# IRISH FORESTRY

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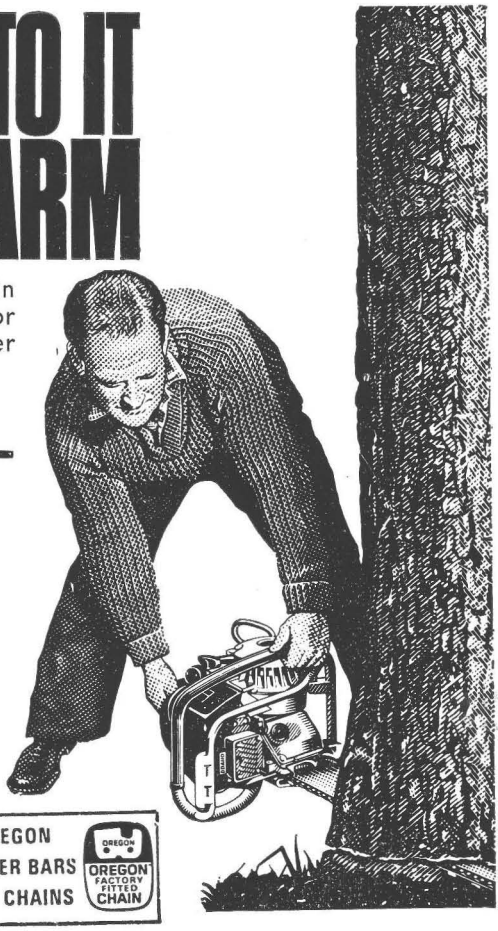

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# IRISH FORESTRY

Volume 26 AUTUMN 19.9 Number 2

## *Editorial*

## OUR BOGS

Those who watch assiduously the electric television (and perhaps others who take their news from closer to the source) will be aware that a degree of controversy exists as to the future use of our bogs, particularly of the hundred (or so) thousand acres now developed for fuel production by *Bord na Mona.* The main argument against the fuel cutting policy comes from horticulturists, who claim that a valuable natural asset, capable of sustaining several centuries of cropping at high yield levels, is being destroyed. The counter argument seems to be that, since it is necessary to remove the upper moss peat before the horticulturally suitable wood peat is reached, this wood peat of high calorific value must also be burned if the whole venture is to make any kind of economic sense.

There appears, however, to be sharp disagreement between the two sides as to the extent of this wood peat in midland bogs. This question surely is susceptible of definite settlement?

The telecast in question did not ignore western blanket bogs: agricultural work at Glenamoy was well covered.

What was most notable though, about the programme, was the complete absence of foresters from the discussions. Leaving aside the tree stumps which make it plain, even to the most simple minded, that the boglands were once forests, and the (perhaps simple minded) corollary that these forests could or should be replaced, it is a reflection on the impact of Forestry and its potentialities in this country that such an important issue in the field of land use policy could be discussed without seriously raising the subject of afforestation. Afforestation cannot be seriously discussed in the absence of foresters.

Perhaps we have taken insufficient interest in this subject. Perhaps we have made insufficient noise. If the first is true perhaps more information would increase the interest. Perhaps Mr. T. A. Barry's article in this issue of *Irish Forestry* may help to do this.

# Origins and Distribution of Peat-Types in the Bogs of Ireland[1]

By T. A. BARRY[2]

*ABSTRACT*

Two bog types (raised-type and blanket-bog) and one sub-type (high-level blanket bog) are distinguished. Their geographical distribution in Ireland is outlined on a map in relation to rainfall and relief.

A summary of the distribution-in-depth of the main genetic peat types is given, three in blanket bog and five in raised-type bog, and the story of peat and bog formation since the retreat of the ice is told in eight illustrations.

## *A NOTE ON THE NATURE OF PEATLANDS IN IRELAND*

Although peri-glacial and possibly pre-glacial peats occur in Ireland, in this paper we shall be concerned only with post-glacial peats. These are derived from the remains of hydroseres, fresh water plant-communities, marsh and fen; and, usually via a forest stage, from the xeroseres, heath, moor and possibly sub-alpine pasture. Accordingly, all the peat lands of present-day Ireland can be grouped simply as follows:

| | | | |
|---|---|---|---|
| Callows & Fens | Former Tundra, Heath, Forest<br>Former Swamp, Fen, Carr | → Bog | Moor. |

Callows, peat-alluvial water-meadows lying between the greater rivers of Ireland and the adjoining raised-type and blanket bogs, and moor, of shallow acid peat, heath-covered, will not be further described here. The two lines of succession that lead to bog are described in this paper and illustrated by Figs. 3, 4 and 5. The development of two main types of bog, thereafter, is shown on Figs. 6 and 7.

## *THE DISTRIBUTION OF BOG-TYPES IN IRELAND.*

The bogs of Ireland to-day, in terms of significant human usage, are either uncut (grazed or ungrazed), in course of hand-winning for

1. Paper given at a Symposium on Peat as a Medium for Horticultural Crop Production, Kinsealy, Co. Dublin, June 1968, (Proceedings now in Press). Published by permission of An Foras Taluntais (The Agricultural Institute).

2. Bord na Mona, Experimental Station, Droichead Nua, Co. Kildare.

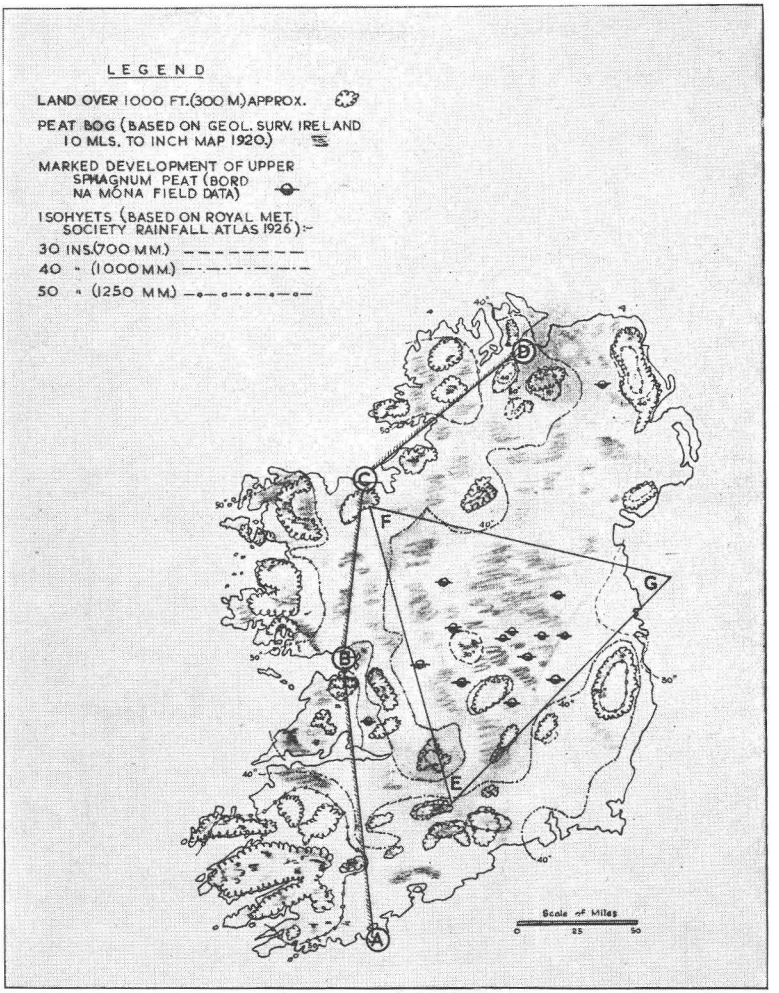


Fig. 1

*Distribution of the main bog types in Ireland in relation to rainfall and relief. West of A B C D is the region of blanket bog par excellence. Within the triangle E F G are the main aggregates of raised-type bog (Hochmoore). On high ground everywhere is the sub-type high level blanket bog (Reprinted by courtesy of Bord na Mona, from Barry, 1954).*

fuel, in course of machine-development for sod-peat and milled-peat fuel and for moss-peat production or to some degree reclaimed for

agriculture and forestry, usually from the cut-over stage following hand winning of fuel peat.

The distribution of the most common, widespread and important peat-types within Ireland's bogs is best described in relation to their genesis, that is, according to the ways and in the order in which they have been formed. Describing them in this way enables one to indicate most conveniently not only the variations encountered from place to place horizontally but those that are found vertically at any one point in a bog. Knowledge of this kind, particularly of the vertical arrangement of peat-types within them, is fundamental to our understanding of the problems that are likely to arise in the development of peat-lands and of peatland products for man's use.

Every bog in Ireland is a multi-storeyed structure, as we shall see.

Distribution within the island of Ireland of the main bog-types was first outlined cartographically by Barry (1954), and their relationship to rainfall and relief was set out on a map now reproduced with this paper. Fig. 1 (The terms "blanket bog" "raised type bog" and "high level blanket bog" will be explained further on).

Since then the suggested outline-distribution has stood the test of many field checks and has been, in effect, confirmed by other workers, e.g. Moore (1960, 1962, 1964) and O'Sullivan (1968).[1]

## *THE ORIGINS AND DISTRIBUTION OF PEAT-TYPES WITHIN OUR BOGS.*

So far we have been speaking in terms of bog types only. Let us now look at the stages of development whereby successive peat layers have been built up to form the bogs as we know them today. These stages of development are presented in this paper schematically (*Figs.* 2-9). While much of the background information on which the diagrams are based comes from the work of the great names in twentieth-century Quaternary peat-investigation, of Von Post (1937), Osvald (1923) and Jessen (1949), of Scandinavia; of Britain's Godwin (1956), Pearsall (1938) and Tansley (1939) and of Ireland's Lloyd Praeger (1901) and Mitchell (1951), recent peat surveys also (Bord na Mona, 1946-1968) have contributed much to these pictures of peat formation. In so far as the peat-stratigraphy of the bogs of Ireland is concerned, they may be said to rest on a basis of fact. Necessarily telescoped here, however, both in the figures and in the account that follows.

The chronology adopted is that which is most widely accepted. Whatever degree of authenticity it possesses as used here derives from its origins and development in the classics of peat literature such as Godwin's (1956) and Mitchell's (1951) works.

1. This is a very recent account of admirable work in West Mayo which sets a headline for the way in which floristic and pedological data may be collated with a view to presenting a scientific picture of complex peatlands.

Its hazards, as now applied, are obvious and inherent, in that peat formation may well have begun at quite different points in time within any one bog of uneven bog-floor topography, at places no more than a couple of hundred yards apart. It was in order to illustrate this very point, in fact, that the present series of drawings was produced in the first place. See and compare the very different histories of peat formation over the convexity on left and over the concavity right, in Figs. 3, 4 and 5.

*The last or Weichsel Glaciation* (Fig. 2)

The Glacial Ages in these latitudes are said to have begun about one million years ago. Successive glaciations covered Ireland, to a depth of 1,000 feet or more of ice field. Generally, the story of the most recent glaciation is one of soil-material creation, of rock being ground down to "rock flour"; of abrasion, transportation and deposition extending, from say 100,000 B.C. to 12,000 B.C. — a span of 88,000 years.

*Development of Post-Glacial Vegetation, Stage* 1 (*Fig.* 3)

LATE-GLACIAL (Lower Dryas, Allerod, Upper Dryas) and PRE-BOREAL— about 12,000 B.C. to 7,000 B.C., — a period of 5,000 years.

By about 10,000 years ago the ice fields had retreated northward leaving behind them drift, till, and scratched and polished rock-surfaces; the hollows being fielled with glacial melt-waters. Boulder-clay, gravels and sands although sometimes of remote origin were more often locally-derived and therefore resembled the rock type of the general area e.g. siliceous drift among the quartzites and mica-shists of the West; calcareous drift in the carboniferous central plain. Gradually lichens colonised the rocks, and sub alpine plants, Arctic willow and birch followed in succession to form tundra and later heath-land vegetation. This colonisation may well have been assisted by seeds from plant refuges on the mountains and, in the final phase, from the South West.

*Development of Post-Glacial Vegetation, Stage II* (*Fig.* 4)

BOREAL 7,000 B.C. to 5,000 B.C., a span of 2,000 years.

After the lapse of some thousands of years mixed forests of pine, oak, and yew, or of pine only, depending on the nature of the drift,[1] covered all the "middle ground" (that is, above flood level, beneath the hills) while lakes and ponds were being encroached upon by *Phragmites* reedbeds. The remains of these and other aquatics went to form the first peat-type, reedswamp peat, resting on silt, clay or shellmarl, or on other detritus or algal mud.

1. R. F. Hammond's recent work (1963-67) is likely to throw much new light on the processes of soil formation prior to the onset of bog.

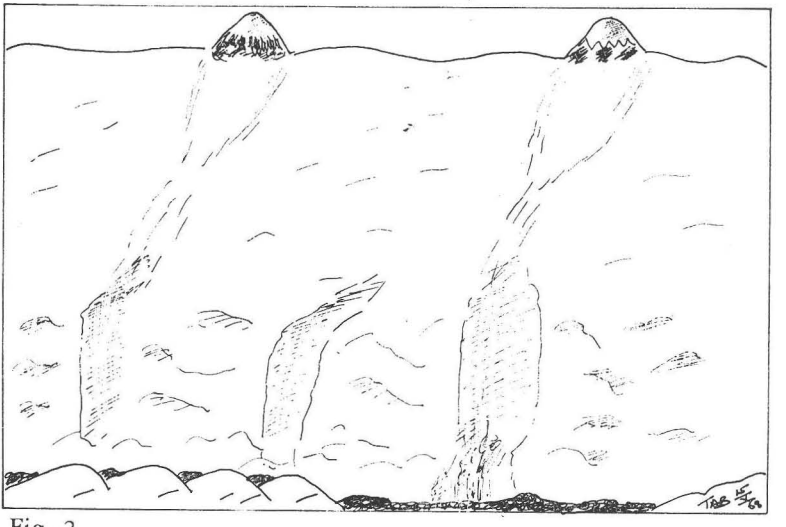

Fig. 2
*The last (?) glaciation. Climate: Arctic. At the culmination of each glaciation, only the higher mountains protruded from the ice, except at the final glaciation when Ireland, south of the line River Slaney—Baltinglass—Newcastle West—S. W. Clare, was apparently clear of the main ice field.*

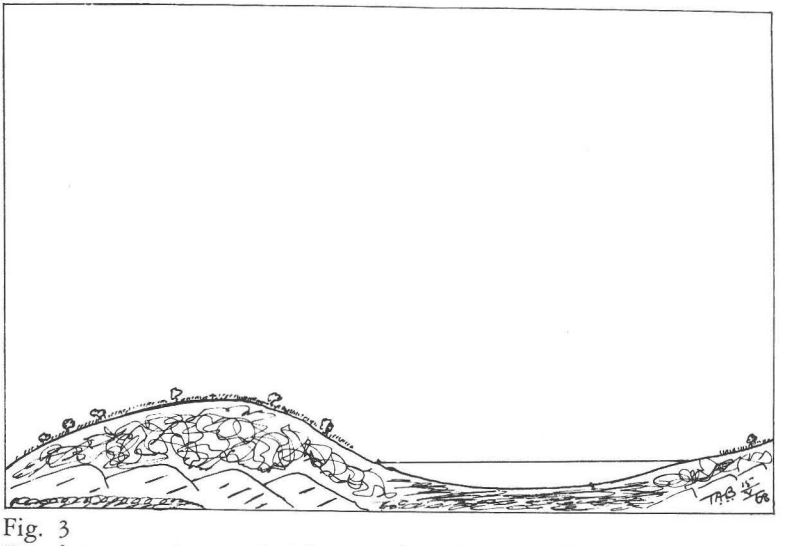

Fig. 3
*Development of post-glacial vegetation. Stage 1. Climate: sub-Arctic. Tundra conditions prevail at the beginning. Vegetation colonises the higher drier ground, at first intermittently, then progressively.*

