees, allowance being made for expense of felling and damage likely to be done in the process, was to be determined in court. Failure of the landlord to pay the sum fixed before the next sessions resulted in the trees vesting in the tenant or his representative and he could then enter on the lands and remove them within six months' time without having to pay for damages unless they were wanton and unnecessary.

Provision was also made, on the surrender of a lease for renewal or on the granting of a new lease for the tenant's existing rights remaining in full force.

Section XIII. clears up a point which remained in doubt under previous statutes regarding action to be taken in the confiscation of stolen goods.

"And whereas it is usual with timber stealers to saw and work up as soon as possible the green timber they have illegally possessed themselves of; and it is not clearly understood that justices of the peace or those authorized by their warrant, have a power by any act now in force, to seize such wooden ware and wrought-up timber, as are offered to sale by suspected persons; be it enacted by the authority aforesaid, That any justice of the peace or person authorized under his hand and seal for that purpose, shall have power to seize all fresh wrought timber, whether wooden ware, cars, carts, fork or shovel handels, hoops, ploughs, harrows or rakes tails, when found in possession of any person or persons suspected of having become illegally possessed of the same; and if any such person or persons cannot give a satisfactory account of having procured them honestly, he or they shall be liable to such penalty, not exceeding triple the customary value of such goods, as the said justice shall adjudge, one half thereof to the use of the poor of the parish, and the other moiety to the informer; or if there be none, to such sub or petty constable or wood ranger, as shall appear to the justice before whom the offender is convicted, to have been the most active in carrying the law into execution."

The penalty in default of payment of the fine was first offence: three months; second, six months, and, for every subsequent offence, twelve months.

Section XVI. increases the penalties for offences by habitual timber thieves, and Section XVII. is a reminder that it is a felony to cut down trees between sunset and sunrise. The next clause announced that the provisions of the 7th of George III., c. 23, still remained in force.

Section XIX. was a new attempt to deal with the goat problem, as follows:

“ And whereas the keeping of goats either in woodlands or any unfenced country, greatly tends to the destruction of trees be it enacted, that owners of goats found trespassing may be fined 20s. on conviction, for every goat, to be paid to complainant or to the church-wardens for the poor of the parish. If any one find a goat trespass in his or her plantation he or she may take same and keep or dispose of it as his or her own property.”

The last two clauses exempted trees planted under any special covenant of a lease and tenants evicted for non-payment of rent.

The Dublin Society.

Before going on to deal with certain information of forestry interest, derived from a perusal of several issues of the “Dublin Gazette,” it may be mentioned that in addition to the nineteen items dealt with above, there were a number of statutes in the reign of the third George, which provided for the payment to the Dublin Society of grants from the exchequer, which usually amounted to sums of £5,000, one-half of which had to be applied to the encouragement of agriculture and planting. On one occasion in 1785 some of the money had to be used for the promotion of the importation of oak bark from countries whence it had not usually been imported.

Both Forbes (2) and Litton Falkiner (1) have dealt with the planting activities of the Royal Dublin Society between 1741 and 1808, and it is not proposed to go more closely into them here. Forbes tells us that 2,800 acres were planted over a period of 40 years and that nearly half the premiums awarded went to County Galway.

EFFECTS OF THE ACT OF 1784-1785

The proviso requiring registration in the “Dublin Gazette” of trees planted by tenants unable to notify their head landlords otherwise, had one fortunate consequence. It left a permanent record of a considerable proportion of all the tree-planting carried out between roughly 1785 and 1850. Detailed examination of all these records would show to what extent the Act was taken advantage of by tenants, but that would be a big task. Examination of the records for four years, namely, for 1805, 1810, 1829 and 1844, well scattered over the period mentioned, may, however, suffice to arrive at a fair estimate of the possible numbers of trees registered and, therefore, acreage planted, and from the result it is clear that very considerable advantage was taken of the Act and that, including planting done direct by landlords and planting by tenants, not advertised in the “Dublin Gazette,” considerable areas must have been planted—very much greater than those under the Dublin Society’s premium scheme.

