

Report of the Annual Excursion, 3rd, 4th and 5th June, 1947

Contributed by O. V. MOONEY, B.Agr.Sc. in collaboration with the Editor.

For its 1947 outing the Society chose Portlaoighise as its operating centre. This choice gave anticipation of a really interesting three days' tour, with the inclusion of some of the Forestry Department's oldest and most important forests on the itinerary, and the addition of a visit to Count de Vesci's demesne at Abbeyleix, one of the finest wooded demesnes in the country, gave a prospect of a really intriguing time in store. The inclusion of a film show, a novel item to the Society's outings, in place of the usual reading of a paper and discussion, also added to the pleasurable anticipation.

Such favourable forecasts were very satisfactorily substantiated but it must be admitted that the weather, for once, was not on our side and the enjoyment of the second day was considerably detracted from by an even downpour which greeted the party's entry into Baunreagh and continued throughout the day. If such had not been the case it would have been difficult to get the party away from the interests of this area, but as it was, the members withstood the misery of the weather with great fortitude and the ultimate retirement was not much before the scheduled conclusion of the day. The accommodation was somewhat spreadeagled, which militated against the members generally getting together in the evenings, but when they did, it was to enjoy the film show which proved to be one of the highlights of the excursion.

The attendance throughout was a little below average of previous outings in numbers, but certainly not in keenness, as was well proved in the difficult conditions at Baunreagh. The names of the members and others who attended at the various functions are as follows:—T. Almack, P. Barry, H. Beresford-Barrett, M. Bogue, L. Brannigan, Miss N. Brunner, Miss S. Cahill, T. Clear, W. V. Chisholm, M. Connolly, J. Crammond, R. Crerand, P. Cronin, T. Donovan, M. Dalton, D. Forde, H. M. FitzPatrick, Captain Hamilton, H. Jeffers, Mrs. Kane, H. R. Langley, D. Mangan, S. McMenamin, T. McEvoy, T. H. McCarthy, O. V. Mooney, D. McGuire, J. Murphy, M. O'Beirne, J. O'Leary, M. Sharkey, J. J. Sheils, K. L. Schorman, M. Swan.

First Day—3rd June. Emo Forest.

The party assembled at the demesne gate at Emo at 9.30 a.m. After general preliminary greetings among the members, Mr. O'Beirne (Vice-President) in welcoming the party regretted the

unavoidable absence of Mr. Meldrum (President) and wished everyone present a very enjoyable and interesting excursion. Mr. P. Barry then welcomed the party on behalf of the Department. The Convener for the excursion, Mr. FitzPatrick, then addressed the party. He thanked the Department for the facilities extended and said that while his duties should really be confined to keeping the party together, he would like to give a short outline of the history of Emo State Forest. The estate, he said, was formerly owned by Lord Portarlington and was taken over by the Irish Land Commission in 1928. Subsequently in 1929 some 910½ acres within the walls of the demesne passed into the hands of the Forestry Division and the mansion and surrounding grounds were bought by the Jesuit Fathers. The remainder of the estate was divided up into agricultural holdings. This area now formed the main block of Emo Forest, though subsequent to 1929 a number of other properties were added and the total area of the forest was now some 2,900 acres, of which 2,329 acres have been laid down in new plantations. In Emo demesne itself, which was mainly made up of old Oak woodlands and open park land with scattered trees, some 750 acres had been planted and 136 acres of the old woodland maintained. The ground at Emo Park was not generally exposed and lay between the comparatively low elevations of 250' to 350'. Soils varied throughout the area both as to depth and texture, but generally the ground could be described as limestone gravel drift overlying carboniferous limestone. There were also some lesser areas of surface peat on the N.E. side of the estate. It was of interest to note that before the formation of the new Forestry School at Avondale, Emo Park functioned as a training ground for the Foresters, many of the senior Foresters in the country to-day having been schooled there.

