Society Activities.

Minutes of 26th Annual General Meeting

2nd March, 1968 in Shelbourne Hotel

The President, Professor Clear, opened the meeting, and welcomed those present. The minutes of the 25th A.G.M. were taken as read. The Council's report for 1967 was read and passed.

ABSTRACT OF ACCOUNTS :

The Treasurer said that this could not have been sent out at the usual time due to circumstances beyond his control, but hoped that everyone had received it by the time of the meeting.

The Society now had 401 members, of whom 330, or 82%, were paid up to 31st December last. Of the remaining 18%, many were newer members. He hoped that all would be prompt in payment of subscriptions, as this was the main source of income.

The journal as a source of income, showed a loss of £50, although some of this had been recovered (advertising,etc.) since the end of the year.

There had also been a loss in exam revenue.

Revenue from "The Forests of Ireland" was favourable, but not as good as the previous year.

There then followed a discussion on the Northern Region, especially in regard to communication between the Council and Regional Council. The method of election of a Regional representative to the Council was questioned, and it was stated that this should be in the constitution. Mr. McEvoy suggested that a general meeting should be held, and a system adopted, provision having been made already to supply a seat on the Council for a region. The Chairman then suggested that the constitution should be kept up to date, reprinted, and circulated to members. The summary supplied at the meeting was inadequate (although this, in fact, was merely to cover the amendments to the constitution over the past year). Following this, Mr. Kilpatrick suggested that there should be no regional representative this year, but that one should be constitutionally elected next year; this was approved.

The discussion then returned to the financial standing of the Society with regard to the Book and the Journal. The Treasurer said that 461 copies of the book were sold in 1966, revenue being £552 19s. 8d., and £102 in donations, but sales had fallen in 1967. The journal was more complicated, especially the second issue, as receipts carried over to the following year. These at present amounted to £77 0s. 11d. and although the exact figure was less, back issues added to the latter. Revenue from advertisements was £147, and of £100 due, £50 had been recovered. Average income per annum from advertising was £100, but although there might appear to be a profit, the book, in fact, was upkeeping the Society. Mr. McEvoy

then congratulated the Treasurer on an excellent breakdown of the financial situation.

The only successful candidate for the Foresters certificate was Mr. Neilan, and he was unable to be present at the meeting.

In his address, the President discussed European Forestry in the present day.

The results of the 1968 Council elections were:— President: Prof. T. Clear; Vice-President: M. McNamara; Secretary: C. Kelly; Treasurer: T. Moloney; Editor: M. Swan; Bus.-Editor: J. Durand; Hon. Auditor: D. M. Craig. Councillors: Grade I, D. Mangan, B. Wilson; Grade II, J. J. Prior; Associate: Miss E. Furlong.

Mr. Barry introducing the motion: "That Technical Membership should be of one category", felt that the present system cut across the whole purpose of the Society, and that foresters played a major part in maintaining its objectives. He suggested there was no need for two grades of councillors, and that the word: "Technical" being left out, the simple term: "Member", could be used. There should still be: honorary, associate, and student members. Mr. Swan seconded the motion.

In the discussion that followed, it was suggested there was no evidence of advantage to be gained from a change, and that it appeared to be a purely personal idea, without apparent group support. It was also mentioned that every profession had its grades, and that every grade should be represented fully. However, grading could be a reason for poor membership, and although in the earlier days of the Society the grading was mainly financial, to attract new members, today this no longer applied.

At this point, the question of increasing the income of the Society was raised. The Chairman replied that the Auditor had suggested three courses of action :

(i) Subscriptions raised by at least 5/-;
(ii) The Journal reduced to one issue per year ;
(iii) Donations made by members.

With regard to the question of categories, it was mentioned that differences in subscription rates were inconsequent, and that the objects of the Society should cater for members, not groups. The motion was put to the meeting, but was rejected, as with 19 votes for, and 13 against, it failed to attain the required majority.

The motion: "That the Council year correspond to the calendar year", proposed by the 1967 Council, was then discussed. Although the Council found the transition period difficult, it was felt that a decision at this time might be premature. When put to the vote, with 15 for, and 13 against, the motion was defeated.

The President then informed the meeting of a Symposium on Peatland Forestry to be held in Edinburgh in September, 1968. As there was no more business, he then brought the meeting to a close.

C. KELLY, (Hon. Sec.).

Council's Report For 1967

In the year under review no new ventures were undertaken by the Council. It could be classified as a year of consolidation in which earlier plans were pushed forward to completion. One event of note was the length of the current Council's year. It lasted three months longer than was customary to date. This change was brought about by the revision in the constitution passed at the 25th A.G.M. Though nothing spectacular may have been achieved all Council members were active in furthering the aims of the Society. A good attendance was maintained at all the nine Council meetings. The attendance was—Prof. T. Clear and M. Swan (9); J. O'Driscoll, D. McGuire (8); T. Moloney, D. McGlynn, L.Condon, W. Luddy, Miss E. Furlong (7); A. M. S. Hanan, D. O'Sullivan (6); J. D'Arcy (5); J. D. Robinson and S. Galvin (1).

The year commenced with rather a bleak outlook as regards finances. However, as it progressed and the sales of the book mounted the picture improved. By the end of the year only 214 books of the original 1,000 remained unsold. Since then there has been a steady trickle of sales. The question is now posed of a second edition. Though the book has shown a handsome profit, other Society activities have tended to be run at a loss. This is particularly so for the journal. Though advertising revenue has increased, it proved extremely difficult for the Business Editor to obtain three sets of advertisements for the three journals published in 1967. The result of this is that some of the profits of the book have had to be used to keep the Society solvent. The cost of the running of the Society has also increased Last year it cost approximately £360. There appears to be a need for a revision of the subscription rates to make the Society self sufficient.