In extracting details from the “Gazette” care has to be taken not to include repeat entries, as in many cases the same advertisement appears two or three times. The following table shows the number of registrations and the number of trees (and shrubs) included therein for the years mentioned, and, allowing a round number of 2,000 trees to the statute acre, the approximate acreage probably planted.

Year	Registrations	Number of Trees	Approximate Acreage
1805	... 57	360,177	180
1810	... 215	1,633,125	817
1829	... 117	986,258	493
1844	... 55	459,452	230
Total	... 444	3,439,012	1,720

Registrations went on, therefore, over a long period. There were still a few in 1854, and, in the sixty years from, say, 1791 to 1850, therefore, we may presume that some fifteen times the above totals were registered or a total of 6,660 registrations, involving some fifty million trees and some 25,000 acres.

It is important to realise that survivors of the trees planted during that period of sixty years would in 1940 be from 90 to 140 years of age and that, a very considerable proportion, therefore, of the old and mature trees which have been cut during the present emergency must have been planted under this Act. For that reason alone there should be some appreciation of the national service rendered by the framers of the Act and by the planters of those days. Absolute proof of the above conjecture can quite readily be obtained in perusing the record of registrations, as it is not unusual to find actual woods and townlands recorded where the old trees are standing even yet or from which they have recently been cut, for emergency firewood and other uses.

The distribution of registrations throughout the country is of some interest. For the years 1805 and 1829 it was as follows, the number for 1805 being given first:

Antrim	.. 4 2	Kerry	... 1 3	Roscommon	... 1 3
Armagh	... 1 1	Kildare	... 2 6	Sligo	... 1 1
Carlow	... 0 2	Kilkenny	... 2 1	Tipperary	... 2 6
Cavan	... 0 5	King's Co.	0 0	Tyrone	... 0 1
Clare	... 1 7	Limerick	... 2 1	Waterford	... 1 1
Cork	... 12 24	Londonderry	4 1	West Meath	.. 0 0
Donegal	... 1 2	Longford	... 1 1	Wexford	... 9 17
Down	... 1 1	Louth	... 3 0	Wicklow	... 0 4
Dublin	... 7 5	Mayo	... 0 7	Uncertain	... 1 2
Fermanagh	... 0 4	Meath	... 0 6		
Galway	... 0 2	Queen's Co.	0 1	Totals	... 57 117

Cork and Wexford seem to have been the counties where the scheme was most popular, which can possibly be explained as due to some difference in the system of land utilisation or land tenure. Galway, which showed up well under the Dublin Society's scheme, makes a poor showing here, while King's County, Leitrim, Monaghan and West Meath had no registrations.

INFORMATION OF SILVICULTURAL INTEREST

While these records are unable to supply information as to the absolute numbers and areas planted, they do provide interesting information concerning the silviculture of the time, especially regarding the relative popularity of the species which were planted and the trend of their popularity can also be seen.

The following is an example of a typical registration, showing the information which is available.

"Dublin Gazette." Saturday, 9th January, 1830.

"NOTICE. Take notice that I have planted or caused to be planted, within twelve months last past, on the lands of Cross in

the Parish of Ballyclay, Lower Half-Barony of Antrim, the County of Antrim, held by me from Henry Joy Tomb, of Belfast, Esq., the following trees, viz.: 3,000 Alder, 2,000 Beech, 2,000 Sycamore, 1,000 Elm, 2,000 Ash, 1,000 Mountain Ash, 1,000 Larch and 100 Silver Fir; and that I intend to register said trees, pursuant to the Statutes in that case made and provided—dated this 29th day of December, 1829. David Kirk.

“To Henry Joy Tomb, of Belfast, Esq., the Landlord of the Lands and Premises in the foregoing notice mentioned; and all others concerned.”

From an analysis of the numbers of the various tree species planted in 1810, 1829 and 1844, the following percentages for these three years have been calculated. For comparison the proportion of species planted by the State Forestry Service in 1943, a century later is shown.