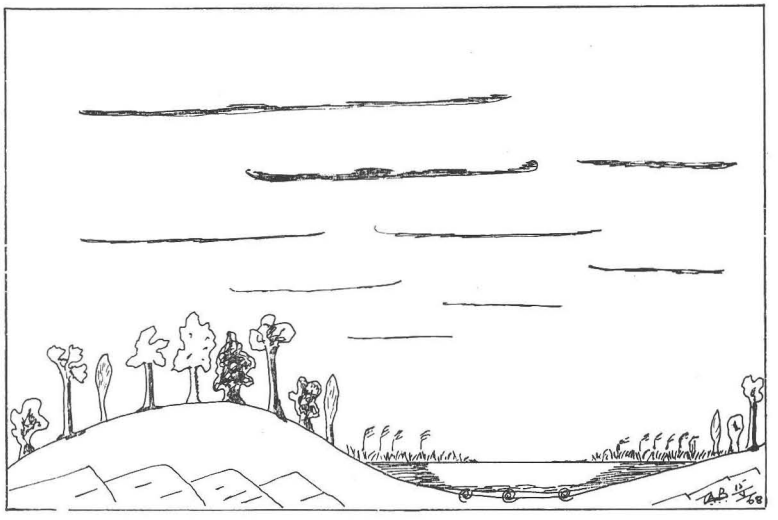

Fig. 4
*Development of post-glacial vegetation. Stage II. Climate probably warm and dry. Forests of oak, pine and yew. Lakes and ponds infilling.*

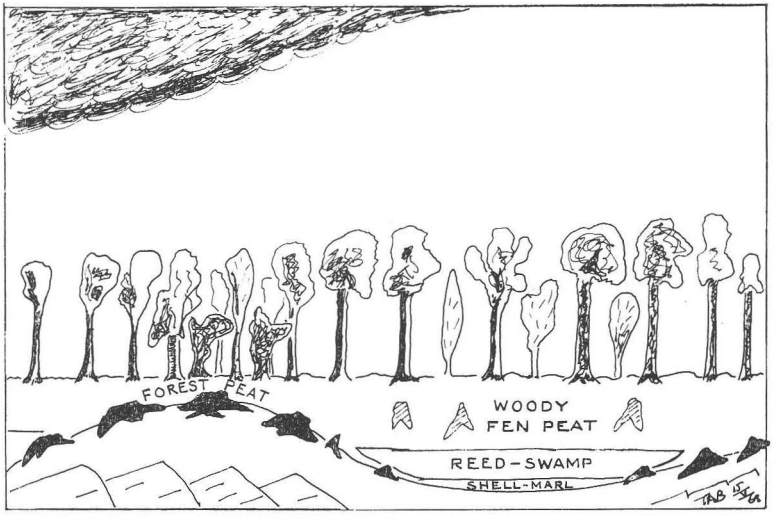


Fig. 5
*Development of post-glacial vegetation. Stage III. Climate moist and warmer than today. In the central plain of Ireland, pine forests extend over the woody fen-peat and reedswamp.*

*Development of Post-Glacial Vegetation, Stag III* (*Fig.* 5)
ATLANTIC and SUB-BOREAL. 5,000 B.C. to 500 B.C. or later.
A span of 4,500 years at least.

For as long as the post-glacial amelioration of climate continued, forests persisted on the middle ground and extended widely, pine succeeding birch, out over the "woody-fen" (*Eng.* carr. from a Swedish phytogeographical term), which had by this time developed over the reedswamp. The woody-fen peat is composed of mosses, mainly non-sphagnum, and very mixed eutrophic or meso-trophic vegetation remains, occasionally including birch, sometimes with *Phragmites* intrusions. Rapid and numerous. fluctuations in botanical composition and in humification, indicating changes in flood-level, are not rare.

It must be emphasised that the diagram is entirely schematic. In reality, as Bord na Mona stratigraphical records, 1953 to date, show quite clearly, in the Central Plain of Ireland a convexity of the bog-floor, as shown in Fig. 5 could cover anything from a hundred square yards to hundreds of acres. It could be in the form of a ridge, or a plateau. Similarly the concave reedswamp, which looks like a pond in Fig. 5 could cover several hundred acres, could extend along a mile of section, or could be interrupted several times in the course of that mile by abrupt or gradual uplifts of the floor.

*Development of Raised-type bog* (*Fig.* 6)
SUB-ATLANTIC and RECENT. 500 B.C. or later, up to now,
a period of 2,500 years at most.

In the Central Plain of Ireland, when the forests shown in Fig. 4 had decayed, from whatever cause, most probably a relatively drastic deterioration of climate, true acid bog peat, of the *Sphagnum-Carex* association rich in *Eriophorum,* began to grow over their remains. This series of layers of well humified older – *Sphagnum* and *Eriophorum* peat, is distinguished from all of the foregoing peat types by a total absence of arboreal woody remains. This was the beginning of true bog and it was succeeded, (sometimes by sharp alteration at a particular level, sometimes by a gradual change upward) by younger-sphagnum peat composed mainly of sphagnum mosses, relatively un-humified, which does not in surface configuration reflect the contours of the bog floor. On the contrary the more concave the ffoor, the more likely it is that the surface of this type of bog will be distinctly convex.

*Development of Blanket bog* (*Fig.* 7)
SUBATLANTIC and RECENT. 500 B.C. or later, up to now. A
period of 2,500 years at most.

While the eents outlined in the preciding paragraph were taking shape in the Central Plain, in the Western maritime countries and on high ground everywhere, the pine forests, at the lower levels, and the birch woods on the hill slopes and hill tops were dying out leaving an amorphous peat containing stumps of pine and birch and were being replaced by true blanket-bog peat in which sphagnum mosses

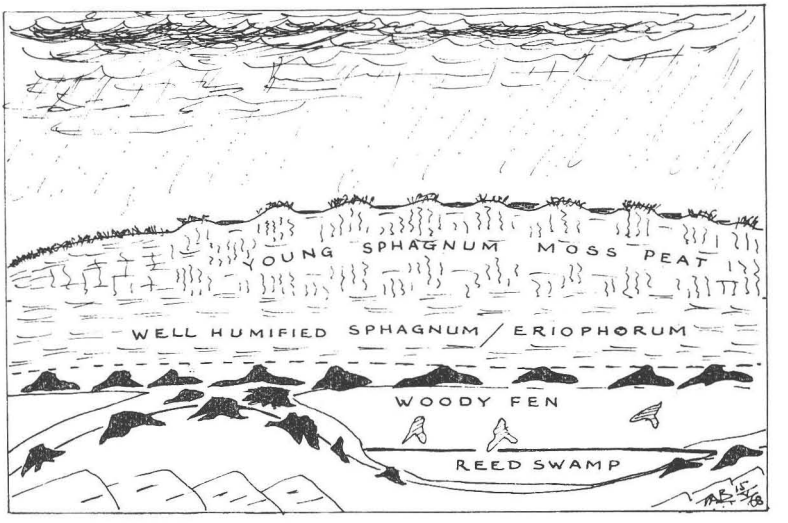


Fig. 6
*Development of post-glacial raised-type bog. Climate: oceanic, North temperate. In the central plain, this type of bog developed over the decayed pine forests, in two stages, as shown.*

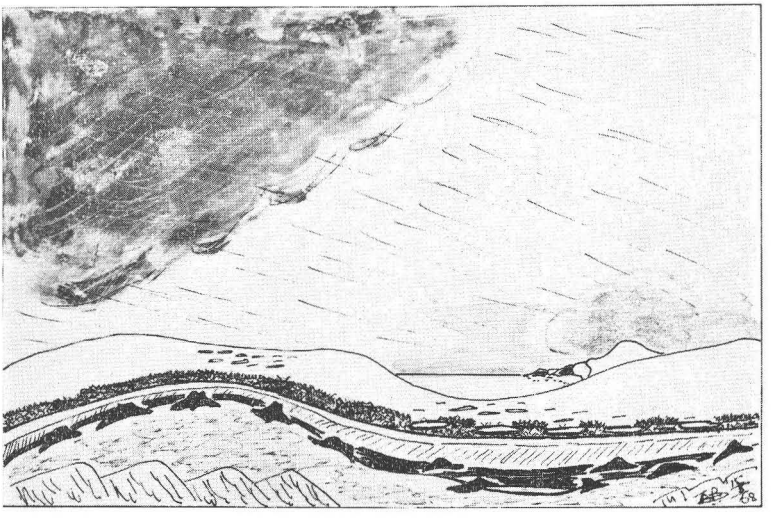

Fig. 7
*Development of post-glacial blanket bog. Climate: extreme oceanic. In western Ireland this type of bog developed over the decayed pine-forests, as sedge peat, rather than as moss peat, in two distinct layers.*

rarely if ever played a principal part. This layer of mixed composition, *Cyperaceae - Gramineae - Ericaceae,* is usually very well humified (H8—9 on the Von Post scale). Above it there is a sharp change to a blanket peat of approximately similar composition but noticeably less humified, which condition continues to the present surface.

The obvious reason for this radical difference between the true bog peats of the West of Ireland and of high ground as compared to those of the Central Plain is a difference of climate going back a couple of thousand years or more. The Western counties are subject also, by reason of their maritime situation, to more base-rich air and rain than is the Central Plain. Further, the ruggedness of the terrain affords better opportunities for the formation of soligenous peats—those enriched by ground waters flowing on to them from higher levels, now or in the past, so that it is not surprising to find that Western blanket-bog profiles often include quite large depths of *Phragmites* peat at base, on long slopes and in declivities.

As will be seen in Fig. 7, the blanket bog, in contrast to the raised-type bog, does reflect in surface configuration, more or less faithfully, the contours of the underlying mineral soil.

High-level blanket bogs occur commonly above the 1,000 ft. contour or so and resemble the Western low-level blanket bogs in growth-form but are of more montane and ericaceous composition.

*The Regeneration-Complex of Younger-Sphagnum Peat* (*Fig.* 8)

To revert to the regeneration-complex, of the raised-type bog in Ireland and West Europe, a feature that is of special importance as it gives rise to the industrial product moss peat. This was first worked out in detail by Osvald in 1923. In Tansley (1939) two of Osvald's profiles from his examination of raised-bogs in Ireland are given. One south-west of Athlone shows seven complete or incomplete cycles of regeneration going to a depth of 15 ft., the other, south of Edenderry, shows six or seven cycles to a depth of 10 ft. Such successions have been found repeatedly since then in surveys of other undrained raised-bogs in the Central Plain.

The figure (Fig. 8) shows schematically only one such complete cycle, the one nearest the surface, in a bog of classical moss-peat composition. Such a bog, in Ireland, could be comprised mainly of younger-sphagnum peat in the top one, two or three metres. The explanation of the sequence of growth in the part shown in Fig. 8 is as follows: on right and left former hummocks have gone through a pool stage and then a stage of pronounced upward growth of *Sphagnum* to become a pair of present-day bare-topped hummocks, which will form the floors of the next pair of pools if growth continues. At centre a similar succession at a different level has led to a present-day pool.

The sphagnum mosses are remarkable for the specialised cellular structure of their stems and leaves, so much so that one early worker

wanted them classified as sponges, not mosses. Their structure is a microcosm of the regeneration-complex to which they give rise and this complex in turn foreshadows, as it were, within each sphagnum cushion of vertical aggregates, the upward growth and domed form of the bog that will result.[1]

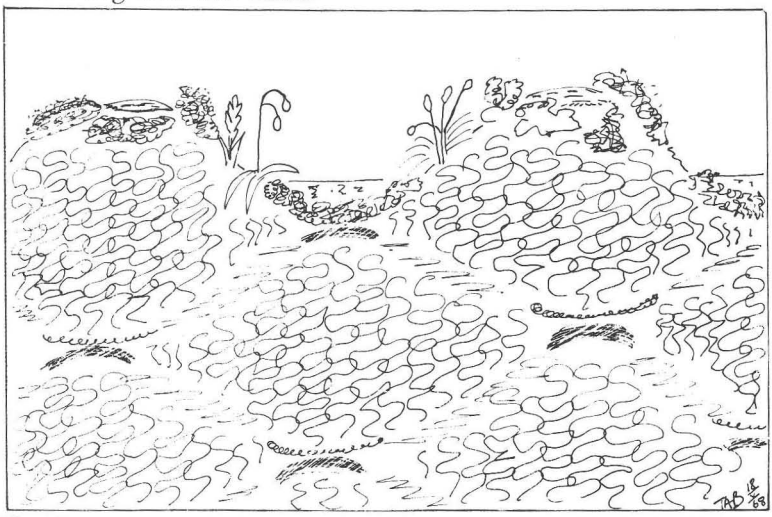

Fig. 8.
*Regeneration complex of younger sphagnum peat in raised-type bog of the central plain, Ireland. (One cycle—schematic).*

From a review made in 1963 of all the literature containing vegetational records for Ireland, e.g. Tansley (1939) Osvald (1949) Mitchell (in Jessen 1949) and Walker & Walker (1961); from personal observation of bog cuttings and profiles, and from subsequent discussion, it appears clear that the sphagnum species most commonly found in our younger moss peats of the East Central Plain are

*Sphagnum papillosum*
" *imbricatum*
" *magellanicum* (*S. medium*)
" *rubellum*
" *plumulosum*

1. Recently in a stimulating paper Walker and Walker (1961) have cast some doubt on the reality of the regeneration-complex concept. The meticulous observations made were all at the vertical faces of peat left by turf-cutters. "A very large number of cut faces were examined", they write, "and the examples recorded are thought to be fairly representative of these." Since, however, four of the eight places plotted on their map and reported on in their paper are well outside our E. Central Plain region of best younger sphagnum peat regeneration-complex (one was in Tipperary, one in E. Galway—West bank of Lough Derg —and two in Co. Derry) it may be that the authors themselves have not lent their theories the support they perhaps deserve.

It would appear (J. J. Moore, S.J., Personal communication, 1963) that of these, *Sphagnum papillosum* and *Sphagnum imbricatum* together make up on average the main bulk of our first-quality moss peat. An interesting point is that both of those species (and *S. magellanicum*) belong to the *Cymbifolia* or coarse-leaved group of sphagnum mosses. Dittrich (1954) quoting Overbeck in support, claims that *Cymbifolia* moss-peats have a higher rate of absorption and in their dehydrated state, better aeration than *Acutifolia* moss peats of small-leaved sphagnum species. "Cymbifolia peat is loose and bulky, Acutifolia peat is dense."