As mentioned three journals were published, one of which was a carry-over from 1966. The Editor is to be congratulated in getting the '67 Journals out to schedule.

On the activity front three summer meetings were held as well as the Annual Study Tour. Attendance at some of the day excursions was rather disappointing considering the amount of effort the various leaders had put into them. The Council discussed ways of encouraging greater attendance but as yet were unable to implement any of the suggestions. The Study Tour to Cahir, attended by over 40 members, proved very enjoyable

The Annual General Meeting was held in March at which Prof. T. Black of Edinburgh University read a paper entitled "The Role of the Forester in a Changing World." A large attendance heard Prof. Black explain his *avant garde* views on what role the forester should play in an everchanging world.

The Society again held its examinations for both Woodmans and Foresters Certificates. Of the candidates for the Woodmans four were

successful while one of the two who sat for the Foresters was successful.

Regionalisation was finally launched in the Autumn when the foundation meeting of the Northern region was held in Strabane. It is hoped that this will stimulate interest in the Society. To tie-in with this the Constitutional sub-committee have been drafting the revised constitution. It is hoped to have the completed article available in the near future.

J. O'DRISCOLL, (Hon. Sec.).

President's Address

Before going on to review progress here at home, I feel it would be useful to look at the state of Forestry in other parts of the world.

Continental Europe has for centuries set the lead in forestry — particularly in the field of silviculture and one naturally looks for trends there.

It is disturbing therefore, to learn from the reports of the various countries submitted to the Meeting of the European Forestry Commission held in Rome from the 15th - 19th May, 1967, that the economics of European forestry have become a matter of growing concern. With wood prices remaining stable and forest costs rising — the profit margin in many European countries has narrowed. Indeed net losses are being reported in a growing number of forest enterprises.

On the other hand Europe's foreign trade in wood and wood products shows a widening gap in both quantities and values. One would assume that the home producers would take advantage of this increasing home demand, but the problems of European forestry are compounded by traditional adherence to a costly and labour intensive form of silviculture — an expensive and highly destructive game population — slow growing and slow maturing species and top heavy administration.

The growing imports of forest products influence European timber market prices. It is not thought desirable to control imports so as to give the home grower an advantage. An improvement in the economics of European forest enterprises has to be sought through lowering production costs rather than increasing the prices for standing timber.

The greatest impact on future production costs, we are told, will be achieved through further mechanisation in felling and extraction — in mechanisation of planting — in concentration on high yielding conifers on high yielding land, in rationalisation of tending tree crops,

from grass cleaning to pruning and thinning; concentration of thinnings; concentration of final fellings — including clear cutting on larger areas; wider spacing in plantations, consolidation and concentration of forest areas.

That there is a real threat to European forestry, as present practised, can be judged from the reports of overcutting in order to make ends meet — of wholesale sales of small private forests as development sites, of lack of interest in private forestry and so on.

The professional foresters who have been examining the problems of European forestry have diagnosed the main troubles and are prescribing remedies.

It appears that more than ever before, forestry practices are being affected by :

1. The rapid upsurge of technology, the growing fund of scientific knowledge and the increasing developments in allied fields such as agriculture and the biological sciences.
2. The development of the economy and the changed or changing position of wood as a raw material.
3. The flight from the less developed and rural areas and the changes in social conditions.

The fundamental changes in forestry that were ushered in around 1948, some twenty years ago, are now beginning to make an increasing impact, notably the success of man made forests in New Zealand, South Africa and the tree farming movement in the U.S.A., and the remarkable studies in research on tree physiology — tree genetics, tree nutrition — soil science, particularly in the U.S., Japan and Europe. The unravelling of the mechanism of photosynthesis, the uptake of soil nutrients, the role of microorganisms and enzymes in tree nutrition, are leading to a clearer understanding of the relationship between the soil and the plant.

The time is passed when all that is needed to make a selection of species is the naming of a few indicator plants and a glance at a soil profile. The forester must recognise that more than one-half of the production increase in European agriculture is due to the use of fertilizers and one quarter each to soil preparation and plant breeding. Foresters have only begun to use fertilizers and selected plant material and to prepare the soil.

Silviculturalists visualise that before long, man-made plantations, with high yielding tree strains — probably clonal material set out at final espacement like poplars will be the rule rather than the exception. These orchard like stands will be kept weed free and will be fertilized and sprayed with insecticides and fungicides as required by machines. The optimum date and type of cutting will be precisely determined by field probes — just as is done today with most field crops from corn to grassmeal. Finally the production potential of the

trees and the site will be known and will be kept at peak level by an accurately calculated application of plant nutrients in an acceptable form.

If these orchard like forests are to serve the needs of wood based industries they have to be large enough, high yielding and concentrated so that the scale of the industries can be large enough to be economic. The policy must be to concentrate efforts where they will give the best returns.

The growing population and the increasing prosperity in the cities and towns give more people more leisure time and opportunity to get out into the country. Tourism has become a major source of income for this country as it has for many European countries.

Foresters must take opportune measures to ensure that enough of our suitably located woodlands are designed and maintained to satisfy the growing demand for recreational facilities. It appears that the type of silviculture in recreation areas must be along very traditional lines, with natural regeneration, long rotations and indigenous or native looking species. This type of forestry may well be handled to cater for the requirements of high class decorative wood trades which are bound to flourish in affluent societies. It would be most unwise for forestry to ignore the trends and possibilities.

