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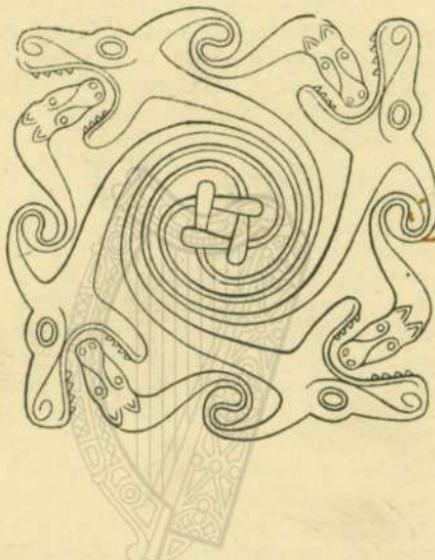
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CUMANN LEIGEACHTAI AN PHOBAIL



IRISH FORESTRY
BY PROFESSOR A. HENRY

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IRISH FORESTRY

Trees are grown for ornament, for shelter, and for timber. These are distinct purposes, all praiseworthy, but requiring different means to carry out. It will be well to explain this, as much confusion exists in the minds of the people, who are not generally aware of the distinction.

Forestry means the growing of trees in dense masses over extensive tracts of land for the production of timber, which is an indispensable material of civilised life. The trees are cut down, when they attain a size large enough to yield useful wood. Such plantations involve great initial expense, and can only be carried out by large landowners, or by the State, or by some public body. Afforestation involves the idea of ultimate profit from the sale of the timber, and should be based on sound business principles.

In ornamental planting, the production of timber is not the object sought. The aim is to beautify the scene. Trees enhance the charm both of town and country, and really add to human happiness. A house in the country without trees is scarce worthy of the name of Home. As long as they remain sound, ornamental trees ought to be spared. Old trees become linked with the history of a place, and are a source of joy from generation to generation. Much may be done all over Ireland in the way of planting trees for beauty alone. There is room around the church, public hall, the school playing ground, for a few trees to give these places of meeting an air of distinction. Everyone can see that the planting of trees for ornament is different from the big question of afforestation, as being a matter that can be dealt with either by individual effort or by small local committees.

The third important use of trees is in providing shelter of various kinds, as for farmsteads and labourers' cottages, and for pasture land and crops. The creation of shelters

belts often merits encouragement and assistance from county and rural councils, as will be shown in the sequel.

Let us now consider the big question of afforestation, which has engaged the attention of public men for many years and has been the subject of several inquiries by Government Commissions. The need of afforestation in Ireland is almost universally admitted. Ireland has less woodland area in proportion to its population than any other country in Europe. In 1914, out of Ireland's total extent of 20,000,000 acres, the woodlands only covered 296,493 acres, most of them being poor in quality and carrying an insufficient stock of trees. During the war some 10,000 acres of the best were cut down, so only 286,000 acres remain, quite insufficient for our needs. This woodland area seems very small, when we take into account the fact that nearly ten times its amount, some 2,500,000 acres is classified as "rough grazing," that is, land of little value in its present use, but of which at least one-third would be capable of growing excellent timber, if planted with the right species of trees.

Our native supply of timber, the amount which can be cut out of the small area of existing woodland, is insufficient for our industries. Timber, coal, iron, and food production are the four great "key industries," and Ireland is especially weak in the first of these. In past years we relied mainly on supplies of timber from abroad, which up to 1914 came into our ports at a low price. The days of cheap imported timber are gone for ever. This is certain, owing to the clearance everywhere of the virgin forest, and the necessary demands for timber by the growing populations of the United States, Canada, Russia, the great forest countries.