D. M. Synnott, Natural History Division, National Museum of Ireland, while concurring in the views expressed regarding the former most common sphagnum species, states that *S. imbricatum* is now quite rare on growing bog surfaces (Personal communication 1868).

*Blanket-bog and Raised-type Bog profiles compared. (Fig. 9)*

In this figure fairly typical profiles of raised-type and blanket bog in Ireland may be compared and contrasted in respect of plant suc-

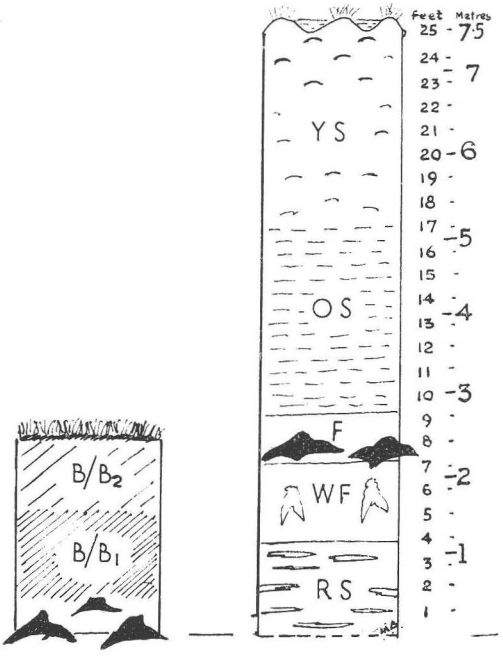


Fig. 9
*Blanket bog and raised-type bog. Normal profiles in Ireland compared. For explanation of symbols see Appendix.*

cession, peat-types, and depth. Each is of average depth, undrained —raised type bog 25 feet blanket bog 8 feet deep. As the schematic sections in Figs. 6 and 7 will have shown, it would be easy to discover profiles quite different from these in either bog-type.

*ACKNOWLEDGEMENT*

Thanks are due to Bord-no-Mona for permission to make use in this paper of information gained in the course of duties for them.

*APPENDIX*

*Key to the peat-type abbreviations used in Fig. 9 follow:*

*Blanket Bog Profile*

$B/B_2$ = Upper stratum of blanket bog peat, moderately or poorly humidified

$B/B_1$ = Lower stratum of blanket bog peat, well humidfied.

F = Forest peat (usually amorphous), with pine stumps common.

(See *Fig.* 7 also)

*Raised-Type Bog Profile*

YS = Younger-sphagnum regeneration-complex.

OS = Older-sphagnum and eriophorum peat.

F = Forest peat, with pine remains most common, except over convexities of the floor, in the Central Plain, where oak and yew occur, with or without the pine.

WF = Woody-fen (carr) peat.

RS = Reedswamp.

(See *Fig.* 6 also)

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# The Society of Irish Foresters, 1942-68

EILEEN MCCRACKEN.

In this article it is proposed to give a concise factual account of the activities of the Society of Irish Foresters during its first twenty six years. The Society's doings have been faithfully recorded in its journal, *Irish Forestry*, but the early issues of the journal are long since out of print and difficult to obtain and so this article aims at summarising information which otherwise might be not easily accessible to members who have joined subsequent to its foundation.

The Society of Irish Foresters was founded on 21st September 1942 and the following thirty one foundation members were enrolled, all of whom, except six, were officers in the Forestry Division, Department of Lands.

M. L. Anderson (d.1961)
P. Barry (d.1948)
T. J. Briody
W. Y. Chisholm (d.1969)
T. Clear
R. J. Crerand
M. Dalton (d. 1967)
P. Delaney
T. Donovan
J. P. Dowds
H. M. Fitzpatrick
D. G. Hayes
F. McMahon (d.1966)
T. Moloney
O. V. Mooney
G. Muir
F. J. Murphy
J. McCarthy
M. McCarthy
T. McCarthy
D. McCaw (d. 1943)
D. McGlynn
S. McMenamin
M. O'Beirne (d.195?)
J. O' Leary (d. 1957)
S. M. O'Sullivan (d.1964)
S. M. Petrie
M. Swan
M. Swords (d.195?)
D. A. Quirke
P. Verling

While the Society was intended to be primarily a society for professional foresters, people who were interested in forestry but who were not professional foresters were permitted to join as associates. The professional foresters were divided into two groups: grade I being Forestry Inspectors, university graduates and Head Foresters and grade II being Foresters, Foremen Foresters and students.

Originally the Society aimed to serve the interests of foresters in the Republic of Ireland (then Eire) but since that time the scope of its activities has been extended to include Northern Ireland and in 1965 the first northern president — C. S. Kilpatrick — was elected.

Although day excursions are organised in various parts of the country and the occasional lecture is given outside of Dublin it was felt by some members in the more remote districts that they derived less benefit from the Society than they might because of their geographical position. At the 1966 annual general meeting it was proposed by W. G. Dallas and seconded by H. Kerr — both

Northern Ireland members — that for the purpose of bringing the activities of the Society more into reach of country members there should be regions within the main body of the Society corresponding to the four historic provinces of Ireland. Each of these regions would nominate and vote for a councillor who would represent his region on the council of the Society and each region would set up a regional committee to organise meetings etc. within their province. To date one region, called the Northern Region, has been formed and it held its inaugural meeting in Strabane in 1967.

*OFFICIALS*

During its first year the Society had a patron, Thomas Derrig, Minister for Lands, but subsequently this office was dropped. The offices of president, vice-president, secretary, treasurer, business editor and editor have been retained and the names of those who have held these positions are given in the following lists. D. M. Craig has been auditor during the entire lifetime of the Society. Professor Clear carried out the combined offices of treasurer and secretary from 1942 to 1959 with the exception of 1945 when he was secretary only. There were three trustees appointed in the first year of the Society. These were: M. L. Anderson, T. Donovan and J. A. K. Meldrum. Since then the following have also acted in this capacity: H. M. Fitzpatrick, Mrs. King, D. Managan.

| *President* | | *Vice-President* | |
|---|---|---|---|
| 1943-4 | M. L. Anderson | 1943 | F. McMahon |
| 1945-6 | H. M. Fitzpatrick | 1944 | H. M. Fitzpatrick |
| 1947 | J. A. K. Meldrum | 1945-6 | J. A. K. Meldrum |
| 1948-9 | M. O'Beirne | 1947 | M. O'Beirne |
| 1950-1 | T. McEvoy | 1948-9 | F. McMahon |
| 1952 | J. A. K. Meldrum | 1950-1 | O. V. Mooney |
| 1953 | H. M. Fitzpatrick | 1952 | D. G. Hayes |
| 1954-5 | T. McEvoy | 1953 | T. McEvoy |
| 1956-7 | O. V. Mooney | 1954-5 | O. V. Mooney |
| 1958-9 | D. P. Managan | 1956 | M. Cosgrave |
| 1960 | M. Swan | 1957 | D. Mangan |
| 1961-2 | T. Clear | 1958-9 | M. Swan |
| 1963 | M. McNamara | 1960-2 | M. McNamara |
| 1964 | M. Swan | 1963 | M. Sharkey |
| 1965-6 | C. S. Kilpatrick | 1964 | C. S. Kilpatrick |
| 1967-8 | T. Clear | 1965-6 | O. V. Mooney |
| | | 1967 | A. M. S. Hanan |
| | | 1968 | M. McNamara |

*Treasurer*

| | |
|---|---|
| 1943-4 | T. Clear |
| 1945 | S. M. O'Sullivan |
| 1946-59 | T. Clear |
| 1960 | L. U. Gallagher |
| 1961-4 | A. M. S. Hanan |
| 1965-8 | T. Molony |

*Secretary*

| | |
|---|---|
| 1943-60 | T. Clear |
| 1961-3 | M. Swan |
| 1964-7 | J. O'Driscoll |
| 1968 | C. Kelly |

*Editor*

| | |
|---|---|
| 1943-4 | J. A. K. Meldrum |
| 1945 | M. L. Anderson |
| 1946-9 | T. McEvoy |
| 1950 | J. J. Maher |
| 1951-5 | M. Swan |
| 1956-8 | J. J. Deasy |
| 1959-60 | N. OCarroll |
| 1961-62 | G. Gallagher |
| 1963-4 | M. Sheridan |
| 1965-6 | L. U. Gallagher |
| 1967-8 | M. Swan |

*Business Editor*

| | |
|---|---|
| 1943 | M. Swords |
| 1944-5 | T. McEvoy |
| 1946-9 | J. J. Maher |
| 1950-2 | N. Ó Muirgheasa |
| 1953-4 | L. Condon |
| 1955-61 | M. Sharkey |
| 1962-4 | P. M. Joyce |
| 1965-7 | J. D. Robinson |
| 1968 | J. Durand |

As well as the above mentioned officials the Council which runs the Society also contains a number of councillors. The number and type of councillors has changed during the years. From 1943 to 1951 these officials were simply termed "councillors" and were the following:

M. L. Anderson, 1946-7
P. Barry, 1943-5
F. P. Clarke, 1946-7
J. J. Deasy, 1950-1
P. Delaney, 1943
N. Diver, 1945-6
H. M. Fitzpatrick, 1947-50
G. Haas, 1947
A. J. Hanahoe, 1947-8
T. Madden, 1945-6
D. Managan, 1948-9
J. A. K. Meldrum, 1950-1
O. V. Mooney, 1946-9
F. McMahon, 1944-5
M. O'Beirne, 1943, 1945-6 1950-1
D. M. O'Sullivan, 1949-50
S. M. O'Sullivan, 1943
S. M. Petrie, 1943-5
P. Ryan, 1947-50
P. Verling, 1943

From 1952 councillors were elected to represent the three groups within the Society and were accordingly classified as grade I, grade II and associate councillors. They were as follows:

*Councillors grade I*

S. Campbell, 1955-8, 1964
L. Condon, 1966-7
M. Cosgrave,1959-62
T. Clear, 1963-64
H. M. Fitzpatrick, 1951-2, 1960-3
A. M. S. Hanan, 1957-8, 1960
H. Kerr, 1965
D. Mangan, 1951-3, 1955-6, 1960-1, 1965, 1968
O. V. Mooney, 1958-9
C. McCarthy, 1961-2
T. McEvoy, 1952-3, 1956-9
D. McGlynn, 1954-5, 1966-7
D. McGuire, 1967-8
P. McMahon, 1953
M. McNamara, 1956-60, 1964
N. OCarroll, 1962-3
N. Ó Muirgheasa, 1963-4
D. O'Sullivan, 1967-8
P. Ryan, 1952-4
W. Shine, 1953- 4
B. Wilson, 1968

*Councillors grade II*

M. Cosgrove, 1957-8
J. D'Arcy, 1967-8
M. F. Donovan, 1953-6
J. Doyle, 1951-2
T. F. Harding, 1960-1
D. M. Hayes, 1951
T. Hunt, 1961-2
E. Joyce, 1964
J. C. Kearney, 1952-5
E. Leahy, 1958-9
W. Luddy, 1962-3, 1966-7
M. MacGiollacoda, 1958
B. Moloney, 1959-60
D. M. O'Sullivan, 1960
M. O'Neachtain, 1963-5
J. J. Prior, 1968

*Councillors, associate*

Miss S. Cahill, 1950-5, 1957-8, 1961-4
Miss L. Furlong, 1958-64, 1966-8
S. Galvin, 1956-60, 1965, 1967
Professor J. Johnston, 1953-4
Mrs. A. L. K. King, 1951-2
A. B. Ross, 1954-6
Earl of Rosse, 1950
K. L. Schormann, 1954

*MEMBERS*

The next list is of paid-up members and associates and it can be seen that with the exception of 1960 associates formed the largest group within the Society from 1946 to 1961.

*Paid-up members*

| | *Grade I* | *Grade II* | *Associates* | *Total* |
|---|---|---|---|---|
| 1942 | | | | 31 |
| 1943 | 37 | 78 | 21 | 136 |
| 1944 | 33 | 48 | 32 | 113 |
| 1945 | 31 | 51 | 46 | 128 |
| 1946 | 30 | 40 | 56 | 126 |
| 1947 | 23 | 36 | 69 | 128 |
| 1948 | 30 | 33 | 70 | 136 |
| 1949 | (no figures available) | | | |
| 1950 | 36 | 53 | 79 | 168 |
| 1951 | 36 | 48 | 81 | 165 |
| 1952 | 45 | 48 | 81 | 174 |
| 1953 | 34 | 51 | 84 | 169 |
| 1954 | 48 | 40 | 94 | 182 |
| 1955 | 45 | 55 | 93 | 193 |
| 1956 | 36 | 52 | 86 | 172 |
| 1957 | 45 | 67 | 85 | 197 |
| 1958 | 48 | 71 | 86 | 205 |
| 1959 | 36 | 78 | 86 | 200 |
| 1960 | 31 | 57 | 48 | 136 |
| 1961 | 63 | 78 | 96 | 237 |
| 1962 | 64 | 101 | 93 | 258 |
| 1963 | 63 | 95 | 99 | 257 |
| 1964 | 57 | 102 | 85 | 244 |
| 1965 | 73 | 108 | 108 | 289 |
| 1966 | 95 | 171 | 104 | 370 |
| 1967 | 87 | 146 | 94 | 327 |
| 1968 | 91 | 156 | 101 | 348 |

The Society has been very sparing in conferring the title of Honorary Member. There have been only seven to date. These were:

A. C. Forbes, 1943
John Crozier, 1944
Mrs. Augustine Henry, 1946
M. O'Beirne, 1951
J. A. K. Meldrum, 1953
T. Donovan, 1966
D. Stewart, 1966

*FINANCE*

Until 1948 the Society was dependent on three sources of income: subscriptions, donations and the sale of journals to non-members. Of these three the first was the most important. After 1948 advertisements were accepted for the journal. In volume V published in the winter of 1948 there were seven and over the years the number has increased steadily.

Initially the annual subscription was fixed at £1 for grade I members, 10/- for grade II members and 15/- for associates. These rates remained in force until 1953 when they were raised to 30/- for grade I members and £1 each for grade II members and associates. At the beginning of 1969 they were further increased to £2 for grade I members, 30/- earh for grade II members and associates and student members rates were 10/-.

There have been various amounts donated to the Society, some for a specific purpose and some as contributions towards general running expenses. Donations for the latter purpose came from Mrs. Augustine Henry who gave the Society £135 between 1947 and 1952; Lord Ashtown who gave two guineas in 1952 and anonomous donors who contributed just under £4 in 1961.

Irish Forest Products Ltd. and Professor Clear provided money to send a forestry student on the annual study tour. Professor Clear gave £15 to cover the expenses of a forester on the tour to Scotland in 1951 and Irish Forests Products Ltd. donated £15 each year in 1956, 1957 and 1958. This bursary was awarded on the basis of an essay written by third year students at Avondale. D. M. Craig donated £2 10s. 0d. towards the publication of *The Forests of* Ireland in 1966.

Expenditure by the Society has been chiefly on the production of its journal. Smaller annual expenses have been incurred by postage, stationary, printing, meetings, excursions, examinations and a small honorarium paid to various officials.

Until 1961 only the secretary received an honorarium, originally of five guineas it was increased to ten guineas in 1944 and to £15 in 1946. In 1962 it was decided to give £15 10s. 0d. to both the secretary and the treasurer and £20 to the editor of the journal. A further change was made in 1965, then the editor's honorarium was reduced to £10 but £10 was also given to the business editor. In 1967 and 1968 all four officials each received £12 10s. 0d.