The party then set off, led by the Convener and Messrs. O'Leary, Crerand and Cronin. The route first took course between plantations laid down in 1931-32 and mainly composed of S. Pine/E. Larch 50 % mixtures and pure D.F. The S. Pine/E. Larch plantations did not show remarkable progress, usually lying between 12' and 15', and it was generally noted that Scots Pine had outgrown and suppressed the European Larch, while on some higher ground European Larch was the predominant tree. Conjecture was general, without being conclusive with regard to the cause of the suppression of the Larch. Some were of the opinion that this was not altogether suitable ground for the species, but it was declared that the Larch, when planted, were a very poor, weak type of plant and severely attacked by *Meriae laricis* (or Larch Leaf Cast disease) and that they had fallen behind from the beginning, the Scots Pine getting a much better start. A soil pit on the ground in question was then inspected and revealed a surprisingly light sandy gravel of good depth, and looked indeed as if it should be a good subject for Scots and Common Larch. Shortly afterwards the party paused at a

16 year old Douglas fir plantation, and this subject gave rise to vehement and general discussion which disclosed many different schools of thought. The crop had reached an average height of about 20'-25' and was well closed in and had come to the stage where weeding and pruning were indicated. The crop was characterised by a majority of coarse-branched trees with which they were not infrequently covered as to stem from ground level. Though in the minority, there was, however, an even scattering of finer-branched straight trees. Many opinions favoured replacing the Douglas Fir with some other species but there was also a strong contingent who advocated selective treatment in favour of the finer stems and who thought that there were definite possibilities in the crop and that weeding and pruning treatment should be put in hand at once. It was interesting to hear from some of the members who had worked at Emo in the past that a most gloomy view had been taken with regard to this particular crop when it was between five and ten years old, and that it was then considered that it would not succeed at all. Those members were able to testify to the great improvement in the health and vigour of the crop since its early days—even since 1941—and an optimistic note was struck by them.

The party then took a course along the margin of the woods and along the Wellington Avenue. This avenue, about half a mile long, was lined on either side with tall Wellingtonias (*Seq. Gig.*) from 60 to 90 feet in height and about 80 years old. This was quite a remarkable spectacle, though the trees themselves did not appear to be in a too vigorous condition—certainly due to the severe cold winds of the preceding winter to which a general discolouration in foliage was due.

At Sweeney's Hill the party divided, the car owners returning to the gate, the remainder proceeding to a mutual objective at Compartment 19.

Here again, Douglas fir was the subject. In this, the spectacle was that of a sixteen-year-old plantation which was being replaced by other species. Apparently here the view already expressed by some members earlier had been accepted, and it had been decided that the possibilities of the Douglas fir crop did not warrant its retention for the full rotation. The Douglas fir crop had been opened out, belts and groups of the original crop being left at intervals. The cleared ground had been planted in the previous season with Scots pine, ash and oak, the produce from the fellings being marketed mainly for pit props. The main interest of the party was, however, centred in the general principle and actual carrying out of the replacement of the Douglas fir.

Mr. O'Leary explained the details of the operation and indicated that in choosing the belts and groups of Douglas fir to be left standing, an eye was kept as to shelter and to retention of the better class trees. The groups and belts were always made large enough to

provide for edging them back and felling inwards without damaging the new crop when such work became necessary. It was noticed that a considerable number of windfalls had already appeared in the retained belts and clumps.

Further discussion took place on the ground, and the party then proceeded to the forest headquarters, where a very pleasant lunch was partaken of, with tea very efficiently supplied by Mr. Cronin and his staff.

Lunch-Time Discussion.

After lunch Mr. McEvoy introduced a discussion on the burning question of the day—whither Douglas fir? He said that, judging by the many private expressions of view on the ground, he felt sure that the members were far from unanimous with regard to the right method of treatment and general policy to be applied to young Douglas fir plantations such as the party had seen. The subject was one of contemporary interest, not alone at Emo, but in relation to many plantations in the country.

Mr. Barry, the "father" of many Emo plantations, then spoke and said that, in regard to the operation of replacing Douglas fir which the party had just seen, he thought that only the very best clumps and belts should be left standing and that where openings were made they should be bigger; also that, owing to the great variation in soil and ground conditions, the clearings should be far less regular and much more adapted to particular circumstances of the ground. He thought generally, however, that it might not be at all good policy indiscriminately to replace Douglas fir now and that the matter should be approached with far greater caution. His opinion was that a more optimistic view should be taken of the future capabilities as to successful timber production of these Douglas fir crops.

Mr. Clear said that, in his opinion, the policy of accepting such young Douglas fir plantations as a failure and replacing them with other species was not a sound one, and that there were not sufficient sound reasons for concluding that Douglas fir would not succeed.