Unless great efforts are made now to increase the area of our plantations, Ireland will in the course of the next twenty or thirty years be grievously handicapped in all its industries by the lack of timber. The farmer will suffer severely by the high price of tools, fencing, gates and buildings. Butter and egg boxes becoming expensive, his profits will be lessened in the export trade. Wood for furniture, factories, housing, railway sleepers, telegraph poles, will also be wanting in increasing quantities. How will

Ireland raise coal from her mines unless a cheap and constant supply of mining timber is available? Every ton of coal now raised requires at least an expenditure of one shilling in the shape of pit props, and this item tends to advance in cost. Again in many farming districts where peat has been cut to a finish, a famine in fuel is threatened. Woodlands yield, in addition to timber, large quantities of fuel in the shape of firewood. For fuel alone, the production of the home-grown timber in some parts of the country is advisable.

To be dependent on foreign countries for the greater part of our timber supply is not a wise policy. The building up of a national timber reserve in State forests was pronounced by the Forestry Reconstruction Report of 1918 to be a military necessity, as a country should include in its own resources sufficient forest to make it independent of foreign supplies in case of emergency. The need in Ireland is, however, pressing even in time of peace. We ought to provide within our own shores for a cheap and adequate supply of timber, if our farmers, miners, and mechanics are to work in the future on equal terms with the foreigner.

The difficulties of afforestation lie in the cost of acquiring the land suitable for growing forest trees, and in the expenses of planting. Fortunately, suitable land for afforestation is not dear land. It is undesirable, on sound principles of economy, even if it were feasible, to take away, for purposes of afforestation, from the farmer any arable land or ordinary pasture.

We have already pointed out that the land suitable for afforestation is as a rule the so-called wasted land, which in its present state is mostly covered with heather, whin, bracken, or rushes, and yields only a scanty return as "rough grazing." The advances that have been made in the art of forestry are enormous. We are now able to plant trees which grow fast and yield useful timber in a short term of years. Species like the Douglas fir and the Sitka spruce give astonishing returns in Ireland, the former being adapted to dry soils and sheltered conditions, the latter thriving in wet soils and exposed situations. With these two species and the Corsican pine, Japanese and European

larches, poor land at moderate elevations will yield good timber ready for felling at fifty or sixty years old. Most of the existing woods in Ireland, being insufficiently stocked, afford no criterion of what could be produced with proper species and good management.

There is one important point which, however, must be mentioned. Certain essential kinds of timber, as ash, oak, and elm cannot be grown fast, and are consequently not attractive as an investment. Nevertheless, this class of timber must be grown to provide for the needs of our industries, and it cannot be grown on poor mountain soil. These trees require good soil at a low elevation. The demesnes and existing woodlands, even if they are good enough land to farm, ought to be retained for growing these valuable timber trees. In no case ought a public body like the Congested Districts Board or the Estate Commissioners be permitted to convert a wooded demesne into farm land. Such demesnes should be reserved to the State forestry authority.

Afforestation on a large scale can only be done by the State ; the returns come in at a distant date, and do not tempt private individuals as an investment. National ownership is also best calculated to secure the maximum production of timber from wooded areas. In foreign countries, like France and Germany, the State forests, which are systematically managed, are found to be on an average about twice as productive as the private forests. Privately owned woodlands are subject to the needs and whims of successive proprietors, and are rarely managed in a steady way over a long succession of years.

State afforestation has been commenced in Ireland. In 1908, the Department of Agriculture held an important inquiry, at which evidence was given by forestry experts, landowners, timber merchants, and business men using timber on a considerable scale, etc. ; and the following recommendations were agreed to in the Report which was drawn up :—

I.—The Government in Ireland to acquire and plant 200,000 acres of waste land in large blocks, and to acquire

50,000 acres of existing woodland, together costing a sum of £286,000, spread over fifty years. There would be an excess of income over expenditure after the fiftieth year, the calculation being that there would be a yield of 4½% on the total capital invested. Timber would be available as thinnings from the twentieth year onwards.

II.—The county councils were to acquire 50,000 acres of the smaller existing woods, the funds to come from the striking of a local ½d. or 1d. rate, the purchase money to be paid in instalments.

These 200,000 acres of new plantations, in addition to the 300,000 acres of existing woods, would make 500,000 acres of woodland at the end of fifty years, all of which would be obtained without trespassing on a single acre of farm land. It was hoped that another 500,000 acres of the available and suitable waste land would be planted gradually by private owners, and county councils, etc., so that by the end of eighty years Ireland would have 1,000,000 acres of woodlands, the amount deemed necessary for the agricultural and industrial needs of the country.