Apart from the publication of *The Forests of Ireland,* which is referred to later, the only non-recurring expenditure of note was:

1951. £27 for the Augustine Henry Memorial at Avondale.

1960. Design, 5 guineas, and manufacture, £31, of badges for members. £11 worth were sold.

1962. £25 for a projector and 22 guineas for the entertainment of a group of French foresters.

1963. £41 for expenses of delegates to a conference in Edinburgh on examinations relating to the National Diploma in Forestry.

£9 for the *Proceedings of the Fifth World Forestry Conference in Seattle.* A second set was presented to the Society by Dr. H. F. Mooney.

£42 towards the dinner celebrating the Society's Twenty first Anniversary.

From 1962 to 1964 a fee was paid for affiliation to the Trees for Ireland Association.

Taking all the above mentioned items of expenditure and income into account a simple table of the financial state of the Society from 1944 to 1968 is given below. This table does not include the money involved in the publication and sale of *The Forests of Ireland.*

| | *Income* (£) | *Expenditure* (£) |
|---|---|---|
| 1944 | 96 | 77 |
| 1945 | 121 | 103 |
| 1946 | 135 | 114 |
| 1947 | 156 | 79 |
| 1948 | 163 | 150 |
| 1949 | (no figures available) | |
| 1950 | 263 | 214 |
| 1951 | 278 | 332 |
| 1952 | 272 | 214 |
| 1953 | 356 | 246 |
| 1954 | 226 | 247 |
| 1955 | (no figures available) | |
| 1956 | 441 | 339 |
| 1957 | 470 | 550 |
| 1958 | 530 | 639 |
| 1959 | 429 | 412 |
| 1960 | 440 | 303 |
| 1961 | 580 | 364 |
| 1962 | 561 | 732 |
| 1963 | 563 | 638 |
| 1964 | 636 | 727 |
| 1965 | 600 | 699 |
| 1966 | 811 | 749 |
| 1967 | 675 | 807 |
| 1968 | 724 | 738 |

Incoce has also included a small amount, usually about £7, from investments.

Broadly speaking the Society has performed the following main functions as well as a number of smaller miscellaneous undertakings which are dealt with at the end of this article.

1. Produced a journal, *Irish Forestry,* usually twice yearly, and one book, *The Forests of Ireland.*

2. Organised annual study tours and day excursions to state and private forests and other places of interest to foresters.

3. Conducted symposiums on subjects relating to forestry.

4. Sponsored lectures by members and by distinguished strangers.

5. Held an annual general meeting.

6. Aided the education of young foresters.

## *THE JOURNAL*

The first volume appeared in November 1943 and contained articles by A. C. Forbes, S. M. Petrie, J. A. K. Meldrum and T. Clear; a report on the Society's first annual general meeting; a statement of accounts; a report on the Society's first annual study tour by T. McEvoy; an obituary notice on Daniel McCaw; a review by M. L. Anderson of a book, *The forestry position in Denmark,* and notes by Mrs. Augustine on *Arbutus unedo,* T. McEvoy on Corsican pine in Glenmalure and G. McCool on planting of forest trees.

Although the journal has more often than not been larger than this 48 pages first issue the pattern of its contents has remained unchanged. The first number had a blue cover, the next three a buff coloured cover and then in 1946 the cover carried a photograph of a Scots pine, "one of the finest specimen of that species in Ireland", at Curraghmore. The practice of placing a photograph on the cover of interest to foresters — not always a tree — was continued up to and including the spring issue of 1968.

There have been two journals annually except during 1948, 1949 and 1950 when only one issue appeared. According to a motion proposed at the first annual general meeting in 1943 by M. L. Anderson articles must be in English. During the year 1954 articles were paid for at a rate of £1 a thousand words. This was not continued, but off-prints were given to contributors who asked for them until 1966.

The cost of producing the journal and income from the sale of journals and from advertisements placed with the journal are given in the following table. Initially the cost of the journal to non-member was 5/-. This was reduced to 3/- in 1945 and remained at this figure until 1957 when it was raised to 5/-. A further rise in price, to 7/6, was made in 1962 and in 1966 it was increased to 10/-

| | *Cost of journal* (£) | *Revenue from journal* (£) | |
|---|---|---|---|
| | | *Sales* | *Advertising* |
| 1944 | 53 | 5 | |
| 1945 | 61 | 9 | |
| 1946 | 53 | 6 | |
| 1947 | 40 | 14 | |
| 1948 | 106 | 18 | |
| 1949 | (no figures available) | | |
| 1950 | 77 | 31 | |
| 1951 | 192 | 104 | |
| 1952 | 137 | 98 | |
| 1953 | 148 | 201 | |
| 1954 | 132 | 42 | |
| 1955 | (no figures available) | | |
| 1956 | 207 | 277 | |
| 1957 | 283 | 232 | |
| 1958 | 393[1] | 280 | |
| 1959 | 211 | 202 | |
| 1960 | 105 | 239 | |
| 1961 | 197 | 273 | |
| 1962 | 475 | 306 | |
| 1963 | 302 | 308 | |
| 1964 | 401 | 297 | |
| 1965 | 435 | 41 | 137 |
| 1966 | 393 | 28 | 274 |
| 1967 | 489 | 77 | 147 |
| 1968 | 374 | 52 | 154 |

## *THE FORESTS OF IRELAND*

As can be seen from the table of income and expenditure (p ) during most years the former exceeded the latter and in 1961 it was suggested that the accumulated surplus, of which £200 was invested in Dublin Corporation Stock and £200 in Prize Bonds, should be used to publish, separate from the journal, orginal works or translations of important foreign works, on forestry. Various proposals were considered and in 1962 it was decided to publish a book on forestry in Ireland. Twenty seven members of the society contributed articles on various aspects of forestry in Ireland and

1. Includes £41 for the printing of an Index covering years 1944 to 1953 inclusive. This Index was prepared by J. J. Deasy.

they were synthesised into a coherent unit by the editor, H. M. Ftzpatrick. The contributors were the following:

| | | |
|---|---|---|
| E. A. Attwood | H. Gavigan | T. McEvoy |
| W. G. Dallas | A. M. S. Hanan | D. McGlynn |
| J. J. Deasy | R. Hunston | N. OCarroll |
| J. F. Durand | W. H. Jack | P. O'Grady |
| N. Deveria | J. E. Johnston | N. Ó Muirgheasa |
| T. Clear | C. S. Kilpatrick | K. F. Parkin |
| G. Coates | D. Mangan | P. Ryan |
| W. H. Forbes | F. Mulloy | M. Sharkey |
| N. J. Gadd | O. V. Mooney | A. W. Simpson |

The book was published in 1966 by The Record Press, Bray, for £696. The only other expense chargeable to the Society was £12 5s. 6d. in 1965 for the preparation of the manuscript. The Ministry of Agriculture, Northern Ireland and the Department of Lands, Forestry Division, Republic of Ireland, each contributed £100 and D. M. Craig made a donation of £2 10s. 0d., so in effect the Society had to £506.

During 1966 sales totalled £553, in 1967 £301 and in £1968 £92, in all £946. Thus the Society did not have to realise its investments to meet the cost.

To launch the book a reception was held by the Society in the Shelbourne Hotel, Dublin and a copy was presented to the Minister for Lands, Mr. M. Ó Morain. The book was reviewed on the B.B.C, Northern Ireland, in 1967 by Eileen McCracken, and the *Quarterly Journal of Forestry* carried a review by H. L. Edlin in April 1967. This review printed as an appendix to this article.

## *ANNUAL STUDY TOURS AND DAY EXCURSIONS*

Every year, with the exception of 1944, the Society has promoted an annual study tour lasting from three to five days. The first one, 7 June to 10 June 1943, was based on Clonmel and for the most part the study tours have been to various counties in the Republic of Ireland. There have been also eight tours to places outside of the Republic: Wales 1949; Scotland 1951; Northern Ireland 1952 and 1966; the Lake District 1954; Germany 1956; Denmark 1959 and Brittany 1964. A special All Ireland Tour was organised in 1963 to celebrate the Society's Twenty first anniversary.

Day excursions were inaugurated in 1946 with a meeting at Avondale and since then there have been eighty such meetings. According to the rules of the Society a member is entitled to bring two guests to day excursions. In practice members usually bring their families. This amenity is greatly appreciated, especially by associates who often have no other contact with forestry as it gives them the opportunity of letting their children see that forests are part of their heritage in the land.

*SYMPOSIUMS*

The Socety has organised the following symposiums:

1951 The place of forestry in the national life. (Dublin).
1962 Forest and recreation (Dublin).
1962 Tree species (Kilkenny).
1963 Pinus contorta (Clonmel).
1963 Pinus contorta (Omagh).
1964 Looking ahead (Omagh).
1967 Forest Management Tables (Arklow).

Society members also attended the following three symposiums organised by outside bodies:

1954 International peat symposium under the auspices of Bord na Móna (Dublin).
1966 Drainage (Pomeroy Forest School).
1968 Peatland Forestry (Edinburgh).

*LECTURES*

The practice of sending lecturers to various parts of the country began in 1961 when lectures were given in Kilkenny and Galway as well as in Dublin. Since then talks have been delivered to Society members in Sligo, Galway, Castlebar, Strabane and Dublin.

Nearly every year a distinguished person has been brought to deliver a lecture after the annual general meeting in Dublin. The speakers to date have been:

1945 Dr. P. H. Gallagher, Albert Agricultural College, Dublin.
1946 Sir Shane Lesle.
1947 H. Beresford Barrett, M.A., Late Indian Forsest Service.
1949 T. W. Freeman, M.A., Dept. of Geography, Trinity College, Dublin.
1950 Mr. Morehead, O.B.E., B.Sc., I.F.S. (Burma).
1952 D. Roy Cameron, Chief of E.T.A.P. Forestry Division of F.A.O.
1953 J. McDonald, Director of Research and Education, British Forestry Commission.
1954 E. G. Richards, Utilization Development Officer, British Forestry Commission.
1955 W. E. Hiley, O.B.E., M.A.
1956 W. M. McNeill, lecturer in forestry, Aberdeen University.
1957 Karl Oedekoven, Ministry of Food, Agriculture and Forests, Federal German Republic.
1958 Dr. Axel S. Sabroe.

1959 Professor M. L. Anderson, Forestry Department, Edinburgh University.

1960 R. P. Woods, Timber Development Association Ltd.

1961 E. R. Huggard, M.A., B.A.I., A.M.I.C.E., lecturer in Surveying and Forest Engineering, University College, North Wales.

1963 Professor T. Clear, Dept. of Forestry, University College, Dublin.

1964 D. R. Johnston, Chief Officer, Management Section, British Forestry Commission.

1965 A. I. Frazer, B.Sc., Research Officer, British Forestry Commission.

1966 Dr. J. Rishbeth, Dept. of Botany, Cambridge.

1967 Professor J. N. Black, Forestry Dept., Edinburgh University.

*ANNUAL GENERAL MEETING*

The annual general meeting of the Society is held in Dublin in the spring of the year. Until 1955 it was generally held in Jury's Hotel except in 1946 when it was held in the Engineer's Hall, Dawson Street, 1948 in the Royal Irish Acamey and in 1952 in University College. Since 1956 it has taken place in the Shelbourne Hotel.

At this meeting reports are read on the financial state of the Society and on the year's activities. Matters of policy are discussed and the outgoing president gives a valedictory address. The form of his address is fixed by rule 5 of the constitution which lays it down that he shall review the advances in forestry or forestry knowledge during the preceeding year.

*EDUCATION*

At the end of the 'fifties a sub-committee of the council was formed to consider how the Society could promote further education among foresters and it was decided that the awarding of certificates would best meet the case. Agreement was reached in 1964 with the Central Examining Board of Great Britain that a Forester's Certificate awarded by the Society of Irish Foresters would be recognised by that body as a qualification for entrance to the examinaton for the National Diploma of Forestry. In the three years, 1966 to 1968, nine candidates were awarded the Forester's Certificate. The Society also awards a Woodman's Certificate. Between 1964 and 1968 (both years inclusive) the Society expended £60 on these examinations and received £70 in fees.

The Society has issued a pamphlet setting out the courses for both examinations and a list of recommended books. While the Society does not possess its own library members are entitled to make

use of the facilities offered by the Irish Central Library for Students and a list of books available on forestry can be obtained from the secretary of the Society of Irish Foresters.

*MISCELLANEOUS ACTIVITIES*

In 1945 it was decided to register all the remarkable trees, native and foreign, in Ireland. A set of forms on which to enter the relative data was printed the following year and members were invited to apply to the secretary for them. A large book was purchased in which to enter the collected data.

The entries in this book range from March 1946 to September 1954 and cover trees measured by J. J. Deasy and M. O'Beirne at ten different places. A list of the trees measured together with their date of planting and their measurements is given in appendix 2.

The first film show was given to Society members at Portlaoghise during the annual study tour in 1947 at the instigaton of Mrs. Augustine Henry who financed it. Films were shown after the 1948 Annual General Meeting. Another film show was sponsored by the Irish Wallboard Company in Dublin in 1955. The films shown were "Harvest of the forest" and "Tennessee venture". Films were also shown at the symposium on *Pinus contorta* at Omagh in 1963.

It was felt because of the debt of gratitude that foresters everywhere, including Ireland, owed to Augustine Henry and his wife it would be fitting for the Society to establish a memorial to him. Accordingly in 1950, with the permission of the Department of Lands, a memorial grove was laid out at Avondale. This plot was planted and fenced and on 29th September 1951 the Dedication Stone was unveiled by the Minister for Lands.

An exhibition of forest machinery was opened by the Minister for Lands, Mr. Erskine Childers, on 2nd May 1959. The Earl of Meath provided a site for the exhibition at Kilruddery and fourteen firms took part. This exhibition was in line with the policy of describing new forestry equipment in the Society's journal.

The Society has on occasions entertained members of Forestry Societies from other countries: Welsh foresters in 1950; Finnish foresters in 1962; French foresters in 1963 and Scottish foresters in 1964.

There have been many social occasions, especially on the annual study tours when the Society's annual dinner takes place but three outstanding socal events in recent years need to be mentioned. Two of them are connected with the Society's Twenty First Anniersary in 1963. It has been mentioned that to mark the occasion the annual study tour took the form of a circuit of Ireland. At Omagh the Society was given a cocktail party by the Ministry of Agriculture, Northern Ireland. Mr. Elliott represented the Minister for Agriculture and the Duke of Abercorn the Royal Forestry Society.

Later in the year a hundred people attended a dinner in the Gresham Hotel, Dublin, to celebrate the anniversary. The guests included Mr. Frank Aiken, Minister for External Affairs, and Mrs. Aiken, Commissioner O'Brien, Secretary to the Department of Lands and Mrs. O'Brien and Mr. H. Harbourne, President of the Trees for Ireland Society, and his wife. Professor T. Clear was presented with a set of Waterford glass to mark his unbroken service on the council since the Socety was formed and Mrs. Clear was presented with a bouquet of flowers.