Mr. Beresford-Barrett said that, in the particular case we had just seen (i.e., Compartment 19), the opening out of the crop into belts and clumps such as had been done was a process of artificially creating frost hollows for the newly-planted trees in the intervening spaces. In his opinion the shelter given by the standing groups was negligible and he expected that they would be eventually blown down by the wind. Mr. Crammond reiterated the view that in the area viewed in Compartment 19 the openings made were not sufficiently large but, generally, he thought that more faith should be placed in the future of Douglas fir.

Mr. O'Beirne said that the Douglas fir had been left standing in such a way that they had no chance of withstanding the wind.

The most desirable way of handling such a crop would be to treat it in the ordinary way and carry out weeding, the produce from which would be readily saleable at the moment; the better trees should be treated as an ultimate timber crop.

Many other opinions were contributed, and the discussion could have been a long one had the Convener not called our attention to the time. The members accordingly moved along to the Department's Nursery, passing on the way a small area of very promising young Norway spruce some three years planted.

Emo Nursery.

In this nursery the members were mainly interested in the hardwood seed beds and in a remarkable variety of Poplar cuttings which were in stock. Amongst the Poplar species were *Populus trichocarpa*, *P. serotina*, *P. generosa*, *P. candicans*, *P. nigra*. Mr. O'Beirne gave some interesting botanical notes on the Poplars and Mr. Bogue turned attention to some natural *C. macrocarpa* in the oak seed beds.

An interesting item in this nursery was the rows of Alder which had been planted some 12 yards apart in a N.S. direction between sections of seed beds running in the same direction. These single rows of Alder were some 12' to 16' high shading good seed beds of hardwoods, amongst which Alder, Beech, Hornbeam and Oak were represented. The original object of this lay-out was to afford protection to the seed beds from early sun and the accruing frost-lift and, perhaps, also, to serve the purpose of drawing up the hardwood seedlings. The rows of Alder appeared now to be getting too tall and rather closing in the seed beds and the opinion was expressed by Mr. Barry that every alternate tree in the rows might be removed in order to allow freer air circulation between the rows and make the working of the seed beds easier.

From the nursery the party proceeded in brilliant sunshine to the Grapery, now the pleasure grounds of the Jesuit College, the invitation to visit being kindly extended by the Fathers. Here the variety and stature of numerous copper beeches were an immediate subject for admiration as also were the ordinary green-leaved Beeches which were of massive dimensions. After some photographic groups were taken, the party deployed to inspect the individual specimen trees which included some very fine conifers. The members who were on the alert found grounds to question the labelling of some of the trees. A tree labelled *Acer pictum* was found to be a *Platanus orientalis*, while a *Pinus strobus* was likewise incorrectly labelled *Pinus sylvestris*. Diverse discussions took place, including one on the correlation of the phenomena of sunspots and ring growth on trees. It was again difficult to draw the party away from the lure of this park.

Oak Fall.

This proved to be an area of very openly stocked heavy mature Oak, hardly warranting the description of a wood. We were told that this crop had suffered severely from the great storm of 1903 and later fellings had further depleted the wood. Both pedunculate and sessile Oak appeared to be represented but the quality of the trees was not high, clean straight butts being only occasional, and it was reported that the timber from this area was of poor quality, particularly prone to "shake." The ground vegetation displayed mainly strong grasses (especially *Holcus mollis*), briars and bracken, overlying a sandy gravelly loam—perhaps soil conditions too light for growing really good Oak. This stand was partially underplanted with Oak and natural regeneration of Oak was also quite frequently in evidence.

It was said that the Oak Fall was held to be a remnant of a primeval Oak wood, but whether or not this was the case many thought that the trees at present standing were planted.

Emo. Compartment 8.

This area proved to be fare to stimulate the most stoic of foresters to vent expressions of enthusiasm.