Species	1810	1829	1844	1943
Scots Pine	25.20%	25.30%	16.40%	26.50%
European larch	24.60	28.30	36.30	4.50
Norway Spruce	6.20	10.30	10.00	17.25
Silver fir	.80	.80	2.00	
Other conifers	.10	.30	.10	39.25
Total conifers	56.90	65.00	64.80	87.50
Ash	12.20	7.60	5.70	1.75
Beech	8.20	6.70	6.80	6.65
Oak	7.70	4.40	5.80	2.25
Sycamore	5.10	1.70	1.70	
Alder	3.10	6.90	4.55	
Elm	2.40	3.30	2.90	
Birch	1.90	1.80	1.15	
Horse Chestnut	.70	.10	.20	
Spanish Chestnut	.50	.05	—	
Willows	.50	1.90	1.55	1.85
Poplars	.40	1.20	4.60	
Hornbeam	.20	.10	.05	
Lime	.10	.05	.20	
Platanus	.10	—	—	
Walnut	—	.20	—	
Total Broadleaved Trees	43.10	35.00	35.20	12.50

The following points emerge from a scrutiny of the above table. The proportion of broadleaved trees used then was three times higher than it is now. As the percentage of the older coniferous species in 1943 is still some 48% as compared with 57% in 1810, the increased proportion of conifers is almost wholly accounted for by the use of more recently introduced species. In fact, Japanese larch, Sitka spruce and Corsican and Contorta pines account for nearly 38 of the 39.4% of other conifers used in 1943. It is interesting to see how Scots pine and beech have maintained, or rather recovered, their position in recent years. There was a steady rise in the popularity of larch—first mentioned in the 1776 statute—which replaced Scots pine as the most popular species by 1829 and had increased its lead by 1844. Norway spruce had also become more popular and Silver fir was three times more in favour in 1844 than in 1829. Sycamore fell off in favour after 1810, but trees suitable for wet ground or as nurses to more valuable trees, and incidentally of more rapid growth, increased in favour. Thus, Alder, willows and especially poplars had become more fashionable. The poplar proportion for 1844 is nearly twelve times higher than for 1810. Elm maintained its place very

well, while ash and hornbeam fell away. Oak fell away during 1829 but recovered ground by 1844, when the proportion was still double what it is nowadays.

Amongst the other conifers, one of the most interesting species mentioned is Weymouth pine. In 1810 this species was planted in twelve places, a total of 1,705 trees being used, but there were no records for 1829 or for 1844. In 1829, 1,500 "Pine Aster" were planted, and in 1844 310.

By 1844 considerable interest was being taken in different varieties of certain broad-leaved trees, especially of elms, of which the French, Cornish and Feather varieties were planted; of poplars, including the Carolina poplar, and the Ontario poplar, and of willows. At Ennismore in County Kerry, the Earl of Listowel planted varieties of elms and poplars. There is also a record in 1829 of Black Italian and Carolina poplars being planted in Armagh. Occasional locust trees, i.e., Robinias, are also recorded. Other rarer names recorded are Pearl birch, Gorgomel Sally or Gorgamill Sallow, Silver Abails and Norfolk Willow. In 1805 a few of the following were registered: Tulip tree, *Betula laciniata*, i.e., the Dalecarlian variety of the common birch, Black spruce, White spruce, Lote or Nettle trees (presumably *Celtis*), Cork trees, Deciduous Cypress, Virginia cedar, Judas tree, Scarlet hornbeam, and in 1829, Scorpion lime, Bloody lime, Turkey oak and Scarlet maple. This, however, does not exhaust the enterprise of these planters. At Kilmore in County Limerick the following extraordinary variety of species was planted and registered in 1829: Alder, Birch, Evergreen oak, Beech, Copper beech, Ash, Sycamore, French elm, Norway spruce, larch, Silver fir, Balm of Gilead fir, oak, holly, Arbutus, Philarea, Aleterna, Broom, Juniper, nut trees, bay, laurel, Acacia, Portugal laurel, lilac, Cittisis, Sweet briar, *Lignum vitae*, Cypress, quick, Cedar, pear, apple, plum and peach. This enterprising tenant, although he does not seem to have liked Scots pine, was leaving nothing to chance, so far as registration was concerned.