The third social occasion took place during the annual study tour in 1966 when the Society visited Northern Ireland. A reception and dinner was given for them at Stormont by the Northern Ireland Government. The Minister for Agriculture, Mr. Harry West, acted as host. A Society member, from Wicklow, in replying to one of the toasts, remarked that if anyone had told him he would one day be speaking in Stormont he wouldn't have believed him.

## APPENDIX I.

The review of *The forests of Ireland* in the *Quarterly Journal of forestry*, April 1967, lxi. (2) 176-7.

Reviewer: H. L. Edlin.

This remarkable volume is the outcome of friendly co-operation between the Society of Irish Foresters, which now operates on an all-Ireland basis, and the forest services of Northern Ireland and the Irish Republic. It is amazing value for money, being well printed on excellent paper and bound within green cloth boards. Each of the black and white plates fills a large quarto page, which is essential to display the intricate detail and beauty of the forest scene. The photographs from both north and south of the country are of an exceptionally high standard.

The text is well balanced, with chapters on the history of the Irish forests from prehistoric times to the present day, a general physical description of the country, and an account of every practical task that is carried out in the state forests to bring the trees from seedbed to maturity. Further chapters cover woodlands on private estates, education and research, the value of forest parks for public recreation, the harvesting of timber, and the uses to which it is applied. Appendices cover forest law and taxation, assistance for private planters and the organisation of the forest services.

Few people in Great Britain appreciate the extent and vigour of the Irish forestry effort. This is on a scale comparable to our own, though Ireland has much smaller financial resources. In the 45 years from 1920 to 1965 the Republic has established 450,000 acres of young plantations, and there are a further 80,000 acres of state forests in Ulster. Virtually all of this is conifer, and the broadleaves, in each part of the land, occupy no more than 4 per cent of the new woods. Spruces account for half the planting in the Republic, and two-thirds of that in Northern Ireland with the Sitka spruce far outnumbering the Norwegian kind. The larches have a significant share — about one eighth — of the plantations, in the north, but in the Republic only one other tree plays a major part. This is the lodgepole pine, *Pinus contorta,* which thrives under conditions of poor soil and extreme exposure that daunt every other conifer. The Forestry Commission is now planting it on a vast scale in Scotland, using 15 million trees a year, but it remains unfamiliar to the average English forester with his richer soils and kinder climate.

The building-up of the national Irish forests has been a slow and tedious process. Some large parcels of land have been secured from the demesnes of the great estates, but many smaller blocks have come from small hill farms, abandoned when agriculture became unprofitable. As a result, the forest map looks as though it had been sprinkled from a pepper pot, and the multitude of small units add enormously to the difficulties of protection and supervision. All the land has had to be acquired within the present century from private owners and the average size of each purchase is only 100 acres.

The regions with the greatest concentration of forest follow the hill ranges. In the wildly beautiful uplands of the west, forestry has become a major source of employment, helping to anchor able-bodied men to the land and halt emigration. Though soils are often poor, the climate is kind, and the timber growth rates compare favourably with those found in Britain. Modern techniques of ploughing are widely applied, and where necessary chemical fertilizers are used to promote rapid establishment and quick growth.

Few difficulties have been experienced in marketing the growing volume of thinnings that are coming forward from the state forests. There are over 100 sawmills in Ireland and also three modern chipboard factories, one wallboard factory and one paper pulp mill that all need a steady flow of logs. Markets in Great Britain are conveniently placed along the Irish Sea, within easy reach by coasting steamer.

There is an active interest in research, though no central station has been set up. Degree courses in forestry are given at the National University of Ireland, in Dublin and the Republic trains its foresters at its own schools at Kinnitty Castle in Offaly and Shelton Abbey in county Wicklow.

Against this flourishing picture of state forestry we must set the gloomy prospect of the private estates. The pioneer work of the landowners in discovering which trees would thrive is acknowledged, and grants are available for all who wish to plant trees today. But, to paraphrase the actual text:

'The private woodlands of Ireland are nearly all old estates and amount to 90,000 acres — 60,000 in the south and 30,000 in the north. Their stocking is low and their rate of growth insignificant; the mean annual increment for the quality of the land must be the lowest on earth — yet these woods have been for many years the only native source of full-sized timber. Their area in 1906 was three times what it is now, it has dwindled following the breakup of estates by the Land Commission, the demands of two world wars, the neglect of replanting and the depredations of livestock which prevented natural regeneration.'

Allowance must be made here for the Irish talent for picturesque exaggeration, for later on we are given details of ten large and well-managed properties and are told that 'there are three or four large companies which specialise in forest tree growing and also undertake planting and other forest operations in contract for private woodland owners'.

What are the main points of contrast between forestry in the sister islands of Ireland and Great Britain? Ireland holds 20 million acres against the 55 million of Britain and has thus about 40 per cent of the land area of the larger land mass. But she has only 600,000 acres of forest against 4 million in Britain. Only 3 per cent of Ireland is wooded but 8 per cent of Britain is now under trees. Impressive though Ireland's forestry programmes have been, there is good reason to ask why Ireland's forest area should not be doubled, for mountain land is sub-marginal for its alternative uses of cattle and sheep rearing.

In Britain, at the present time, only 40 per cent of the total woodland lies in the hands of the Forestry Commission and only in Wales does the state share exceed that of the private owner. But in Ireland the Government agencies hold five-sixths of the forest land or 83 per cent, and all the indications are that this proportion may rise to 90 per cent or nine-tenths.

Irish forestry is thus nationalised to a far greater degree than we know here. The stimulus of competition with a strong private sector, having a greater freedom to experiment with untried ideas, is much weaker, Ireland may therefore have a peculiar need to watch what the rest of the world is doing, but this lucid account shows that her current methods are right up-to-date.

Everyone visiting the Irish woods should secure a copy in advance. As this book is privately published it is best obtained from the editor, *Irish Forestry*. Only in this way has it proved possible to give so much information at so low a price.

(This review is reprinted by kind permission of the editor of the *Quarterly Journal of Forestry*).

## APPENDIX 2.

*Measurements of remarkable trees made* 1946-54.

To ensure uniformity names have been corrected where necessary in conformance with the *Handlist of coniferae and other gymnosperms in the Royal Botanic Gardens Kew*, 1961. Girth measurements were taken at 4 feet 6 inches or 4 feet 3 inches. In the case of forked trees measurements are given for both forks.

| Species | Date planted | Measurements |
|---|---|---|
| Avondale, 1946. | | |
| *Abies amabalis* | 1907 | 50' x 5' 2" |
| „ *bracteata* | 1907 | 53' |
| „ *alba* | c.1776 | 145' x 19' 6" |
| „ *cephalonica* | 1908 | 70' |
| „ *grandis* | 1905 | 80' |
| Cronebane, Avoca, 1950. | | |
| *Abies cephalonica* | 1790 | 85' x 10' 8" |
| *Pinus strobus* | 1790 | 93' x 13" |
| *Quercus cerris* | 1790 | 70' x 12' 4" |
| „ *lucombeana* | 1772 | 28' to sawn off part |
| Ballyarthur, 1950. | | |
| *Pinus contorta* | 1916 | 41' x 4' 4" |
| „ „ | 1916 | 41' x 3' 10" |
| „ *sylvestris* | | 75' x 9' 10" |
| Kilmacurragh Park, 1951 | | |
| *Abies concolor* v. *lowana* | c.1870 | c.50' x 4' 4" |
| „ *numidica* | c.1870 | c.45' x 6' 4" |
| „ *pindrow* | c.1870 | c.65' x 10' $\frac{1}{2}$" |
| „ *procera* | c.1870 | c.70' x 11' 6" |
| „ *spectabilis* | c.1870 | c.50' x 11' 8" |
| *Athrotaxis selaginoides* | 1906 | c.55' x 5' 3" |
| „ „ | 1906 | 55' x 4' 9" |
| *Araucaria araucana* | | c.70' x 8' 1" |
| *Cunninghamia* | | c.60' x 4' 6" |
| *Cupressus lusitanica* | 1809 | c.90' x 9' 10" |
| „ „ | 1809 | c.80' x 6' 8", 3' 7" |
| „ „ | 1809 | c.70' x 5' 11" |
| *Eucalyptus coccifera* | | c.75' x 9' 3" |
| *Fitzroya cupressoides* | c.1870 | c.40' x 6' 8" |
| *Picea smithiana* | 1906 | c.45' x 4' 11" |
| *Pinus koraiensis* | 1809 | c.80' x 4' 9" |
| *Sequoiadendron giganteum* | | c.120' x 17' |
| *Tsuga dumosa* | 1809 | c.85' x 6' 10", 6' 2" |

| | | |
|---|---|---|
| Rossanagh estate, 1951. | | |
| *Castanea sativa* | 1718 | c.55' |
| Headfort estate, 1952. | | |
| *Larix decidua* | c.1750 | c.90' x 12' 2" |
| *Sequoiadendron giganteum* | | c.110' x 20' 6" |
| Powerscourt estate, 1952. | | |
| *Cupressus nootkatensis* | | c.70' x 7' 11" |
| *Picea sitchensis* | | 178' x 19' |
| *Pinus jeffreyi* | | c.80' x 9' |
| „ *radiata* | | 13' 8" |
| *Sequoiadendron giganteum* | | c.120' x 19' |
| *Castanea sativa* | c.1700 | c.60 x 22' 8" |
| Maynooth, 1952. | | |
| *Taxus baccata.* | 12th century? | 19' 4" |
| Doneraile Court, 1952. | | |
| *Larix decidua* | 1738 | c.100' x 10' 7" |
| „ „ | 1738 | c.90' x 13' 10" |
| „ „ | 1738 | c.60' x 11' 6" |
| „ „ | 1738 | c.50' x 11' 6" |
| *Taxus baccata* | | c.35' x 11' 2", 11' 6" |
| *Sequoia sempervirens* | | c.80' x 9' |
| Myrtle Grove, Youghal, 1952. | | |
| *Taxus baccata* | pre 1588? | 9' |
| Leslie estate, Glaslough, 1952. | | |
| *Abies procera* | | 85' x 8' 11" |
| *Picea sitchensis* | 1854 | 138' x 19' 1" |
| „ „ | 1854 | 133' x 16' 6" |
| „ „ | 1854 | 18' 4" |
| „ *smithiana* | 1854 | 8' 11" |
| *Pinus muricata* | 1854 | 11' 1" |
| *Sequoiadendron giganteum* | 1854 | 112' x 21' 2" |
| Raheen, Tuamgraney, 1954. | | |
| Oak | | 26' |

**Note:** An exhaustive survey by A. M. S. Hanan (State Forest Service) and A. F. Mitchell (British Forestry Commission) was carried out in 1966 and 1968 during which more than 2,300 trees in about 50 collections in Ireland were recorded. These records will be published elsewhere. *Editor, Irish Forestry.*

## *Trees, Woods and Literature*

*Thereupon Suibhne heard a hunting-call of a multitude in the verge of the wood. 'This', said he, 'is the cry of a great host, and they are the Ui Faelain coming to kill me to avenge Oilill Cedach, King of the Ui Faelain, whom I slew in the battle of Magh Rath'. He heard the bellowing of a stag and he made a lay wherein he eulogized aloud the trees of Ireland, and, recalling some of his own hardships and sorrows, he said:*

*O little stag, thou little bleating one,*
*O melodious little clamourer,*
*sweet to us is the music*
*thou makest in the glen.*

*Longing for my little home*
*has come on my senses—*
*the flocks in the plain,*
*the deer on the mountain.*

*Thou oak, bushy, leafy,*
*thou art high beyond trees;*
*O hazlet, little branching one,*
*O fragrance of hazel-nuts.*

*O alder, thou art not hostile,*
*delightful is thy hue,*
*thou art not rending and prickling*
*in the gap wherein thou art.*

*O little blackthorn, little thorny one;*
*O little black sloe-tree;*
*O watercress, little green-topped one,*
*from the brink of the ousel spring.*

*O* minen[1] *of the pathway*
*thou art sweet beyond herbs,*
*O little green one, very green one,*
*O herb on which grows the strawberry.*

*O apple-tree, little apple-tree,*
*much art thou shaken;*
*O quicken, little berried one,*
*delightful is thy bloom.*

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[1]Translated as *saxifrage* by K. Jackson (*Studies in early Celtic nature poetry*, Cambridge, 1935).

*O briar, little arched one,*
*thou grantest no fair terms,*
*thou ceasest not to tear me,*
*till thou hast thy fill of blood.*

*O yew-tree, little yew-tree,*
*in churchyards thou art conspicuous;*
*O ivy, little ivy,*
*thou art familiar in the dusky wood.*

*O holly, little sheltering one,*
*thou door against the wind;*
*O ash-tree, thou baleful one,*
*hand-weapon of a warrior.*

*O birch, smooth and blessed,*
*thou melodious proud one,*
*delightful each entwining branch*
*in the top of thy crown.*

*The aspen a-trembling;*
*by turns I hear*
*its leaves a-racing—*
*meseems 'tis the foray!*

*My aversion in woods—*
*I conceal it not from anyone—*
*is the leafy stirk of an oak*
*swaying evermore!*

From *Buile Suibhne (The Frenzy of Suibhne) being The Adventures of Suibne Geilt.* Translated by J. G. O'Keeffe, Irish Texts Society, London, 1913 (still in print). Reprinted by kind permission of the Irish Texts Society, c/o. The National Bank, 15 Whitehall, London, S.W.1.

Although the battle of Magh Rath was fought in A.D. 637, O'Keeffe believes that this tale was composed between the years 1200 and 1500. It tells of the misfortunes which befell Suibhne (Sweeny), King of the Irish territory of Dal Araidhe, after he had been cursed by St. Ronan Finn, whom he had prevented from marking out the site of a new church in his territory, and one of whose palmists he had killed. Extensive tracts of the tale were incorporated by Flann O'Brien into his novel *At Swim-two-birds.* The influence of the passage quoted above can be clearly seen in the extract from George Moore printed in the last issue of this journal.

## *Conferences*

# LAND USE, CARLOW

A new organisation, *The Irish Society of Agronomy and Land Use,* held its inaugural meeting in Carlow on the 5th and 6th June, 1969. This society is a pioneering one in that it seeks to bring together all those with an interest in land use questions in the hope that, by inter-disciplinary discussion and argument, the basic facts will be established on which land use policy decisions can be made. The society concedes that policies will be decided by others, but hopes to provide the best possible factual basis for the policies.

Among the attendance of 175 there were about a dozen foresters representing the Forestry Division of the Department of Lands, the Agricultural Institute and the University.

Formal papers were given on soils, climate, systems analysis and crop production, forestry as a land use enterprise, horticulture as a land use enterprise, determinants in the alternative uses of land, and amenity uses of land.

In his introductory paper on the soils of Ireland, Dr. Pierce Ryan, who heads the National Soil Survey, described the four main use range classes into which our soils had been divided:

*CLASS 1:* Wide use range. 32% of area. These are the best soils on which agriculture could be economically competitive in an open free market. These soils are completely suitable for tillage, grassland, forestry, etc. 67% of the soils of Co. Carlow are in this category.

*CLASS 2:* Somewhat limited use range. 9% of area. These soils can be improved, but may not reach the level of economic competitiveness of the soils of Class 1. Suitable for grassland and forestry only.