The rapid changes referred to have led to many changes and amendments in forest policy and forest legislation in Europe. The serious situation of private forestry is recognised and massive aid is available in most countries. In Denmark, planting grants, now cover half the afforestation costs and new plantations on waste land are exempted from rates and taxes for 60 years. In the Netherlands subsidies for afforestation cover up to 80% of the total costs and 5% of the budget of the State Forest Service has been set aside for subsidies for associations interested in purchasing and restoring forests. Since 1966 The Dutch State Forestry Service has been charged with responsibility for Silviculture and Landscape Architecture. It is also increasingly involved with the authorities concerned with the management of nature reserves, town and country planning and recreation. The increased demand for recreational facilities has made it desirable to involve private woodlands to an increasing extent and the State now offers grants of up to £2 per acre per annum to woodland owners who are prepared to keep their woods in an attractive state and open them to visitors.

The wood processing industry in the Netherlands is concerned about the future home supply of industrial wood. It has now established the Industrial Wood Foundation which will keep the whole question of industrial wood supplies under review and has the special task of promoting and subsidising the planting of quick growing species by land owners of all kinds.

Coming nearer home the General Review in the Annual Report of the British Forestry Commission for 1966- reveals that the respon-

sibility for forestry in England was to be transferred from the Minister of Land and Natural Resources to the Minister of Agriculture, Fisheries and Food as from 16th February, 1967.

In June 1966 about half the Headquarters Staff were transferred to a new office in Basingstoke under the Government's decentralisation scheme. However, most of the senior officers have remained in London which is still the centre of administration.

The report shows that afforestation in Britain is running at around 54,000 acres of State planting and 32,00 acres planted by private owners.

1968 Study Tour
County Donegal

COUNTY DONEGAL

Co. Dun na nGall ("Fort of the Stranger")

AREA: 1,193,000 acres.

ENCLOSED FARMLAND: 390,000 acres.

Mountain, Moorland, Rough Pasture: 800,000 acres (Highest proportion in Ireland).

AGRICULTURE

20,000 holdings owned by 15,000 farmers, 75% having less than 50 acres.

SIZES OF HOLDINGS (1965)

1-15 acs.	15-30	30-50	50-100	100-200	200 and Over
8,270	4,565	3,027	2,715	1,208	469
41%	23%	15%	13%	6%	2%

TILLAGE: 66,400 acs. (17%)

Barley	Oats	Wheat	Potatoes
7,500 acs.	36,000	900	22,000

POPULATION

Total: 108,486 (1966 census) (36.5% of the total resident in the county in 1841).

Emigration rate 1961-66: 1.5% per annum (over twice Republic average).

Between 1951 and 1961 almost 40% of the 15—24 age group emigrated from the rural areas.

TOTAL WORK FORCE: 40,700 (1961)

Agricultural Occupations: (1961) 22,800 (53% from 1926).
Agricultural Occupations: (1926) 48,800.

FORESTRY:

Total Acreage: 50,000 acs. approx.
Productive Acreage: 40,000 acs. approx.
Planted to date: 35,000 acs. approx.
Potential of forest land in county: 250,000 acs.
Districts: 2
Forests: 19
Labour Staff: 360

GAELTACHT

Covers one-third area of county but only contains 15% of population.

First Day June 11th.

Mr. O'Donovan, District Inspector, welcomed the bus party to Donegal as we travelled to our first stop at Raphoe Forest. Professor Clear welcomed members on arrival at Mongorry Property, where the tour leader, Mr. Johnston, introduced the forester in charge, Mr. Seamus O Domhnaill, a chuir chead mile failte romhainn go Dun na nGall agus da foraois fein go h-airithe.

The sun shone and the extending shoots of the young *Pinus contorta* plantations all around us, with their bright brown clusters of male flowers, all and each proclaimed high summer.

The existence of a block of almost 1,400 acres of plantations, all aged under 15 years, pointed up the scale of planting in such areas where convenient acquisition offered. Only in later years had Clarke ploughing become available to break the iron pan over underlying quartize.

These upland properties of Mongorry and Dooish overlooked the valley of the Swilly with Muckish mountain rising as a dramatic back-drop. In the valley is some extremely fertile farmland, affording contrast with the upland grazing areas and forest plantations.

Our second visit was to a 25 year old Sitka spruce stand in check at the small timber category stage. This was in Corravaddy Property of Letterkenny Forest, Compts. 1, 2, 3. An arithmetical rate of decerase in width of annual rings in recent years had caused investigation and various fertiliper rates and types were being employed experimentally.

The absence of precise soil data for such conditions was regretted, due to the likely inter-action between any added P and the existing iron pan. The stand's condition called forth many points of view, including Professor Clear's ready comment that such sites of 200 yield class would repay a better return on the nation's investment in fertilizer than would be possible from pasture. He alluded to current Finnish

practice, where he had recently visited, and the Finnish method of hand distribution of urea—rather than of phosphate. Costs for labour and material are not likely to exceed £1 per acre. Mr. Kilpatrick told of recent purchase by N.I. Ministry of blowers to give coverage of up to 2 chains wide.

In view of exposure in Donegal—which was to be impressed on us again and again, no doubt to prevent us from being deluded by the balmy weather we enjoyed—the point was made that a check at such an age might suggest that short rotations might be the basis of management in general, and that manuring would likely have a part to play in advancement of saw log sizes where the investment of fertilizer would be quickly realised in the more sheltered and productive areas.

J.F.D.

AFTERNOON JUNE 11th.

GLENVEIGH

"This castle hath a pleasant seat, the air nimbly and sweetly recommends itself unto our gentle senses".

Macbeth Act 1, Scene 6.

Even those in the party who were accustomed to beauties and contrasts of our Irish countryside were moved by the strange grandeur of this remote corner of Co. Donegal. Here some 17 miles north west of Letterkenny, lies this haven of enchantment, Glenveigh Castle.