Mr. FitzPatrick introduced the subject with some very interesting details and said that in this wood we were viewing what was probably one of the finest examples of natural regeneration of Beech in the country. He explained the French Uniform System of natural regeneration with seeding fellings and drew a parallel with this wood, in which the same process approximately had taken place—though here it had occurred in part accidentally. The regeneration in this wood was strongly established and there was a dense thicket crop of Beech of uneven height from 4' to 10'. The standards or seed trees were standing rather too closely together, with an almost closed overhead canopy in places, and it was generally agreed, the young crop having now become firmly established, that the removal of a number of the old trees with spreading crowns, with the retention of a more open distribution of best-shaped standards, would be beneficial. Mr. Crammond said that the wood had been treated for natural regeneration during the Department's management and that fellings had been made accordingly. Mr. Barry thought that the older Beech in this wood were not of a good type, and that the introduction of Norway Spruce on this moist site might have been better policy in the first place. However, Mr. Bogue on the other hand maintained that the mature Beech looked sound enough from a timber point of view and a good risk for any timber merchant, and that where you have got good regeneration of Beech such as was to be seen here, advantage should be taken of it. Mr. FitzPatrick concurred. Mr. Beresford-Barrett said that this area of natural regeneration was as good as anything he had seen under the Uniform System in France or on the continent.

This small area was a lesson to all foresters as to what could be attained in Beech natural regeneration in this country. It showed what was possible, but a further lesson was, perhaps, also presented. Such a success in natural regeneration may be assumed to be possible in many other of our not numerous or extensive pure Beech woods, and it was borne in on one's mind that the important factor is the method by which the conditions for successful natural regeneration of not only Beech, but other species too, are brought about. The need for sound silvicultural observation and recording would probably be admitted by all so that, later on at least, this work could be undertaken with a confident hand. The field of investigation is varied and complicated and we have much to learn of the factors bearing on success such as the receptiveness of the forest floor to seed and the conditions then governing germination; of the study of the light intensities favourable to seedling growth, yet checking the inimical growth of weeds and grasses—truly the most delicate of balances; of the periodicity of good seed years and so on.

Garryhinch.

The party drove from Emo through Portarlington to Garryhinch, an outlying property of Emo Forest.

Before entering the area, Mr. FitzPatrick introduced the property, which, he said, was once a part of the Warburton Estate. 810 acres were sold to a firm of timber merchants in 1932. This firm re-sold 523 acres to the Department for forestry purposes in 1935. Most of the ground we would see had been under mature hardwoods, planted when part of the Estate. These hardwoods were mainly replaced by conifers in the Department's planting, with the reservation of some hardwood standards and Ash regeneration. The area was more or less flat, ranging from 240' to 250' and soils were usually of a strongly calcareous nature. The party then walked along the Compartments 9, 8, 7, 6 and 5 where some very promising Norway Spruce plantations, eight years old, were seen with occasional clumps of good Ash saplings. A luxuriant and varied vegetation brought the botanists into action and Miss Brunner and Mr. McEvoy were prominent. *Virburnum opulus* and *Euonymus europeus*, were prominent in the vegetation while *Prunus padus* (Bird Cherry) appeared occasionally and was the subject of some argument before being finally identified.

Cush Bog.

In Compartments 1, 2 and 3 there was an abrupt change in conditions and a flat, wet-looking area was viewed which had been planted with Scots Pine about eleven years ago, the trees now having reached a height of some 10 to 12 feet. *Calluna* and some tussocky *molinia* were evident in the vegetation here with some briar and grasses. It was noticed immediately that many of the

Scots Pine were showing distinct signs of check with much yellowing and discolouration of the needles. A soil pit was inspected, which revealed a surface black, amorphous, alkaline peat layer to about 9" to 12", overlying a sticky marl. The bottom of the pit was inundated with water which lay at about 2' from surface level and probably much higher in the winter months. This was assumed by some to be the minimum water table and it was generally thought that the tree roots had now penetrated down to the wet zone and were being adversely affected despite the intensive drainage already carried out. This bog was within half a mile of the River Barrow and probably lies at a lower level than the river itself in flood periods. It was said that the Scots pine were originally intended as nurses for Norway Spruce whose surface rooting system would not be so readily affected by the high water table.

A further item of note was met in Compartments 7 and 8 on the way back to the cars. This was in a very good eight-year-old Norway spruce plantation with Oak groups. The Spruce had made an even growth to about 4'-6' but the Oak groups had fallen very far behind and the plants had rarely grown beyond 1½' though it seemed that they had now come out of check and were coming away. Mr. Clear drew attention to the late and early flushing types in the Norway Spruce, some of which had not broken bud while others were well flushed. The contrast was very striking and Mr. Clear elaborated on the benefit to be had if the source of such seed strains could be traced and late flushing types raised with certainty, thus providing a sound assurance against damage by late Spring frosts. The day's outing was then concluded and the party returned to base.