*CLASS 3:* Restricted use range. 30% of area. These soils also can be improved, but not up to the productivity level of Classes 1 and 2, and can never be economically competitive under agriculture. This class includes many of the poorly drained mineral soils and accounts for 64% of the soils of Co. Leitrim.

*CLASS 4:* Extremely restricted use range, 29% of area. This class includes the bogs and iron pan podsols. In many cases these can be considerably improved.

Mr. T. McEvoy, Inspector General, Forestry Division, in a paper on forestry as a land use enterprise, put forward the case for forestry on good forestry land, emphasizing that this

was not necessarily synonymous with good agricultural land. As he described it, good forest land appeared to coincide largely with Dr. Ryan's Class 3.

An interesting view was put forward by Mr. K. McWhinny of the Institute for Physical Planning and Research *(An Foras Forbartha)*. He suggested that, from an amenity point of view, afforestation impaired a unique feature of the Irish scenery, its openness.

N. O CARROLL.

# TREE BREEDING, WASHINGTON, D.C.

The second World Consultation on Forest Tree Breeding was held in Washington D.C. from August 7th to 16th, 1969.

The theme of the consultation was the Practical Advantages of Forest Tree Breeding. It was attended by over 200 scientists from 41 countries. The opening ceremony was performed by Dr. E. Cliff, Chief of the U.S. Forest Service. In the unavoidable absence of Prof. Jemison, President of I.U.F.R.O., the keynote address was delivered by Dr. John Gray, Dean of the School of Forestry, University of Florida. He called for the development of superior trees that will produce, on less land, more of the products the world needs from its forests. He emphasised the need for increasing the productivity of trees on a large scale as quickly as possible. It was important to realise that the science of genetics should not be applied alone to production forests, but should also take into consideration breeding of trees for resistance to pollution, for recreation and for amenity. He concluded by stating that our objective is to get what is known applied to those areas of the world where the opportunity and need are greatest. The final business of the opening ceremony was the election of Dr. John Duffield of University of North Carolina as Technical Chairman of the meeting.

To allow for complete coverage of all aspects of tree breeding the meeting was divided into 14 half day sessions. The position paper for each section was presented by an invited speaker. Dealing with breeding for growth and yield, Dr. Nickles (Australia) stated that evaluation of population—environmental interaction for yield would minimise incorrect selection of provenance and siting of plantations and facilitate subsequent population improvement and hybridisation. It has been shown experimentally that by following the correct procedure a gain

in volume of 30% at 15 years in *Pinus elliottii* can be achieved. When breeding for stem quality, Dr. Ehrenberg (Sweden) stated that experimental evidence is available showing that improvement seems feasible in most of the properties. Stem and branch characteristics are continually varying traits controlled by quantitative inheritance while simple Mendelian inheritance is indicated for forking, fasciation and branch formation. Dr. Harris (New Zealand), dealing with "Opportunities and Practical Advantages", stated that the question of wood quality improvement must ultimately be decided in terms of economic gain. Programmes should look forward to meet the requirements of changing technology 30 or more years hence. These programmes must be flexible and adaptable to meet changing demands. In a review of 10 years' work in the field of resistance breeding, Dr. Gerhold (U.S.A.) stated that indications of significant breakthroughs in species hybridisation and vegetative propagation techniques may profoundly influence resistance breeding programmes in the near future. Practical progress has been made in creating disease resistant varieties and in making them available. In dealing with breeding for other characteristics, i.e., cold, draught resistance, etc., Dr. Cram (Canada) pointed out that though they have practical advantages, progress is restricted by limited resources. When planning a development and action programme, Dr. Squillace (U.S.A.) stated that the researcher can choose a procedure in accordance with the facilities he has available and his needs. At present the procedure taking advantage of natural variation among species races and individual trees have the greatest potential for use by most organisations. In conjunction with the choice of programme the study of the economics of mass production of improved material was stressed by Dr. Fielding (Australia). Research should be carried out into all aspects of mass controlled pollination and the rooting of cuttings. In the final position paper on the evaluation of costs and benefits of tree improvement, Dr. Bergman (Sweden) stated that exact costs are difficult to assess due to the many interdependent factors involved. He pointed out that tree breeding should be seen as one among several alternatives for increasing improvement of wood production. The first approach should be to analyse alternative solutions and the costs entailed in each of these. Dr. Schreiner (U.S.A.) brought the meeting to a successful conclusion with a review of tree breeding in the United States Forestry practice.

J. O'DRISCOLL.

# FOREST FERTILIZATION, PRAGUE

An international meeting on the subject of forest fertilization was held in Prague from 23rd to 26th June, 1969. This conference, organized by the Forestry and Game Management Research Institute at Zbraslav (Chairman of organizing committee, Dr. J. Materna), and sponsored jointly by Sections 21 and 25 of the International Union of Forest Research Organizations, was attended by foresters from 17 Northern Hemisphere countries ranging from the U.S.S.R. to Canada. The opening address was given by the Minister responsible for Forestry, himself a professional forester.

The fact that this is the second European conference on the theme of forest fertilization to be held in the past two years indicates the growing importance of the subject. We know that increased timber production through fertilization is accepted as a necessity in Finland, and an economic benefit in Sweden. In many other countries the possible economic gains are beginning to be envisaged.

One of the reasons for its attractiveness, as pointed out by C. Carbonnier of Sweden, is that "fertilization belongs to the type of treatments readily adaptable to modern forestry — the fertilizer spreading easily lends itself to mechanization through, e.g., aircraft or helicopter".

A notable feature of the conference was the attention given to questions concerning the economics of large-scale forest fertilization in practice.

N. O CARROLL.

# BRITISH ASSOCIATION, EXETER

The 1969 annual meeting of the British Association for the Advancement of Science was held in September at Exeter University.

The purpose of the Association is inferred in the title and the annual meeting is geared to this end. It aims to achieve this firstly by enabling scientists to discuss their work with colleagues in their own and related fields; secondly, by providing a bridge between the world of science and the general public, using press, radio and television to disseminate scientific information in an easily understood form.

In his Presidential address on the *Effecting of all things possible,* Sir Peter Medawar examined the role of philosophic thinking in scientific progress to date and its contemporary value as an impetus to progress in the future. His paper clearly

infers no intellectual horizons, no limit to scientific discovery, no near perfection that cannot be improved.

A one-day Symposium held in conjunction with the meeting, entitled "Management of the National Environment", emphasised a concern with industrial and agricultural pollution of the biosphere and the need for greater attention to amenity and conservation in land use development. Both these aspects of environmental management are of particular significance to foresters, and the theme set by the symposium was later reflected in lectures read to the Forestry section and other disciplines.

*The nature and implications of chemical control* (Dr. K. Mellenby, C.B.E., Director, Monks Wood Experimental Station, Huntingdon):—

Chemical pesticides have been a boon to agriculture and have saved millions of people from insect-borne disease every year. Unfortunately, insecticides may have harmful ecological effects which, unchecked, could be disastrous. Ideally these chemicals should be selective, sufficiently persistent to do their job and then quickly decompose into non-harmful substances. The main problem facing scientists in the future is how to get the benefits of chemical control without seriously damaging the environment.

*The nature and advantages of biological control* (F. Wilson, Sirex Biological Control Unit, Silwood Park, Berks.):—

Biological control is essentially the use of natural enemies to reduce the abundance of pest organisms. Biological control methods have been successful in the past and Dr. Wilson emphasises that the techniques are often low-cost, permanent, self-regulating control systems, generally free from harmful side effects.

*Management for Amenity* (T. W. Wright, Assistant Adviser on Conservation and Forestry, The National Trust):—

Amenity in its widest sense embraces those aspects of forest management concerned with beauty and public enjoyment. Our concepts of beauty in a forest is conditioned largely by what we are accustomed to, and conversely ugliness in the landscape is often closely associated with the emotional shock when a familiar pattern is disturbed. The economic and amenity aspects of forestry are often in conflict and to rationalise problems amenity must occupy a fundamental place in long-term and short-term forest planning.

J. D. ROBINSON.

# *Notes and News*

## Minister's Address

Opening the Forestry Exhibition at Glenealy on 5th September, the Minister for Lands, Mr. Sean Flanagan, T.D., in his first public engagement since his appointment, congratulated the *Society of Irish Foresters* for their enterprise in sponsoring the exhibition.

"It is fitting", he continued, "that this exhibition should be sited in Co. Wicklow, where State Forestry had its beginnings in 1904 with the acquisition of the old Parnell Estate at Avondale, and where progress has been such that as of now 54,000 acres are under plantations and woodlands in the country. This means, in fact, that over 10% of the land area of Co. Wicklow is already under forestry—this is by far the highest percentage of any county in Ireland".

Commenting on what had been achieved in the way of new plantations and modernised techniques, he warned that it was "essential that we should keep fully abreast of developments in other countries to ensure that we can maintain our competitive position as producers and processors of timber as well as manufacturers of timber products. It is in this context mainly that we must grasp at the opportunities which new machinery, new —and safe—chemicals, and new services and techniques have to offer".

## Two New Deficiencies

For the first time in Ireland, both sulphur and zinc deficiencies have been shown by research workers in *An Foras Taluntais* (The Agricultural Institute) to limit crop production. Preliminary findings have been published in *Farm Research News* (July-Angust 1969). P. A. Gallagher describes zinc deficiency in onions on limed cutover peat at Lullymore, Co. Offaly, and P. K. Hanley records increases of 43 per cent and 26 per cent in grassland production following the application of 75 lb. per acre of elemental sulphur in two out of four sites in Co. Wexford.

Applications of zinc compounds are standard practice in the establishment of pine forests in parts of Australia, but sulphur deficiency has not so far been demonstrated in forest crops under field conditions.

## Private Woodlands

Having recently completed an inventory of State-owned woodland, the Research Branch of the State Forest Service has now begun a survey of privately owned woodlands in order to complete the national picture. This census will cover all forest areas whose owners possess one hundred acres or more of woodland, not necessarily in one block. (A ten per cent sample of all other woodlands will be examined). The records of private woodlands in the Department will be used as a basis for this survey but these records are not exhaustive and the officer in charge of the work, Mr. L. P. O'Flanagan, would like to get in touch with anybody who owns a hundred acres or more of forest, or to hear of any such areas throughout the Republic which readers may know of. This is an important national venture, since accurate information on the timber resources of the country must be available for the planning of timber-using industries.

## Forestry Courses

Full-time residential courses in preparation for the Woodman's certificate, Forester's Certificate and National Diploma in Forestry examinations are available at the Cumberland and Westmoreland College of Agriculture and Forestry, Newton Rigg, Penrith, Cumberland. There are also courses in Production, Utilization and Marketing, and a three-day refresher course for qualified foresters. Further information may be had from the Principal.

## *Abstract*

# Getting Rid of Stumps

Foresters are often asked how to get rid of old tree stumps. Usually these stumps are situated in gardens where explosives or heavy machinery cannot be used.

This problem became acute in the area around Illinois, U.S.A., following the epidemics of phloem necrosis and Dutch elm disease which killed thousands of elms, and was taken up by two research workers in the University of Illinois. They investigated the possibility of using materials which would promote combustion in the stumps but would work better than the commonly recommended saltpeter which was not satisfactory.

In their report[1] they describe how they screened over 400 combinations of eight compounds. Extensive field tests were carried out using the most promising materials. The following method proved best:

Cut the stump as close as possible to the ground. Bore vertical holes, 2 inches diameter, about 6 inches deep, in the stump surface, with centres 4 inches apart (a hardboard template was used to locate the centres). Clear the holes of wood chips. Place in each hole about $\frac{1}{4}$ lb. of the following mixture: 4.5 parts sodium dichromate, 1.5 parts cupric chloride, 1 part lead acetate and 1 part manganese dichloride. Fill the holes with water and leave for about 3 months. At the end of this period place a liberal pile of dry kindling over the stump and ignite it. (If there is still any liquid in the holes it should be removed with a syringe a day or so before burning.) Most of the burning takes place in about two hours but it should be left to smoulder away for up to two weeks. During the whole of the period (except the actual burning) the stump should be protected as it may be dangerous to children or animals. While smouldering it should also be protected from rain.

On average this method resulted in the destruction of over 80 per cent of stump volume. The chemical mixture was subsequently named *Stumpfyre* and patented.

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[1]C. S. Walters and K. R. Peterson. Inorganic chemicals as aids in burning hardwood stumps. *Bulletin* 678. *University of Illinois, Agricultural Experiment station,* 1961.

N. O CARROLL.

# *Obituary*

The death of Tom Manning on 31st August, 1969 will have been mourned by the entire Forest Service.

He trained in Baunreagh under Paddy Barry from 1924 to 1926 with one of the first groups to be accepted to man the infant forest service.

After acting as assistant in Clonmel, Kilworth, Glencree and Delgany Forests, he was appointed in charge of the three forests Glencree, Roundwood and Delgany in 1933. In 1934 he opened Urlingford Forest, transferred to Glen of Aherlow in 1936 and opened Cong in 1939, when he was promoted Head Forester. In 1941 he was appointed Inspector in Galway, moved to headquarters in 1'46, became Senior Inspector in 1953, Inspector General in 1957 and retired in 1966.

His rapid rise was an acknowledgement of his exceptional ability, his balanced judgment and his complete 'unflapability', no matter what the crisis. His reputation was laid as a forester when he handle such delicate matters as land agitation and labour problems at Urlingford and Cong with consummate skill. He accumulated too a vast and surprising knowledge of both the forests and their managers which he used to good effect in matters of administration, promotions and transfers.

He was a quiet man, never seemed to hurry and never let work get ahead of him he was very interested in people, a keen observer, a good listener and a pithy and humorous commentator. His interest in Gaelic games was well known; he was a regular attender at Croke Park. Not so well known was his interest in literature and gardening. He had a deep attachment to his home county of Tipperary and it is fitting that he should now rest in Kilcash in the midst of the woods in which he grew up and which he later tended as a forester. *"Si monumentum requiris, circumspice".*

T. McEVOY.

DENIS FORDE (9/8/1918 - 6/9/1969)

The sudden and unexepected death of Denis Forde came as a profound shock to his many friends, colleagues and acquaintances in and outside the Forest Service.

A fine upstanding figure of a man, "Dinny" undertook each task with boundless energy and enthusiasm. *Fag a' bhealach* could truly be his *Rosc Catha* at full forward as he led his team in search of goals in his beloved game of hurling. His death on the eve of the All-Ireland final was a poignant reminder that twenty years before to a day he had played full-forward for Laois in the 1949 All-Ireland.

Born in Clarenbridge, Co. Galway, he entered Avondale as a trainee in 1938. He was foreman in Cong in 1941 and Glendalough in 1942, and he went in charge to Clogheen Forest in June 1942. Subsequently he served in Clonaslee, Nephin Beg, Graigue and Thomastown Forests and moved, on promotion, to Ballinglen in 1962.

In August 1968 he was promoted to Inspector with The Curragh as his district H.Q. Here, as always, he got quickly into his stride, and carried out every task in the only way he knew, thoroughly and efficiently.

He was a keen gardener, and the well kept gardens at his home at Annacurra, and later at Newbridge, bore the imprint of his care, hard work, perseverence and no little skill.

To his widow Elizabeth, and to his relatives the Society tenders its deepest sympathy in their great loss.