We were welcomed by Philadelphia born owner, Mr. Henry McElhenny and his agent, Mr. Julian Burkitt, who treated us to a brief outline of Glenveigh's history. The present estate, around 30,000 acres in extent, was first owned by a Mr. John Adaire from Ferbane, Co. Offaly.

The castle, an impressive building overlooking Glenveigh lake, was built between 1863 and 1873. It is now believed that the money for the building of the castle and "buying out" about 250 small holders was provided by John Adaire's wife, an American-born heiress. The local tradition is that some "persuasions" and an appropriate amount of cash was supplied to facilitate the emigration of the dispossessed smallholders to Australia and that most of them settled in Victoria.

The mountains of Derryveigh contained, at that time, the already dwindling remnants of some native red deer *(Cervus Elphus)*. These deer were enclosed about 1880 by a 28 mile long deer fence and new blood was introduced from Scotland to strengthen and improve the stock.

Primarily run as a deer forest of 28,000 acres, the estate was then and still is, the only one of its kind in Ireland.

By 1890, when John Adaire died, the stock had increased to around 1,100 head. His widow continued to maintain the deer forest until her death in 1922 preserving the deer fence and winter-feeding the stock. After her death considerable local pressure was brought to bear on the authorities to divide the estate but without success. While the agitaion was proceeding the deer forest was virtually derelict. The present day stock at Dunlewey and Meeniroy is thought to date from that time.

The estate remained in this condition until 1930 when an American, Prof Kingsley Porter, when on a visit to the area succumbed to its charm and offered to buy the entire estate if the deer fence was restored. The purchase price was eventually agreed on and this 30,000 acre state with its castle, deer forest — the deer fence restored—and a herd of deer was acquired for a sum which we were told, would not now purchase an average size suburban house. The professor introduced new stocks of deer from Scotland and for a few short years enjoyed deer stalking in the best Scottish tradition. In 1937 Professor Porter disappeared tragically off the coast of Innisboffin and the estate was again on the market.

In 1938, the present owner, whose great grandfather came from Milford, purchased the estate and at once started the mammoth task of making the now internationally famous gardens of Glenveigh. Plants and shrubs were brought from at least four continents.

The gardens are about 10 acres in extent and the formal layout usually associated with gardens of a former age is nowhere apparent. The mass of colour provided by the quite extraordinary variety of rhododendrons and azaleas was in striking contrast to the austere wilderness of the adjacent mountains and lake.

Under the expert guidance of both Mr. McElhinney and Mr. Burkitt the party had the fascinating experience of a journey through what might well be described as a botanist's paradise.

Quite apart from the botanical significance of the Glenveigh gardens, there are other interesting features in this unique estate. A the southern end of the lake, which is 2½ miles long, lies some 200 acres of natural oak, holly, birch forest. *Rhododendron ponticum* is presently threatening the natural regeneration process of the oak and plans are afoot to clear the dense understore to encourage the natural regeneration. The importance of this work of conservation was, of course, of particular interest to foresters and encouraged a lively discussion on chemical methods of eradicating the rhododendrons. These methods, while successful, were subject to the limiting factor of cost, which even for a wealthy owner was an important consideration.

Another important aspect of conservation at Glenveigh was the red deer herd. Standing as it does at approximately 800 head, it represents about 75% of Ireland's red deer population. Three or four hinds obligingly showed themselves to us during our visit.

Poverty of natural feed and the expense of deer fence main-

tenance makes the conservation of this, the largest wild animal in Ireland a gargantuan task.

Mr. McElhenny is to be commended for the substantial contribution he is making in preserving a remarkable Irish heritage.

Our President, Prof. Clear closed the afternoon's visit to Glenveigh by expressing to Mr. McElhenny the thanks of all present for the pleasure of allowing the party to visit the estate and for the time both he and Mr. Burkitt gave to make this visit so memorable.

We returned to Lifford at dusk via the scenic route of Bunbeg, Bloody Foreland and Gortahork.

F.M.

Second Day

Our second day of the tour commenced with a visit to Killygordan State nursery, where we were introduced to the Forester-in-charge, Mr. J. Darcy, and his two assistants, Messrs. D. McBride and F. Tormey. The nursery, first opened in 1963, overlooks the Finn valley, elevations varying from 107 to 207 feet O.D. The soils, developed from glacial drift which is composed mainly of mica schist and gneiss with some granite, vary from acid Brown Earths at the lower levels to Brown Podzolics at the higher elevations. Their favourable textural, structural and physiographic features are conducive to good drainage conditions. Chemical analyses carried out in 1965 showed pH levels to be strongly acid while phosphorus and potasium levels were low and moderately low respectively. The nursery occupies a total area of 56 acres and is highly mechanised and intensively managed. Before proceeding on a tour of the area Mr. O.V. Mooney provided us with some interesting general information about nursery production in the State Forestry Service. The Forestry Division now own twenty nurseries amounting to 787 acres. All are located on mineral soils. A breakdown of these figures shows that twelve of the nurseries, amounting to 677 acres, are now largely mechanically operated, six of the smaller ones, amounting to 64 acres are hand operated, while the remaining two, accounting for 46 acres could be classified as being semi-mechanical. The production target is to supply adequate plants for the 25,000 acre annual planting programme. In the 1967-68 season thirty seven million plants were produced, while a total of 1,455 pounds of conifer seeds and 8,625 pounds of hardwood seeds were sown. These figures for pounds of seeds sown are a reduction on previous years due to improvements that have come about in the field of seed germination. For example, seedling production from 1lb of *Pinus contorta* seed has been increased from 25,000 to about 90,000 but may be much higher, production at Killygordon has reached 134,000 seedlings per pound of seed. The same trend holds for Sitka spruce where figures have risen from 30,000 to an average of about 80,000 and at Killygordon have reached 110,000. These figures coupled with great progress in chemical weed control and general mechanisation have reduced costs of production

considerably despite rising labour costs. It is being planned currently to put a pilot Nursery Center Building at Killygordon which will provide office accommodation for the forester together with canteen and toilet facilities for the staff. Space for a workshop and storage for machinery will also be provided.