Second Day—7th June.

It was painfully evident from early morning that only a miracle could cause the sky to clear and it was already raining quietly when the party set out from Portlaoighise. Driving through Mountrath and climbing gradually into the Slieve Blooms the rain became heavier until, entering the main gate at Baunreagh, it became a steady and penetrating downpour which eased only very rarely during the day. At Baunreagh House the members were greeted by Mr. Dalton (Head Forester), Mrs. Dalton and family, whose hospitality and consideration throughout the day will long be remembered.

Mountrath Forest. Baunreagh.

There was some delay in starting while the party waited in hopes of the rain easing off, but eventually it was decided to brave the elements and the Convener got the party moving. Baunreagh property, one of the oldest forestry centres, was originally acquired from a Mr. William Fogarty in 1911. At that time 1,926 acres were taken over, but later, as Mountrath Forest, the area was considerably

added to and the total area of the forest is now some 3,909 acres. The Baunreagh block itself is situated in a deep-cut valley, about two miles long, at the eastern end of the southern side of the Slievebloom Mountains. The valley runs in a S.E. to N.W. direction and rises sharply on either side from the Delour river to elevations well over 1,400'. The valley slopes are thus sheltered from all points except the S.E. The main underlying rocks are Silurian shales and Old Red Sandstone and the soils are mainly local drifts. At the time of acquisition there were a few small woods of Scots pine, European larch and Norway spruce, but in the main the ground was a bare flush rush-grass type with peaty surface conditions predominating on the upper slopes and mountain flats. Conditions generally were very wet and intensive drainage was carried out over large areas. The planting was continued over a period from 1913 to 1926 and the moist soil conditions and humid local climate have proved well suited to the raising of good quality Spruce on the lower valley slopes. The party first saw a 32-year-old stand of Sitka spruce which was very densely stocked and of very fine height growth, but generally giving the impression of sub-normal girths. In more recent times, this stand had received periodical light thinnings but in discussion the general view held was that the better trees now required much more growing space to put on bulk and that the work would have to be tackled very cautiously owing to the danger of wind-throw on the heavy soil. Frequent and progressively heavier thinnings were recommended. It was remarked that competition would have been even more severe if the Norway spruce, which originally formed 50 % of the crop, had not been completely suppressed and eliminated by the faster-growing Sitka.

As a matter of interest the members laid out a 1/10th acre sample plot with the following findings:—

Average Total Height	72½'.
Average Timber Height	53' (To 3" Q.G.)
Quarter Girth (base)	6½'.
Mid Quarter Girth	5".
Volume of Average Tree	9.2 c. ft. (Over bark). 8.9 c. ft. (Under bark).
Stems per acre	650.
Volume per acre (o.b.)	5,980 c. ft.
	(u.b.) 5,382 c. ft.
Form Factor	.446.

In comparing these results with the Forestry Commission Yield Tables three items of note emerge. The height growth places this stand in Quality Class I, while the volume per acre is slightly below that class. The Form Factor at .446 is remarkably high but the number of stems per acre is above average. A taper figure of $\frac{2}{3}$ " in 10 feet was also worked out, which is very low.

Continuing on their way, the party walked through this stand

for some time before emerging onto a forest road beside which some small stands of very mediocre Scots pine and European larch were noted. The road itself then became a subject of discussion. It was of the "corduroy" type and Mr. Dalton explained how it was laid down with Spruce poles placed crosswise on heavier "runners" and wired together—generally raised above the water table with marginal drains excavated. An exchange of views indicated two schools of thought, one of which agreed with the methods employed and the other which did not. Mr. O'Beirne was strongly of the latter way of thinking and pointed out that the Germans, who were experts at this work, went on an entirely different principle. He contended that, far from raising the "decking" above the water table, the very reverse should be the case. He argued that the more wood is exposed to alternate wetting and drying—as occurs at the soil surface—the more speedily it will decay from fungoid attacks. On the other hand, if buried in the soil, the exclusion or partial exclusion of air militated against rapid decay and was a far sounder and more lasting method of construction. At this juncture, the party turned back to Baunreagh House for lunch, as the rain became exceptionally heavy.