*Is fíor nach mbeidh a leithéid arís i gCoillte na h-éireann. Solas na bhflaitheas d'á anam dílis.*

F. Ó Fathaigh.

It is hoped to print an obituary notice of the late W. Y. Chisholm in our next issue.

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## *Review*

# What Wood is That? A Manual of Wood Identification

By Herbert L. Edlin

Thames and Hudson, London, 1969. 160 pp, 79 black and white illus. and 40 wood samples. 42 shillings (50 shillings in U.K. only).

In briefest outline, this recently published book sets out, in simple terms, how to identify forty different timbers. As a preamble the author gives a short history of man's progress in harvesting and converting timber to its multitudinous end uses. He gives some interesting insights into past techniques in handling wood, also into methods of harvesting timber in other countries. This section is followed by details of wood formation and structure to assist in identification. Then comes a fairly comprehensive key by which a selection of forty timbers can be identified from each other. This key is backed up by a section which describes these timbers, and the trees which produce them.

One of the first things which comes to mind when reviewing this book is the realisation that something similar has been done before. In fact a book by Dr. Alfred Schwankl called "Welches Holz ist Das?" was translated by Mr. Edlin under the title "What Wood is That?"

and published in 1956. The basic idea of the two books is the same, namely to provide a key, assisted by actual wood specimens, whereby diverse timbers may be identified. In this latest work the keys have been taken from the original book, with due acknowledgement to the publishers, Franckh'sche Verlagshandlung, Stuttgart.

In style, the two books are totally different. Whereas Schwankl tends to be strictly technical Edlin goes for a more generally informative text. Not only are we given details of the physical appearance of the various timbers but we are treated to a considerable introductory comment on woodworking history. There is also a good account of the features present in timber. In the earlier work this forms the opening sequence in the book. The terms in which these features are described are relatively simple, and the work is well suited to instruction of the layman.

Next the key. This is the *raison d'être* of the book. It is a key which differentiates between forty different timbers on the bases of colour, structure. weight, smell, botanical features and class of use. That there should be a different key for each of these characteristics is a very clever idea as it allows the identifier to approach his task from several angles. But that the key should be confined to forty timbers is not so clever, particularly when there are such notable omissions as silver fir, gaboon, obeche, Scots pine, Norway spruce, ramin, Parana pine and utile. Why, for instance, in a book published in England is ponderosa pine included when the most widely used European pine — our common red deal — is excluded? The unhappy problem the author has to contend with is how to make a limited book cover most eventualities. A grave pitfall not resolved by this work is the possibility of identifying a completely strange timber as one of the chosen forty, although the presence of the wood samples would tend to militate against this to some degree. This eventuality might better be avoided by a more judicious selection of the forty keyed specimens. Colour is a notoriously fickle property of timber, and to use it as the primary key is, in my mind, questionable.

Each timber identified is described by text and illustration and a lot of useful and interesting information is contained in this section. I found the "two colour" index rather confusing. This covers actual variation in colour in a timber, but also variation, real or apparent, that arises due to structural differences ... for example the small dark rays of beech make this a "two coloured" wood. I wonder will this be readily appreciated by every reader? Mr. Edlin is in conflict with several wood scientists in stating that the bird's-eye feature of bird's eye maple is caused by masses of epicormic buds. Both Desch and Jane uggest that it is caused by a dimpling of the cambium perhaps due to a fungal disturbance of cambial growth.

Despite these adverse criticisms, I think that this is a valuable book, and a useful addition to the wood scientist's shelves, as well

as to those of the carpenter or other timber user. It has limitations, as outlined, which should not be ignored, but it also has much of historic interest and adds usefully to the many texts concerned with timber identification. No-one can deny that to have one's own collection of forty timber samples is a decided asset when faced with a problem of identity.

L. U. Gallagher

# Reprints Available

The following are some of the reprints available from The Director, Forest Products Research Laboratory, Princes Risborough, Aylesbury, Bucks., England. The reprints are free, and it is sufficient to quote the reference number preceeding the title.

66 M Corsican or Scots?

K. W. Maun *Timb. Trades J.*, 1968, 267 (4807), Suppl., 31-35.

An account is given of recent work carried out by the Laboratory on a comparative study of the sawmilling properties of the wood of Scots pine and Corsican pine which was made by a detailed comparison of the out-turn of graded sawn timber from representative sample logs of each of these two species.

67 C Revenue from residue

J. F. S. Carruthers *Timb. Trades J.*, 1968, 267 (4808), 57-60.

A description is given of the Forest Products Research Laboratory chipping saw system for converting green softwood to yield saleable particle board chips rather than valueless sawdust without affecting the production of sawn timber.

65 P Prevent Rot in Your Timbers

D. F. Purslow *Bldg. Maint.* Lond., 1968, 11 (2), 10-11

The cause of most of the serious trouble in woodwork in this country is fungal decay. This can be prevented by use of appropriate preservation treatments, and descriptions of when and where to use those which are readily available are given in this paper.

# *Society Activities*

## Minutes of 27th Annual General Meeting

15th March, 1969, in Shelbourne Hotel, Dublin

The President, Professor Clear, declared the meeting open; and welcomed those present. The minutes of the 26th A.G.M. were taken as read. The Council's report for 1968 was read, then approved, having been proposed and seconded by Messrs. Mooney and Galvin. Arising from the report, a discussion followed on the facilities offered by The Royal Dublin Society. Use of the Library had not been included, and it was felt that storage space would cover current records only. It had been decided to avail of the basic facilities for the present. It was suggested that the number of complete sets of "Irish Forestry" be determined, and the possibility of binding these explored; also that Society records might be incorporated in the R.D.S. technical records.

*Abstract of Accounts*: The Treasurer presented the statement and assumed it had been seen by those present. There had been a general drop in income, despite an increase in membership, due mainly to fewer sales of "The Forests of Ireland". There was a substantial saving in Journal costs due to the Editor, although overall sales were slightly down. Expenses had been approximately the same, and there were no outstanding debts at the time of printing. Subscriptions for 1968 had been received from 371 members (93%).

In the discussion that followed, the position of the Book (*The Forests of Ireland*) was clarified. To date, 763 copies had been sold. On the question of some 70 copies, it was stated that about 50 had been sent out free, at the outset mainly, 10 to the Northern Region for sale, and a number recently sold not yet paid for. Profit from the Book so far amounted to £439 17s. 0d.—this included over £200 in donations, and the remainder was equal to the balance in the bank—the latter, therefore, being due to the Book. The stage could soon be reached when the remaining copies would be sold out. The question of publishing a second edition of the Book should be explored by the incoming Council, as should the recognition to Mr. H. M. FitzPatrick (approved at a previous meeting).

Mr. McEvoy congratulated the Treasurer on the presentation of the accounts, and proposed their adoption, seconded by Mr. Parkin.

*Presentation of Certificates* : Successful candidates in the Foresters Certificate examination were called on by the President to sign the roll book. Certificates were presented to Messrs. N. Kavanagh and T. J. McCarthy. Mr. F. Leahy, unable to attend, would receive his certificate at a later date.

The President then delivered his valedictory address. (See page 86.)

Results of the 1969 Council elections were confirmed as follows:— President: M. McNamara; Vice-President: M. Swan; Secretary; C. Kelly; Treasurer: T. Moloney; Editor: N. O'Carroll; Bus. Editor: J. Durand; Hon. Auditor: D. M. Craig; Councillors: Grade I: F. Mulloy; D. S. O'Sullivan; Grade II: W. B. Luddy; Associate: J. R. F. Hilliard; Northern Region Representative: J. E. Mackin.

Mr. M. McNamara took the Chair, and thanked the outgoing President for his work in guiding the Council in its various activities during his

term of office. He was happy that he would be acting from Cork, as this would extend further representation on the Council beyond the confines of Dublin.

The programme for 1969 was then discussed. The main item was the Annual Study Tour, to be held in Wales, in May, and a circular would be issued shortly. Mr. J. Prior was the Study Tour convenor, and an early Council meeting was necessary to select a Meetings convenor and organise the usual meetings programme. An indoor meeting had been arranged for the 29th March.

The machinery demonstration and field-day would take place at Glenealy on Saturday, 6th September, and arrangements were already being made.

It was felt that the meetings convenor should keep in contact with the Northern Region regarding meetings, and it was hoped that a tentative programme might be available for the next Council meeting. The Society had not been invited to the Northern Ireland Tree Felling Competition due to a misunderstanding. It was agreed that it would be invited this year, combining this with a Society outing. Details would be sent at a later date.

As this completed the business, the President thanked all present for their co-operation, and declared the meeting closed.

C. KELLY (Hon. Sec.).

# Council Report for 1968

(Read at 27th Annual General Meeting, March 1969)

During this year, eight council meetings were held. Attendance was: Messrs. M. McNamara, T. Moloney, C. Kelly—(8); Prof. T. Clear and Messrs. M. Swan, J. Durand, D. McGuire, D. Mangan, J. Prior, Miss E. Furlong—(7); Messrs. D. O'Sullivan (6); B. Wilson (5); J. D'Arcy (1).

The Annual General Meeting was held in March; a paper on "The Principles and Practice of Forest Planning" was read by Mr. D. R. Johnston, B.A., Conservator, B.F.C. The Annual Study Tour to Donegal had been held in June, and 58 members had attended. Four day-meetings had been held, and two indoor meetings. A sub-committee had been set up in June to organise a Field Day or machinery exhibition. Arrangements are being made to hold this in September 1969 at Glenealy.

In the Society examinations, three were successful in the Forester's Certificate, and two in the Woodman's Certificate. The Secretary of the Central Forestry Examination Board had been contacted, seeking consideration of the Society for membership of the Board. This request was to have gone before the latter at a meeting in January 1969. Further word had not been received.

The Autumn 1968 number of the Journal was late being published, due to change of premises by the printers.

Arising from recommendations made by the Hon. Auditor, read at the 1968 A.G.M., annual subscriptions were raised by 10/-. Twenty new members had joined the Society during the year.

The amended constitution had been brought up to date, and is now being printed.

A scheme has been introduced by the Royal Dublin Society for the assistance of smaller scientific and agricultural societies. The Society has

opted for this scheme. Facilities provided include: the use of rooms for meetings, secretarial assistance, storage facilities, and a central postal address. The Society should greatly benefit from this arrangement. The next indoor meeting is to be held at the R.D.S. at the end of this month.

C. KELLY.

March 1969.

# President's Valedictory Address

Professor T. Clear, President of the Society of Irish Foresters.

It is customary on these occasions for the outgoing Presidents to review trends in Forestry at home and abroad and to comment on developments that are likely to be of interest to forestry and of importance to the forest industry.

If one is to put the question—how does forestry stand in the world today?—most foresters would give an optimistic answer. This optimistic answer would be based on the facts that are available from the studies carried out by F.A.O. These studies reveal that the sector which produces and uses wood and wood products forms an important part of the overall economic activity in nearly every country in the world. Wood is one of the world's principal national resources—one that is renewable and one which nearly all countries possess or have the capacity to create. The products of wood enter widely into the economy at every stage of development and the industries that use wood form an important part of the manufacturing sector of most of the more advanced economies.

The evidence is that the industrial wood sector is growing rapidly and that the demand is shifting from unprocessed to processed wood products and from solid to reconstituted wood products such as chipboard and paper. We have evidence of this here at home in the fact that exports of chipboard and hardboard rose by 25% in the first seven months of 1968 compared with 1967.

Apart from the increasing demand for products from the forest, there is a spectacular change in the techniques and equipment coming to hand to maintain and increase the production of the forests and forest industries. One need not emphasise the amazing progress of industrial technology in recent times—it is evident at every hand's turn. It is not so marked in the forest, however, and it is necessary to concern ourselves with this lest a chasm develops between our Industry and industry in general. It is vital that our people should participate in these

developments and that, particularly, research workers in forestry should be able, and seen to be able, to participate at an advanced level, in the developing technologies.

Here in Ireland we have some major problems to overcome, and our problems are not untypical of the problems of forestry in many other countries.

Our first problem is one relating to land acquisition. It is vital that we sustain if not increase our planting programme. There is a great potential for forestry here and it can only be realised if we develop methods for securing the means for an increased planting programme.

Secondly, the demands of our rapidly developing wood-using industries must be met and this calls for developing thinning operations and the economic harvesting of small-sized wood.

Thirdly, it is now increasingly possible to increase production from existing stands and this must be done at an acceptable cost.

Fourthly, we must develop efficient and economic harvesting and transport methods, from our peatland areas.

And finally, we must encourage wood-processing industries to carry on research and to improve the yield and service of wood products.

We have become acutely aware of the importance of Provenance here. The large areas of Lulu Island contorta are at once a major source of embarrassment and disappointment. In passing, I was intrigued to read in a recent edition of *Scottish Forestry* that Lulu Island is now practically engulfed in the urban expansion of Vancouver and is not likely ever again to be a source of contorta pine seed, good or bad. It appears that the Island was named after a voluptuous " entertainer", Lulu Sweet, who passed that way in 1861.

Forestry research is developing methods for economic afforestation with seedlings of high genetic quality. Major advances in nursery techniques are imminent with the advent of "bullet" planting, or "tubed" seedlings. Tree seedlings can now be grown and ready for planting when only a few weeks old. Variants of this development are common in nurseries in Finland and Canada, and now are on trial in Britain and here at home. The advantages over normal planting stock for us here are (1) extension of the planting season, (2) increased speed of planting (3) introduction of mechanised planting, (4) cheap and rapid production of planting stock. It would seem that conventional nursery practice may soon be a thing of the past and that our seedlings will all be raised in plastic houses, under

# Statement of Accounts for Year ended 31st December, 1968.

| 1967. | Income | | | £ s. d. | £ s. d. |
|---|---|---|---|---|---|
| — | To **Balance from last account** | | | | 186 4 0 |
| | ,, **Subscriptions received:** | | | | |
| | 1 | Technical Grade 1, | | 1 10 0 | |
| | 8 | ,, ,, | 1967 | 12 0 0 | |
| | 91 | ,, ,, | 1968 | 136 0 0 | |
| | 5 | ,, ,, | 1969 | 9 10 0 | |
| | 1 | ,, Grade 2, | 1966 | 1 0 0 | |
| | 28 | ,, ,, | 1967 | 28 0 0 | |
| | 156 | ,, ,, | 1968 | 155 10 0 | |
| | 5 | ,, ,, | 1969 | 7 0 0 | |
| | 8 | Associate | 1967 | 8 0 0 | |
| | 101 | ,, | 1968 | 102 5 0 | |
| | 13 | ,, | 1969 | 18 10 0 | |
| £404 14 2 | | | | | 479 5 0 |
| £6 10 0 | ,, **Interest on Investments** | | | | 6 10 0 |
| | ,, **Journal:** | | | | |
| £77 0 11 | Sales | | | 52 4 7 | |
| £147 0 0 | Advertisements | | | 154 5 0 | |
| £27 6 7 | Reprints | | | 22 16 0 | |
| | | | | | 229 5 7 |
| | ,, **Examination Fees:** | | | | |
| £2 10 0 | Woodman's Certificates | | | 1 0 0 | |
| £10 0 0 | Forester's Certificates | | | 7 10 0 | |
| 17 6 | Examination Papers | | | — | |
| | | | | | 8 10 0 |
| | ,, **Book "The Forests of Ireland"** | | | | |
| £301 4 11 | Sales | | | 91 10 2 | |
| £100 0 0 | Donations | | | — | |
| | | | | | 91 10 2 |
| £1,077 4 1 | | | | | £1,001 4 9 |

| 1967. | Expenditure | £ s. d. | £ s. d. |
|---|---|---|---|
| £84 0 2 | By **Balance due to Bank** ... ... ... | | — |
| £132 5 11 | ,, **Stationery and Printing** ... ... | | 143 4 5 |
| £489 2 8 | ,, **Printing of Journal and Reprints** ... | | 374 7 4 |
| £93 10 4 | ,, **Postages** ... ... ... ... | | 84 11 5 |
| £40 2 6 | ,, **Expenses re Meetings** ... ... ... | | 51 9 0 |
| £2 17 6 | ,, **Bank Charges and Cheque Books** ... | | 3 17 6 |
| | ,, **Honoraria:** | | |
| £12 10 0 | Secretary | 12 10 0 | |
| £12 10 0 | Treasurer | 12 10 0 | |
| — | Editor—1967 | 12 10 0 | |
| — | ,, 1968 | 12 10 0 | |
| — | Business Editor—1967 | 12 10 0 | |
| | ,, 1968 | 12 10 0 | |
| | | | 75 0 0 |
| £24 1 0 | ,, **Examination Expenses** ... ... | | 4 17 0 |
| £186 4 0 | ,, **Balance in Bank** ... ... ... | | 263 18 1 |
| £1,077 4 1 | | | £1,001 4 9 |

I have examined the above account have compared it with vouchers and certify it to be correct, the balance to credit being £263 18s. 1d. which is on current account at the Ulster Bank Ltd. There is also a holding of £200 Dublin Corporation 5% Redeemable Stock 1968/73 and a holding of £200 Prize Bonds. Credit has not been taken for Subscriptions amounting to £75 which were outstanding at 31st December, 1968.