After Mr. Mooney's talk, Mr. Darcy gave us a comprehensive outline of the nursery stocking and the fertilisation, mechanisation and weed control methods used at Killygordon. The stocking for the 1968 season was as follows:

1 year seed beds	5.0 acres
2 year seed beds	4.5 ,,
Seedlings lined out ...	16.5 ,,
Transplants	7.0 ,,
Green crop	9.0 ,,
Fallow	6.5 ,,
Productive nursery area ...	48.5 ,,
Unproductive, Roods, etc. ...	4.68 ,,
	53.18 ,,

Manurial Treatment :

Transplant lines : 4 cwt. per acre of 0.10.20 at lining out.

Seed beds 4 cwt. per acre 0.10.20 to all species except *Pinus contorta.* The latter receives 14 lbs. per 100 yards of effective bed of 0.10.20. This helps to produce a strong 1+1 plant.

Green crop : 3 cwts. 10.10.20 per acre to green crop sown in May.

Weed Control :

Transplant lines : 4 lbs. Simazine per acre in 120 gals. water applied with knapsack sprayer. The rate is reduced to 2lbs. per acre for *Pinus contorta* and Japanese larch.

Seed beds : Pre-emergence spraying : 1 pint Grammoxone W. per acre.

The various machines attached to the nursery were then demonstrated to us. The immediate impression to be obtained was the high degree to which all nursery work has been mechanised. The loading of the sander from a tipping trailer and the attachment of discs to the plant lifter for the purpose of isolating the lines of plants, were typical examples. While a demonstration of the rapidity with which seed beds can be sown, and covered with sand, was in progress, Mr. M. McNamara expressed the view that too much grit and too little humus was being added to cover seed beds and that soil exhaustion could come sooner than expected. Mr. Darcey argued that fallowing and green cropping would prevent this happening, while Mr. Ryan felt it might be better to use peat moss for this purpose. Mr. O'Driscoll claimed that the use of grit in recent years had been mainly responsible for the improvements in seed germination. On the other hand it was stated that very encouraging germination

figures had been obtained in a small experiment at the Agricultural Institute's Peatland Experimental Station, Lullymore, Co. Kildare on milled peat. Some peat soils would be highly suited to nursery work and Bord na Mona should be made aware of this potential.

As we walked through the nursery we were impressed by the long weed free rows of healthy plants. However, losses were observed in some lined out *Abies nobilis*. Mr. Cosgrave thought that exposure might be the causal factor while Mr. Donovan suggested damping off as a possibility. Mr. Mooney informed us that such high losses were widespread with *Abies nobilis* generally and that so far no explanation had been found.

The outstanding feature of Killygordon nursery is the high quality of plants produced. Bearing in mind that the nursery is only five years in existence, and that the staff are all young, great credit is due to all concerned for a job well done.

2nd Stop :

Our second stop for the day was at Monellan Property, part of Killygordon Forest. This property, containing 130 acres, was formerly the demense land of the Delap estate. The acid soil, derived from glacial drift of predominantly gneiss and schist composition, can be described as a Brown Podzolic. Texture varies from sandy loam to loam.

In 1928 it was purchased by Henry Myers and Sons, who cut, converted and sold its stock of timber. At that time the wood contained an assortment of hardwoods, a block of Norway Spruce on the western side, some Scots Pine and European larch. The block of Norway Spruce was completely uprooted by a storm in 1930, by which time it had attained a height of about 100 ft. The Beech was exported to England for furniture making and most of the Oak was sold to the Northern Ireland and Donegal Railway Companies for sleepers. The Larch was used for boatyard material at Killybegs and the Norway Spruce for roofing material. It took ten years to complete the cutting and removal of the timber.

In 1939 the area was acquired by the Forestry Division. Laurel and rhododendron which were then in abundance were cut and either sold for firewood or burned, to facilitate planting.

Main species used were Sitka and Norway Spruce, pit planted at 5 ft. apart. Beech was planted in rows along the existing roads and a small group of Oak and Ash in an alluvial area.

Frost retarded growth in part of the area in the earlier years.

Mr. S. McNamara supplied us with figures obtained from sample plots taken in the area and told us that we were seeing probably the best stands of spruce in Donegal.

SAMPLE PLOTS

PLOT 1 *Compt.* 7 *S.S.*

	Age	S.P.A.	Top Height	Mean B.H.Q.G.	Basal Volume	Standing Area
PLOT	28	480	64	$7\frac{1}{4}$	179	5480
Y/C 260	30	249	70	$7\frac{3}{4}$	106	3440

	Age	S.P.A.	Top Height	Mean B.H.Q.G.	Basal Area	Standing Volume
PLOT	28	680	48	$5\frac{3}{4}$	153	3460
Y/C 220	30	390	$55\frac{1}{2}$	6	96	2285

Comparison of these figures with the Management Tables show both stands to be very overstocked. The main feature of the figures, however, is the greater volume production from the Sitka spruce. The production figures for both species are also a reflection of the high suitability of the site for timber production.

Professor Clear made a case for extending Sitka spruce onto better land while Mr. Mulloy supported him and criticised the many marginal subsidy schemes being given to farmers in possession of what were inherently poor agricultuaral, but highly productive forest soils. Leitrim and Cavan were two counties where large areas of such land existed. It was pointed out that the Forestry profession have failed in their duty to produce sound and understandable production figures for such, or indeed any, sites. We must go further than Yield Class to convince economists of the untapped potential. Much remains to be done.