In the afternoon conditions improved slightly and a course was set for Baunreagh Nursery. On the way some very fine 16-year-old plantations of *Abies grandis* were seen. Of interest too was an unusual treatment of a 50% Douglas fir/Sitka spruce mixture. At 10-12 years the Douglas fir had been outstripping the Sitka spruce but was of "corkscrew" habit. Cutting out the Douglas fir was thought to be too severe an opening of the crop, so they were severely headed back. Side branches then developed into leaders but did not interfere with the Sitka spruce leaders which have since maintained their lead, the Douglas fir playing a useful role as "fillers" to help clean the Sitka stems.

The nursery is reported to be the best Spruce nursery at present in operation in the country. Large stocks of Sitka spruce transplants were seen and weeding of the transplant lines was in progress. A number of the members were impressed by the difficult conditions under which the men were carrying out this tedious work.

During the afternoon walk, the party paused at one point to survey the impressive panorama of forest and moor. This general view brought members' minds to bear on the larger aspects of afforestation—such problems as acquisition of land, extraction methods, the establishment of wood-using industries and fire protection being discussed. On the latter topic, Mr. Clear referred to the great advances precipitated by the war in fire protection methods and equipment in English forestry. As our plantations increase in acreage and in value, these problems will require to be faced here too, he said.

Tsuga heterophylla (Western Hemlock) is not widely used in

Irish forestry but a small plot of this species seen in the afternoon evoked much admiration. It was a dense unthinned pole crop of about 40 feet in height with extremely dense canopy, so that we stood in a dim twilight. The stems were of excellent form and the impression given was that the species was entirely at home in the habitat of this sheltered valley in a high rainfall area.

We may sum up our impressions of forestry in the Slieveblooms somewhat as follows: The retentive soils and high rainfall combine to make Spruce—especially Sitka spruce—the natural selection over large tracts. Yields and quality promise to be exceptionally good, making afforestation a very profitable proposition from the national point of view. The gradual building up of a large population dependent on forestry and its allied industries was foreseen and it was suggested that active measures were already due to establish and encourage forest communities—witness the current shortage of labour in the district, even for normal forest maintenance.

It was interesting, too, to notice that those species which predominated in the plantations existing at date of acquisition have now been largely discarded in favour of the comparatively recently introduced Sitka spruce. Scots pine is in general disappointing; European larch suffers severely from canker and is seldom vigorous, while Norway spruce has proved no match for Sitka in point of height growth or volume production. Thus, as in the Society's previous excursions, we were again made to realise the enormous revolution which Irish forestry is undergoing in our time and the vast scope for experiment, trial and observation which the new conditions afford.

We left Baunreagh with the impression of great things accomplished, great promise for the future, and great lessons still to be learned in an art which in this island is still in its formative stage.

Third Day—5th June. De Vesce Demesne and Durrow Forest.

The weather prospect for the final day of the excursion was very threatening when the party assembled in the morning at the sawmills of Count de Vesce's magnificently wooded demesne at Abbeyleix, and in the earlier parts of the day some very heavy showers were experienced. However, after mid-day, periods of sunshine predominated and became continuous as the afternoon went on, and the excursion was concluded in delightful weather conditions. At the sawmills the members were welcomed by Captain Fitzherbert, agent for Lord de Vesce, and by Mr. Brown, Head Forester of the estate. A short time was spent in viewing the highly efficient mechanism and layout of the estate sawmill, with its 70 h.p. oil engine, after which the party proceeded through the demesne under the leadership of Mr. Brown.

The woodlands on this estate run to some 2,000 acres and stand mainly on limestone drift and cut-away peat bogs. A good deal of

planting has been done on the latter type with varying degrees of success but some magnificent Norway spruce and Scots pine were seen on peat in the roadside belts during the drive to the sawmill. There are also extensive areas of old hardwoods, some of them very old and probably linked with the primeval forest of the country. Mr. Brown first brought the members through the Park Hill wood, which is said to be a part of the ancient Nore valley oak woods. Pedunculate Oak predominated and the trees were of magnificent stature, with fine spreading crowns and, where the stocking was close, some lovely tall clean stems were to be seen. The age of this wood was estimated at not less than 300 years, and estate records show that tempting offers of up to £74,000 were refused for these Oak woods during the Napoleonic wars. The party were attracted by one colossal old veteran growing in a more open part of the wood and measurements show it to have a diameter of 22' 4" (i.e., Q.G. of 67"), with a crown spread of 75 yards. With the bluebells in flower, the walk through this wood was an experience of great beauty.