Such was the programme in 1908, but public opinion was not ripe for such measures, either in Ireland or in Great Britain. The Department's actual programme has, however, exceeded anything done by the Government in England or Scotland, and may be summarised as follows:—

The Department up to 1918 acquired thirteen wooded estates in Ireland, where forestry operations have been continually carried on, felling, planting and replanting, etc. These estates, now called forestry centres, are as follows in extent:—

Ulster, four centres	....	....	1,429	acres
Connaught, two centres	....	....	1,710	„
Leinster, four centres	....	....	1,564	„
Munster, three centres	....	....	1,996	„
 Total	....	....	6,699	acres

The Department also acquired, by aid of development funds, waste land for planting, viz. :—

Glendalough and Lug Duff area	....	2,816 acres
Slieve Bloom area	....	3,146 "
Ballyhoura area	....	2,696 "
Total	....	8,658 acres

The Department by 1918 had thus acquired 15,357 acres of woods and plantable waste land, the total purchases being £68,625, out of which £36,507 was acquired from the Estate Commissioners when land was passing from landlord to tenant. The annuities are paid out of the vote of £6,000 a year, given by Parliament for forestry in Ireland.

Two of the centres were purchased, however, out of the Department's Endowment Fund. The balance, £32,500, was provided by the Development Commissioners. The amount sanctioned as advance from Development Funds is £80,911.

In conjunction with the Forestry Commission, which was appointed in 1919, the Department acquired in that year about 3,000 acres more, 2,700 acres in Tyrone and 470 acres in Wicklow, and negotiations are proceeding for the purchase of 19,000 acres in six different counties.

The county councils have done exceedingly little in the acquisition of woods. Five counties have made a beginning—Kildare has 363 acres, Westmeath 89 acres, Limerick 39 acres, Cavan 50 acres, and Louth 6 acres. It is worthy of note that in Kildare, out of the total 363 acres, nearly one-half, 170 acres, were presented to the county council by a local landowner. In another county 101 acres of wood were offered in 1917 by the Estates Commissioners to the county council, but the latter refused to strike a rate for the preservation and maintenance of the wood.

It is doubtful if county councils will ever be willing to spend much in the purchase and maintenance of existing woods that are being disposed of when estates are being sold to tenants. County councils will also be unwilling to

embark on schemes for the afforestation of tracts of waste land. These duties are much better left in the hands of the central government, which has already a competent staff engaged in planting schemes and in the management of the State forestry centres. The work that can be well done by the county councils consists in encouraging and assisting farmers to plant shelter belts and small bits of land unsuitable for cultivation.

In fact the principle may be laid down that:—

1. Planting on a large scale for the production of timber should be left to the State and to large landowners. Landowners should be invited to lease suitable land for planting to the Government. Produce-sharing schemes have been devised by which the landowner provides the land and the Government does the planting, but the simple lease may prove more attractive, and will be less troublesome to the State, as the dearer cost of the purchase of land is not incurred at the outset.

2. Planting for shelter. This is a work, as already mentioned, in which county councils could do a great deal of useful work at no great expense to the ratepayer.

Planting for shelter is much more important than it is usually believed to be in Ireland, the most wind-swept country in Europe. In Oregon, U. S. A., where the mightiest forests in the world are being cleared away, the dairy farmers have found that cows which are pastured in fields exposed to the prevailing wind gave 20% less milk than those which graze in fields where the shelter of trees has been retained. In the West of Ireland generally, the gardens of the gentry, which are provided with shelter, are remarkable for the wealth and variety of their shrubs, flowers, and vegetables, surpassing those of the sister island. The peasants in their exposed fields can never fatten cattle, and in some seasons lose by wind a great part of their corn crop. In the absence of shelter, they are unable to raise fruit, like apples, which might be one of the most profitable industries in the West. In fact, the whole problem of the West, as well as of all hilly districts in Ireland, is the provision of shelter. Planting for shelter is expensive, when

it is done on a small scale, on account of the cost of fencing, necessary to protect young trees from cattle, goats, rabbits, etc. To the labourer or small farmer, the cost of fencing is often prohibitive. Young trees can be obtained at such cheap rates that their cost need never deter anyone from planting. Some provision ought then to be made to aid the small holder in the matter of fencing.