M.L.C.

WEDNESDAY AFTERNOON

Following lunch at Stranorlar the party continued to Ballybofey forest where Mr. J. P. Dowds, head forester and his asistants Mr. J. J. Galvin and Mr. J. Fogarty were introduced.

The area of Stranorler Forest is 6722 acres of which 4832 acres are considered plantable. To date 4400 acres have ben planted leaving a reserve of 432 acres. The planting programme for the coming season is 250 acres. This forest has a labour staff of 45 men.

Stop 1 :

The first stop was at compts 43-48 which had been planted in 1960 with contorta pine. The adjoining plantation across the border was of Sitka spruce.

Croghonagh property of Ballybofey forest was planted between 1951 and 1962 with contorta pine of the Lulu Island provenance on both double and single mouldboard ploughing and with 3½ cwts per acre of G.M.P. spot applied after planting. Compts 32 and 37 which were planted in 1957 showed a yield class of 60 when they were assessed in 1966. Across the border in Co. Tyrone an area of similar type peat under the control of the Northern Ireland Forestry Division had been treated in a different way. Here the area was treated with 1½ cwts of G.M.P. per acre broadcast by machine before ploughing. During ploughing racks were left at 1 chain intervals, for access by machines for transport of men and materials and for ease of extraction later. The area was planted with S.S. in 1967. A complete change in vegetation followed this treatment. The original vegetation was scirpus calluna but it is now lush molinia with the S.S. looking promising at this stage. The merits of this system were discussed at length and it was felt that the absence of main drains may produce problems in the future. The adventurous nature of the ideas adopted by the Northern Ireland service was applauded especially their extensive use of machines where possible.

Mr. Marin, the Northern Ireland forester demonstrated the use of the Snowtrack and Muskeg machines.

Stop 2 : Meencaragh property Compts. 1—12.

The original acquisition was 320 acres all of which have now been planted. Planting was carried was carried out in 1941-2 and was among the earliest ventures in moorland planting in the Northwest. Mounding and drainage were caried out manually.

Figures for two sample plots taken were—

Plot 1—Jap Larch

Plot	age	s.p.a.	Top Ht.	Mean 13HDG.	13.A.	Volume
Yl. Cl 240	27	370	50	6¼	103	2730
	25	283	48	5½	62	1410
			Plot 2—Sitka Spruce			
Plot	27	405	57	6	100	2635
Yl. Cl 120	25	400	54	5¾	93	2200

The soil was Brown podsolics and acid Brown earths on mixed predominantly mica schist and gneiss materials.

Following an interesting discussion on the S.S. sample plot the party returned to Lifford.

B.O'R

Morning of Thursday, 13th., June

Stop 1 :

The first stop of the day was made at the Franciscan Capucin Friary at Ards House. Here members of the group were able to attend Mass, After admiring the splendid view of this part of the Sheep Haven, the tour proceeded to its next halt.

Stop 2

This was at the Irish National Veneer Industries factory at the edge of Ards forest. The party was welcomed by Mr. Valkenborgh, the Managing Director, and proceeded to see the method of veneer production.

Logs are first of all squared or quartered, depending on size. These sections are then steamed in special cellars for 65 to 70 hours, and then pass to the veneering machines. Here, veneers are sliced off the log portions in flat sheets, are stacked, and pass to a packaging bay, prior to export.

The group saw a band-saw being mounted and a three foot diameter log being quartered. A variety of imported and home grown timber was being used, and one particular Sapele log weighed about 12 tons. The interior of one of the steam chambers was open to view. There were two veneering machines, one of which, a newer type, was fully automated. The latter was shown operating at different speeds, with two men handling the veneers; these were then stacked, before being dried artificialy. This was followed by trimming to standard sizes, with a guillotine. bfore finally packing.

Stop 3 :

After driving a short distance through the forest towards the shore, the party left the bus and walked up a side road to a vantage point, affording a panoramic view of the immediate coastline and surrounding forest. Prior to this, Mr. Johnston had introduced Mr. Farrelly, the Forester-in-Charge, and Mr. Boyle, his assistant. He now opened a discussion on amenity and the possibility of a National Forest Park in the area. Mr. Durand mentioned that "Forest" should be emphasised in this title, as active forest development would still take place in such a region. If there were to be recreational development, local opinion, including County Council would have to be consulted. Sheltered sites for cars, caravans, etc., might have to be provided, as well as road improvements. Overnight accomodation could be arranged in surrounding towns, such as Dunfanaghy, and visitors could be drawn from further afield—from Strabane, Lifford, or Derry. It was too early to define the exact area of such a Forest Park.

Mr. Johnston described the location of the area concerned. It was near the end of a peninsula, with quite an amount of scrub, and an element of conservation might be introduced. A caravan park could be positioned near the sand-hills, less than a mile from good strands.

There was a great variety of flora in the forest, and nature study could be an important introduction.

It was also suggested that specific route-walks could be planned, and road-maps prepared of the area, which was already well roaded. Pony-trekking might be introduced, but apart from the main access road, cars should be discouraged. Two caravan sites might be prepared. Some felt that grants could be supplied to encourage private enterprise to provide overnight accomodation, but this might harm local interests.

A caravan park providing forty caravans and services, would cost a minimum of £40,000, and would have to be of the best. A Forest Park should be under Amenity Section, and not controlled by a combination of interested bodies. One function of the forester could be to give short instructive talks, and with the introduction of people to the forest, a new aspect would be given to his life.

This completed the morning's programme, and the tour moved on to lunch in Dunfanaghy. C.K.