By far the greater number of plantings were of mixed conifers and broad-leaved trees in the form of a general mixture of the common hardwoods with nurses of conifers or alder and birch. A typical sample has already been quoted above. Here is another specimen taken at random from the 1810 "Gazette"—1,000 Scots pine, 1,000 Norway spruce, 2,000 larch, 2,000 Oak, 2,000 Ash, 500 Elm, 2,000 Beech, 2,000 Alder and 1,000 Horse Chesnut. Another example without the Alder and Birch comprised 5,000 Scots Pine, 1,000 Norway spruce, 1,000 Larch, 2,200 Oak, 1,000 Ash and 1,000 Beech. Planting of conifers alone or of one conifer alone were relatively rare. Instances of the valuable hardwoods being planted alone without nurses are extremely rare and it may safely be presumed that almost all the fine old hardwood trees still in existence, at least, before the present emergency, were grown originally in mixture with conifers which were taken out early on.

Records of the ages and sizes of trees used in planting are rare. Some of the remarks are "all four years old," "from two to four years old and one to four feet in height." One record for Galway gives four years for larch, ash, sycamore and horse chestnut and six years for Scots pine, beech and elm. A second record for Wexford gives three years for oak, and poplar and both three and four years for ash, pine and larch. A third from Cork registers five-year-old beech and four-year-old Norway spruce. Another for Kerry shows that sometimes quite large trees were used, the heights given being two feet for larch, one foot for pine, four feet for spruce and silver fir, 2½ feet for beech and sycamore, 4½ feet for lime, 5½ feet for alder and horse chestnut, 6½ feet for elm, 7 feet for hornbeam and 9½ feet for varieties of elm. There is no information given regarding planting distances and planting methods.

For the four years investigated, there is only one record of a registration of enclosure of coppice for preservation in accordance with Section IV. of the Act, as follows:

"Grillagh, Ballymony, Co. Cork (Ash, Alder and Sycamore were planted); also I have copped, or caused to be copped, the Glins on said lands consisting of oak, heazle and birch; and that I intend to register the same. 11th February, 1830. E. H. Good, tenant of the Earl of Bantry."

The small area of woodland known as the Doctor's Glen, in Grillagh townland, about three miles east of Dunmanway, is probably the remnant of the "glins" here mentioned.

Some of the woodland planted and registered during the years examined has, in fact, passed into the possession of the Forestry Division of the Department of Lands and some of the trees still survive. This would appear to be true, for example, of certain areas of Ballymahon forest (Newcastle, Clonkeen and Forgney); Coolgreaney forest (Newtown); Delgany forest (Kindleston Upper); and Killeshandra forest (Gartinadress and Marahill), while one area was cleared of trees several years ago at Bree forest (Craan).

A complete examination of all the registrations for the whole period of years would certainly result in the discovery that many more of the old woodlands purchased by the Forestry Division when acquiring old demesne woodlands and still surviving—not to mention woodlands still in private hands—were planted under the influence of this Act, so that it is possible to see clearly how our own forestry work of to-day is closely linked up with the work of those earlier planters at the end of the 18th and beginning of the 19th century, and how forestry transcends politics. Collection of seed for the production of new trees goes on from some of the veterans then planted. There was 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, as Litton Falkiner pointed out, 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.

This survey of the Irish Statutes does not, of course, present a complete picture of forestry history in Ireland, but it has brought out a number of points of interest and may serve to indicate how many of the problems are of a perennial nature. Since the first warning of the statute of 1698 the attempts of the various authorities to remedy the chaotic destruction and exploitation of woods, both natural and artificial, have been many and varied, culminating in the modern Forestry Act (1928). The history of these earlier efforts shows how closely the matter is bound up with the problem of land tenure. The lesson to be drawn by the forester seems to be to direct every effort to maintaining all areas now set aside and being utilised for forestry in the highest state of production possible, not only to justify their existence economically, but to discourage any future attempts at disafforestation in favour of some other land-using industry. That risk will always be present, to judge from past history.

References.

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