Experiments in the United States have shown that in the immediate neighbourhood of peat bogs the temperature is lowered, causing late frosts, which are very harmful to crops like early potatoes. The planting of belts of trees around the peat mosses will prevent this chilling effect.

The Department has introduced various schemes, by which, in co-operation with the county councils and the Congested Districts Board, farmers are enabled to plant trees for shelter on their holdings, viz. :—

1. By the Horticultural Scheme, Clause IX, trees are supplied by the County Committee of Agriculture. In the year ended 30th September, 1917, 400,000 trees were supplied under the scheme.

2. Special shelter belt schemes for Kildare and Donegal. In the same period, 12 holders in Kildare obtained 16,690 trees, and 800 holders in Donegal obtained 160,000 trees.

In Mayo the scheme was in operation, but has been dropped.

3. There have been also tree planting schemes in the Congested Districts, which were in operation in 1913 and in 1914, but have not been carried out recently.

These schemes might be greatly extended at no great expense by the County Committees of Agriculture. There is no doubt that the establishment of nurseries, where trees could be obtained at cost price, would greatly encourage small farmers to plant trees for shelter and ornament. Such nurseries might be placed at convenient centres under the control of a forest officer employed by the county council. The officer would give advice free of charge as to the proper species and best methods of planting trees. Prizes might also be given for the best plantations and shelter belts.

On most farms there is some waste land, odd corners

too rocky or too steep for cultivation, areas covered with whin or bracken, etc., which could very well be planted with trees. Plantations of a half-acre to five or even ten acres are often feasible on poor soils and situations. These small plantations would give some shelter, and would ultimately yield rough timber that would turn out useful in an agricultural district.

Much can be done in the way of planting trees by private effort. This will sometimes require co-operation. Thus, in a mountainous district, where a number of neighbouring farmers hold in common a tract of grazing land, the formation of shelter belts can best be carried out by a combined scheme. Such shelter belts will prove of great utility, not only in providing protection in severe weather for sheep and cattle, but also in ameliorating both the adjoining pasture and the farm land situated at a lower elevation.

Planting on a small scale for shelter and ornament is work that will often be done by local effort, and wherever possible, a committee should be formed in a village or rural district for the encouragement of tree-planting. This may be made a branch of activity by the local Farmers' Society, by the United Irishwomen, or any other society that may happen to be flourishing in the district.

Of all the non-official efforts that I know, the most promising is the planting scheme instituted at Roundwood, in Wicklow, by the Togher Agricultural Association, a local and unsubsidised society, which gives annually prizes in the shape of artistic certificates that are hung in the homes of those who have made plantations during the year. The farmers' daughters in the neighbourhood, which is bleak and at a high elevation, have enthusiastically taken up the

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in the district, and 5,500 trees by twenty-one persons in the adjoining district. In 1915, 1916, and 1917, an average of 9,000 forest trees were planted annually in the neighbourhood of Roundwood. In addition, ornamental shrubs and hedges were planted in great quantity.

A record of the Secretary, inscribed on his planting certificate and hung in a conspicuous place in his best room, is :—

1891.—Planted one hundred trees on taking possession of his farm.

1906.—An other set planted on his marriage.

1907.—Fifty trees planted when the new Vartry Reservoir was commenced.

1909.—Fifty trees planted when he purchased his farm under the Land Act.

1910.—One hundred trees planted when the National University was founded.

1911.—Fifty trees again planted.

Schemes might also be tried by which schools in rural districts should take up the question of planting trees.

It is evident, in conclusion, that the subject of afforestation has a wide bearing on the prosperity and happiness of Ireland, and that much remains to be done in the enlisting of popular sympathy in the support of the movement. This can be done by lectures and by publications.