13/6/'68. Afternoon

From Dunfanaghy we entered the country of McSwiney and Mr. Johnston showed us Doe Castle their fortress. They were gallowglasses to O'Donnell. We proceeded to Carrigart, and thence by the Ocean Drive of Paul Henry fame past Tra na Rossan and Downings to Mulroy House.

The Countess of Leitrim introduced us to her propagation centre for rhododendrons, which is run by Mr. Bergstrom. Many are raised from seed and 80-100% germination is normal. In all, 147 species have been grown and different kinds of compost are used for many species. Labour content of grafting is too high to allow it as an economic method. Cuttings in September will be rooted in March under plain glass. The names of varieties often become mixed, but Mr. Bergstrom was not worried by this. Dwarf rhododendrons retail at 10/- to £1 each. Mr. Ryan said that Wicklow was more suitable as the Mulroy climate was too damp.

We were then shown into the Rose garden. All roses were imported from Germany and have the advantage over Irish roses that they flower from June to October. The Countess asked about shelter trees and Sitka spruce and Cupressus macrocarpa were recommended. Prof. T. Clear suggested she use 'Renadin' mixed with cowdung as a repellant for rabbits. Our afternoon drawing to a close, Prof. Clear expressed the thanks of the Society on behalf of all present.

On our departure, we drove beside Mulroy Bay towards Milford and some islands planted with Sitka spruce were pointed out to us. Mr. Johnston said that the Department hoped to gain possession of the rocky headlands along the shore of the bay. The spot where Lord Leitrim was assassinated by the Fanad men was shown to us on our journey to Lifford via Letterkenny. R. O C.

Visit to the John Fitzgerald Kennedy Park 7th July, 1968.

Mr. A. M. S. Hanan received the party on behalf of the Minister for Lands. Professor Clear, President of the Society, expressed appreciation on having the honour of signing the visitors book immediately following the notable entries of May 29th. This was the first official visit to the J.F.K. Park since the opening day 29th May.

Mr. Hanan gave a brief account of the background.

Shortly after the tragic death of the late President of the United States of America in 1963, it was decided to provide a fitting memorial in Ireland in the form of an arboretum and forest garden. This project was financed jointly by Irish American contributions and the Irish Government and is administered by an Inter-departmental committee consisting of representatives of the Forestry Division of the Department of Lands and the Department of Agriculture. The Office of Public Works undertook the design and erection of buildings, the construction of roads and responsibility for the provision of water supplies.

The site chosen was at the foot of Slieve Coillte—a commanding hill rising above the Kennedy ancestral home at Dunganstown, Co. Wexford, and 7½ miles south of New Ross. The terrain is slightly sloping to the S.W. between 120 ft. and 600 ft. above sea level. An intensive soil survey found the site to be suitable for tree growth. It is a deep brown earth with a pH of about 6.2. The underlying rock is ordovician schist.

The climate also is considered favourable and the average rainfall is 40 inches per annum. The region is situated in an area noted for its high annual sun duration.

Objectives

1. The provision of a comprehensive, scientifically laid out and fully documented arboretum.

2. The establishment of a series of forest plots to provide a silvicultural knowledge of a wide range of species.

3. To mould these two objectives into an amenity park which will not only provide a place to enjoy leisure in beautiful surroundings but also serve to stimulate interest in the more enlightened use of woody plants.

Historical Background

Historical records support the belief that the hill derives its name Slieve Coiltia, The Mountain of Woods, from the fact that it was densely wooded in ancient times. Its main claim to more recent fame

is, however, its association with the Rising of 1798. It is commemorated in the words of the old song "Boolavogue".

"We took Camolin, Enniscorthy
and Wexford storming drove out our foes
'Twas at Slieve Coiltia our pikes were reeking
with the crimson stream of the foes."

Acquisition :

The Minister for Lands took formal possession on the 22nd. July, 1964, of an area of almost 390 acs. which forms the main block of the park. A further area of 70 acs. was acquired subsequently.

Visit of Study Group to America

A group of officials including experts on afforestation and botany travelled to America in May and June of 1964 to see at first hand Arboreta and Botanical gardens in that country. The group visited the Arnold Arboretum, Mass., Brooklyn Botanical Gardens, The New York Botanical Gardens, Longwood Gardens, Pennsylvania, National Arboretum, Washington D.C., the Morton Arboretum, Chigago, and University of Washington Arboretum, Seattle. The party were most appreciative of their reception in America and of the very valuable assistance they got from all with whom they came in contact.

Contributions by Governments, Arboreta and Institutions

Co-operation has been received from many Governments in the development of the Park. Already 20 countries with whom Ireland has diplomatic relations have either sent plant contributions or indicated their intention of doing so as soon as conditions are suitable.

Great assistance has been received from the Northern Ireland Ministry of Agriculture.

Arboreta and similar institutions in many parts of the world have also taken a practical interest in the project and have offered plants.

Amenity and Recreation

While the main aim of the Park is educational and scientific the park is also being designed to provide for amenity and recreation.

A network of roads and footpaths will afford a wide variety of walks in pleasant parkland settings with convenient shelters and resting points.

A picnic area with tables and water supply is situated within 100 yds. of the main reception centre.

A spacious car park is provided. Cars will not be allowed beyond the car park in the main park area.

There is however a special motor road giving access to a viewing point at 630 ft. above sea level with a panoramic view of Counties Wexford and Waterford including the Saltee Islands, the confluence of the Rivers Suir, Nore and Barrow and the Comeragh Mountains.

Buildings

The Reception centre constructed in Liscannor stone and western cedar is roofed with copper.

The building provides office accomodation and fully equipped lecture room and a large lobby. In the latter are sited display panels including the plan of the John F. Kennedy Park, a map showing arboreta and gardens in Ireland and a world map showing vegetation zones contributing to the arboretum.