D. M. CRAIG,
Hon. Auditor,
85 Harcourt Street, Dublin 2.

10th February, 1969.

absolutely controlled conditions. Planting will go on all year round and will be so mechanised that manual tree-planting will be the exception rather than the rule.

The use of fertilizers in farm practice has grown enormously in the last twenty years in this country and has led in most developed countries to an embarrassing level of overproduction in grain and dairy products. It now appears that foresters are turning successfully to the fertilizer weapon to increase production in forestry. It is unlikely that the expected increase in production will be an embarrassment, since it can be safely stored in the forest to be harvested when needed.

Turning to harvesting, the newest in felling devices is the tree-shears. Hydraulically operated jaws cut off a tree at its base. These shears are tractor mounted and, in addition, can be associated with a machine which can cross-cut into logs or feed to chippers in the harvester.

A variety of very manoeuvrable tractors, for picking up and loading pulpwood in the forest, such as the Bobcat, show how adaptable new machinery can be. A recent innovation in British Columbia, balloon logging, is of considerable significance, when one thinks of the difficulties of roading and extraction on peat. The balloons can extract at 30 miles per hour with a maximum distance of 1,500 yards. Five men can extract 5,000 cubic feet per 8-hour shift.

In the sawmilling industry there are also developments of note. As is well known, a log put through a conventional head-saw loses 50% to 60% of its volume as slabs. The wood going through a chemical pulp mill loses all or most of its lignin as waste. The most profitable way to use logs is to recover the maximum of sawn-lumber and use the residues for pulp and particle board manufacture. This is happening here and increasing quantities of slabs are being used by our hardboard and chipboard mills. Now comes the chip-n-saw. This machine squares the log, by chipping off the waste and sawing the squared log into boards and scantlings. There is no waste and logs from 4" to 15" diam. can be processed. Production capacity is 1,750 logs of 16' length per 8-hour shift.

Here at home we have had a very significant contribution in wood technology, the development of a fire retardant hardboard at Athy. This has aroused world-wide interest.

The Forestry Programme, to judge by recent statistics provided by the Forestry Division of the Department of Lands, is beginning to lose momentum. The total productive area

acquired in the period 1967-68 was 14,713 acres, as against 18,313 acres in 1966-67 and close on 30,000 acres in peak years.

The area of new afforestation was 21,496 acres, as against 18,838 in 1966-67—a welcome increase which can hardly be sustained in the light of the acquisition figures quoted above.

*Thinning and Felling*: The area recorded as thinned during the year was 12,051 acres producing 4.25 million Hoppus feet; in addition, another 2.00 million cu. ft. was harvested—a total of 6.25 million cu. ft.—the figure for 1966-67 was 7.6 million —a significant decline.

*Employment*: In 1967-68 was down to 3,851, against 4,134 in the previous year.

*Expenditure* for 1967-68 amounted to £4,246,528 and *income* £707,221.

To complete my review of forestry progress here, I include some facts and figures supplied by the Forestry Division of the Ministry of Agriculture, Northern Ireland. The information refers to the financial year 1967-68.

The area acquired during the year was 6,779 acres, giving a grand total of acquired land of all types of 145,531 acres. The area planted during 1968, including replanting, was 4,477 acres, giving a grand total of 90,890 acres planted.

Out of a grand total of round timber produced of 1,587,000 hoppus feet, all but 107,000 sold standing, was harvested by the Staff of the Northern Ireland Forestry Division. This is in marked contrast to the practice in the Republic, where the vast bulk of the produce of thinning and felling operations is handled by timber merchants and pulpwood contractors.

The number of men employed was as follows:

| | |
|---|---|
| Regular workers | 1,077 |
| Relief Scheme workers | 1,100 |

The number of relief scheme workers has fluctuated considerably in recent times and the scheme is to be terminated indefinitely in April, 1970.

There was a total of 446 acres of private planting done under the various planting grant schemes operating in Northern Ireland.

The total expenditure for the year (excluding interest, but including depreciation and superannuation) is given as £1,405,000. Income stood at £375,000.

I have been reading the Third Programme for Economic and Social Development and I note that Forestry's contribution to

G.N.P. is expected to increase at the rate of over 4% during the period of the programme, i.e., up to 1972.

Efforts being made currently to improve the intake of plantable land are aimed at a restoration of the annual planting to 25,000 acres in 1969-70. By 1972 State forest should be 605,000 acres. The report states there is a new approach to land acquisition whereby each area is examined and valued in relation to both its potential capacity to produce timber and the assessed cost of developing it.

The report reveals that a survey was carried out in 1966-67 by a firm of consultants and that the findings were to the effect that the viability of the existing processing factories would be strengthened by expansion and that in general such expansion would offer the best prospects of remunerative prices to the grower. The existing mills have plans for expansion which will absorb all foreseeable increases in pulpwood output until 1973.

The report states that major projects are in hand to develop the scenic and recreational values and game potential of State Forests and that we may expect this work to be intensified in the period ahead.

May I conclude by thanking all the members of the Council for their good work and excellent co-operation during my term of office as President. It was a very pleasant task for me to preside at meetings and much constructive work was done. The Society is now well established in the forestry world and is well set for sustained progress in the years ahead. It has been necessary to keep the financial position constantly under review as ever rising costs threatened to make life more and more difficult for the treasurer. The new facilities offered by the R.D.S. and the new scale of subscriptions promise to relieve the strain and I feel satisfied that my successor can take over the ship on a reasonably even keel. I wish the Council *bon voyage* and may the Society continue to prosper.

I now call on our new President, Mr. Michael McNamara, to take the chair.

# Public Business

An address entitled *Mission to West Irian* was given by Professor S. D. Richardson, M.A., B.Sc., D.Phil. (Oxon), Department of Forestry, University College of North Wales, Bangor.

A vote of thanks was proposed by Mr. T. McEvoy, Inspector General, State Forest Service, and seconded by Dr. R. O'Connor, Economic and Social Research Institute.

# Annual Study Tour

*North Wales—May, 1969*

The first morning was spent at Newborough Forest consisting almost entirely of plantations on blown sand. Planting began in 1947. Corsican pine is the only successful species on the drier areas, and contorta pine grows vigorously on the moister.

On Tuesday afternoon, the first visit was to the National Nature Reserve on Llandwyn "Island", led by Mr. M. Gash, Assistant Regional Officer for North Wales. Mr. Gash outlined the conservation problems on an area with historical, archaeological and natural history interests, and visited by 120,000 people each year.

This was followed by a visit to the Faculty of Forestry and Wood Science of the University College of North Wales, where Professor Richardson outlined the methods of selection of undergraduates, the courses, and the prospects for graduates. Only one-third of these can find jobs in Britain.

Wednesday began with a visit to Gwydyr Forest, 15,000 acres of forest land staffed by a Chief Forester, 2 Head Foresters, 6 Foresters, a Forest Warden and 100 forest workers. Annual production is over 400,000 cubic feet, of which half is sold standing and remainder worked by forest staff.

Since Gwydyr forms part of the Snowdonia National Forest Park amenity is an important consideration. A 2.5 mile forest trail attracted over 5,000 users last year.

At the first stop Mr. C. B. Pyne, County Planning Officer, Caernarvonshire, dealt at length with Snowdonia National Park, the second largest of the ten National Parks in England and Wales. Major forestry development such as new planting, road construction, and clear felling, within the region is controlled by a panel representing the Forestry Commission, the planning authority and private interests.

Mr. J. H. James, Conservator, North Wales, spoke on landscaping principles and amenity planting in general.

The final stop was at a recently opened picnic site. Litter bins were not provided but an exhortation to "take it home" seemed, here at least, to be successful.

The afternoon was devoted mainly to permanent sample plots of Douglas fir, Corsican pine, Sitka spruce, *Tsnga heterophylla, Abies grandis, Abies nobilis* and Lawson's cypress, established between 1927 and 1931 and all accurately measured since first thinning.

Finally the party visited the exhibition mounted by the local staff to mark the jubilee of the Forestry Commission. All aspects of forestry work in the area were shown by means of photographs, charts and scale models, together with stuffed specimens of the local fauna.

Thursday was spent in Beddgelert Forest. One point of interest here was a high elevation species trial, planted in 1929, and believed to be the first forest experiment in which the Latin square design was used. In the Forest Garden, begun in 1927, over fifty species have been tried. Also seen was a 32-acre area where Norway and Sitka spruce crops, planted in 1928, were blown down in December 1966.

(Compiled from notes supplied by Messrs. M. O'Donovan, E. Joyce, M. Boland and Miss E. E. Furlong.)

# Foresty Exhibition Glenealy, Co. Wicklow

Evidence of the developing importance of the forest industry was shown at the Forestry Exhibition which was organised by the Society at Glenealy, Co. Wicklow, recently. Held on Friday and Saturday, September 5th-6th on the State forest nursery, the exhibition had the active support of the Forestry Division, Dept. of Lands and of the Ministry of Agriculture of Northern Ireland, and was supported by the many industrial exhibitors. The Minister of Lands, Mr. Sean Flanagan T.D., kindly officiated at the opening and showed a lively interest in the exhibits.

Highlights of the show were the forest walk, devised by H. M. Fitzpatrick; the nursery display, arranged by L. Condon and D. O'Sullivan; the nursery walk, arranged by J. J. Deasy; the arboicultural display demonstrated by R. McNeill, J. P. Duane, and A. Thompson and the expert display of felling and snagging by Husqvarna demonstrators.

The weather being dry and warm was very suitable but it appears that even a free show like this does not serve to attract the general public in any great numbers without the advantage of Sunday opening. There can be little doubt but that the Society can readily organise such a display, either alone, or perhaps preferably, in co-operation with other bodies, with advantage to all concerned in the many aspects of the industry.

**J. F. DURAND.**

# Portumna

The President and about forty members of the Society attended an outing at Portumna Forest on Sunday the 10th of August, 1969.

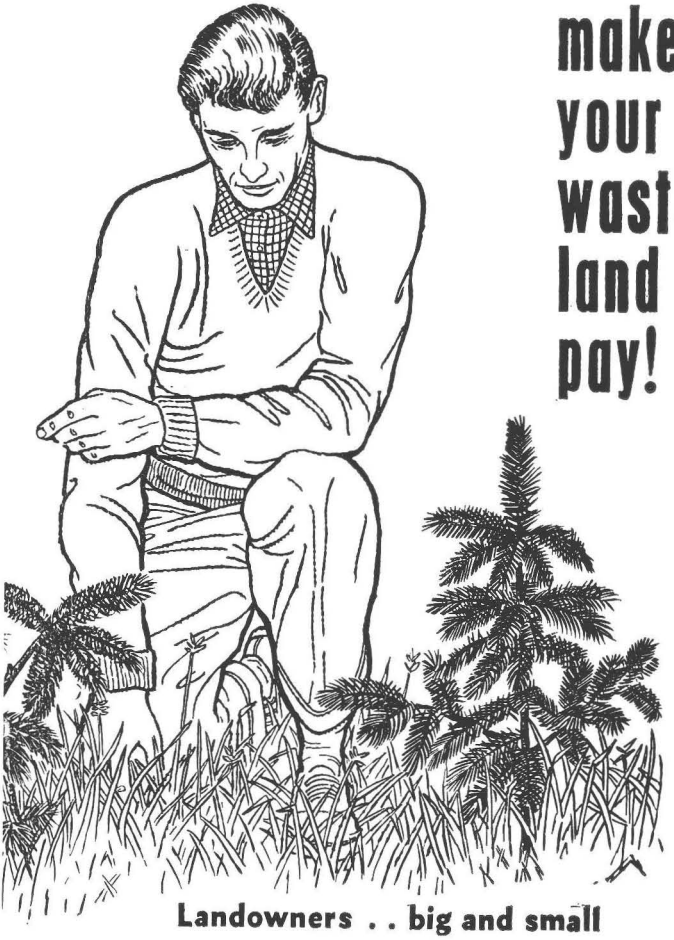
The theme of the meeting was *Forestry and Wildlife*. The main property of Portumna Forest covers 1,300 acres approximately and has an estimated population of between 100 and 120 Fallow Deer.

Mr. McGuinness, District Inspector, and Mr. Mulloy, Wildlife officer, Forestry Division, were leaders of an interesting and well planned walk.

Some fraying and browsing damage was pointed out and installations such as the Thetford High Seat, a raised stalag-like watch tower for the observation of deer and other animal movements and bird-watching were seen: we also saw an ingenious grey crow trap.

The meeting concluded with the usual picnic tea at which the President expressed thanks to Messrs. McGuinness, Mulloy, and Mr. Heverin, Forester in charge, for an interesting outing.

J. KEARNEY.



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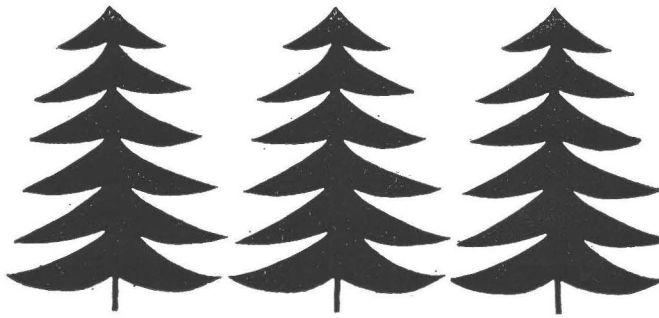

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