Here are artists' impressions showing Plant Evolution and the Flant Kingdom. There is also a model of the Park.

The buildings are laid around an extensive terrace paved in Liscannor stone.

The Kennedy Connotation

John Fitzgerald Kennedy is specially commemorated by a Memorial Plaque in limestone on a granite background situated at the entrance to the building which reads :—

This Park is dedicated to the memory of John Fitzgerald Kennedy, President of the United States of America from 20th January, 1961 to 22nd November, 1963. It is a tribute to the life and work of President Kennedy from United States citizens of Irish origin, organised by the combined efforts of Irish American societies and executed through the co-operation of the Irish Government.

On the terrace is a commemorative fountain hewn from a single block of granite and weighing over ten tons.

The fountain bears the words :

"Ask not what your country can do for you, ...
Ask what you can do for your country."

and the Irish translation :

Ná fiafrigh ce'n mhaith duit do thír,
fiafrigh ce'n mhaith don tír tú féin."

Stop No. 1. International Phenological Garden.

Mr. Hanan described the International Phenological garden scheme which is administered from Offenbach in Germany. It is one of many similar gardens planted in 32 different countries. The plants in all the Phenological gardens are genetically similar being grafted from the same parent plants in Germany. Theoretically the only element affecting the timing of the various phenological phases (conspicuous phenomena of growth) is climate.

Averages of the recorded dates of the phenological phases are obtained for each group of three specimens and the results recorded for comparison with national and international phenological gardens. In this way valuable information on climate trends will be compiled.

The grid system and specimen planting in the arboretum was then explained by Mr. Shekleton.

About 270 acres have been dedicated to the arboretum proper, most of this land is bare pasture but some existing old woodland has been included.

Plant Arrangement

The arrangement of the plants is being determined by Taxonomic classification, the full range being covered in two circuits of the arboretum; one circuit covers the gymnospermae and the other the angiospermae. These two are at times interspersed to improve the overall appearance of the arboretum. The classification being used is broadly that of Englir and Prantl. Three plants of each species are being used, due regard being paid to colour, size and shape for optimum placing.

While recognising that trees are the major objective of the arboretum it is hoped nevertheless to include a wide variety of shrubs capable of growing in this climate. It is estimated that the collection when complete may include up to 6,000 species.

Planting started in 1967. Boundary and internal shelter has been provided using a wide variety of evergreen and deciduous trees. Further amenities include ornamental streams, a small lake and a series of interesting vistas.

Reference Grid

For ease of plotting and indexing a system of numbered grid points was laid out, each point being at the corner of one acre squares. The markers consist of sunken concrete blocks numbered and set to the cardinal points of the compass.

2nd. Stop

A discussion on the treatment and amenity value of existing woodland was held. Mr. Hanan indicated the treatment already undertaken in drainage and the removal of undesirable scrub. The woodland consists of Ash, Oak, Scots pine, Cherry, Beech, Alder, Elm and Sycamore with an understorey of hazel and holly. The ground vegetation was characteristic of mixed old woodland being mainly blue bell, lesser celandine, wood sorrel, ivy and woodbine. It was agreed that the woodlands be left in their natural state.

A short acount of the Park fauna was given. About sixty species of birds have been observed in the Park as well as foxes, badgers, hedge hogs, stoats, rats, field mice, hares and rabbits and various species of bats.

Worthy of note was the prevalence of field mice in conjunction with the appearance of the short eared owl in 1966 and the reappearance of the Hen Harrier after many years of absence. The presence of a number of predators such as Blue Jay, Grey Crow, Sparrow hawk and Kestrel resting in close proximity to game birds like the partridge and pheasant is also worthy of note. It was accepted that efforts to eliminate the Grey Crow should be undertaken.

Following a pleasant walk through the woodland path the party assembled on the lakeside beside shelter No. 3. The treatment of a 6 acre block which was sprayed with gramoxone and planted with various hardwoods and conifers was discussed. The amenity value of the prolific bloom of wild flowers was noted. Mr. Hanan pointed out the extent of the Park, the boundaries of which could be observed clearly from that point. A 1¼ acre lake recently constructed was discussed.

Stop No. 4.

At the chamaecyparis area Mr. Hanan gave an account of the external shelter belts which consist mainly of large mixed hardwood and conifers. The internal shelter belts were then discussed. In view of the apparent exposure to the South-West a system of curved shelter belts was laid out throughout most of the arboretum across the prevailing wind and at intervals of 38 yards. This shelter is intended for the permanent specimen trees and will be removed gradually following establishment of the specimen collections.

Mr. C. McGill, assistant forester, discussed the Meteorological Station attached to the Park.

1. Standard pattern sunshine recorder.
2. Tilting siphon air recorder.
3. Standard rain gauge.
4. Class A pan.
5. Stevensons screen with dry, wet, max. min. thermometers.
6. Thermometers at 2", 4", 8", under soil surface.
7. Grass min. thermometers.
8. Bare soil patch.
9. Cup counter anemometer mk. II.

Observations are recorded daily at 09.00 G.M.T. and include cloud amount, present weather, wind speed and direction, and a coded weather diary covering the previous 24 hours.

Stop No. 5.

Mr. Shekleton gave a brief talk on the newly established clonal collection from the Shelton populetum. There will be approx. 100 individual trees with provision for expansion.

A short description was given of the forest garden and it layout. The area is divided into one acre squares leaving adequate rides and roads between plots.

About 140 acs. were set aside to establish plots of all trees which were thought likely to form a forest crop on this site. The number of species likely to be used is about 250 and plot size will vary from 1 acre to ¼ acre.

It was decided to use a geographical classification in the forest garden by allocating areas to each of the five continents.

To date 56 species, mostly of North American and European origin have been planted covering 40 acres.