Subsequently the party passed through some mixed closely-stocked Oak/Ash/Birch woodland and saw some thriving coniferous plantations on old hardwood ground, in which Scots pine, Japanese larch and Norway spruce were principally represented. A 1938 plantation of Scots pine at about 16' high and a 1937 Norway spruce stand at 12'-15' were particularly promising. Emerging from the plantation areas, some very fine Beech parkland panoramas met the eye and some excellent specimens of open grown Poplars were seen. One Black Italian Poplar, said to be recorded by Professor Henry, was estimated at 120' high. The party then passed through the gardens of the estate and admired the old mansion. Little time, however, could be spent in the arboretum which contained a varied range of good specimen trees and was a veritable paradise for any tree botanist. A reluctant departure was taken from the beauty and interests of this demesne and the members were greatly indebted to Lord de Vesce, Captain Fitzherbert and Mr. Brown for the pleasant and all-too-short hours they spent there.

Durrow Forest.

At Durrow Forest the visit was initiated propitiously by the taking of lunch at Dunmore House, under the efficient organisation of Mr. McMenamin, the Forester at Durrow.

Dunmore.

This property was taken over by the Department in 1936, from the Irish Land Commission. The area purchased was 324 acres and the ground was mainly stocked with old woods and young plantations but a large proportion of the best timber had been removed beforehand. There is no very decided aspect over the area and the

elevation is between 270' to 300'. Exposure is generally moderate. Calcareous drift soils were again predominant. Since taking over, the Department have cleared and replanted some 156 acres of old woodland and 156 acres of woods have been retained in their original state.

At Dunmore, the party's activities were confined to one area, Compartment 34, but it is doubtful that, if a hundred compartments were traversed, one of greater interest than that selected would have been met with.

Before entering the wood, Mr. McMenamin gave a very useful sketch of the history of the wood within recent times. He said that the stand was now about 120 years old and that, despite its present well-stocked appearance, a large number of good trees—some £500 worth—had been removed in the past. In treating the wood, the Department had to deal with a heavy ground cover of laurel and hazel which had to be cleared out, together with a number of ill-shaped hardwoods and rough Scots pine and European larch. A number of Norway spruce (which Mr. McMenamin said did not develop well on this ground) were also removed. The objective of this work was natural regeneration, which did not come too readily at first. The ground surface of selected areas was scratched and the humus generally loosened up to encourage natural regeneration, but it was found that results did not differ substantially from those on undisturbed areas. However, a measure of success had now been attained, and there was a good carpet of regeneration through the wood.

The party then entered this fine old mixed stand, in which Beech was predominant with occasional Scots pine, European larch, Silver fir and Norway spruce, there being a fairly dense canopy and moderate ground light. The average height throughout lay between 80-90 feet and the Beech were of uniform excellence, but occasional European larch and Scots pine that were seen could seldom be equalled in stature. A Scots pine was measured roughly and gave a timber height of 60' (Total about 95') with Q.G. B.H. of 19". This tree was calculated to contain 90 cubic feet of first-class timber. For the second time on the excursion, the silviculturist entered a paradise and the ground surface became the cynosure of all eyes. A fairly even distribution of young Beech seedlings was first in evidence, with oak and ash, but soon more remarkable finds were made and as occasional Scots pine, European larch and Norway spruce were discovered interest became hectic. A soil pit was then examined which revealed about 4" of dark humous soil over about 2½' of calcareous sandy brown earth which again rested on a straight boulder clay.

A discussion then took place which Mr. McEvoy opened by offering the opinion that the overhead canopy and present stocking was far too close and that one third of the older Beech crop in its

denser portions could be removed to give proper light and encouragement to the young seedlings. He emphasised the fact that if the ground were carefully inspected it would be found that there were sufficient seedlings there to form a close crop if allowed to develop. His view was that in such cases as we saw here the inclination was to delay the opening of the canopy too long.

Mr. Beresford-Barrett, contributing, said that he did not agree with Mr. McEvoy's views in this matter and that in his opinion the removal of the overhead Beech should be carried out slowly with the utmost caution and only from ground where the floor was bare and grass-weed growth absent. It was important to make sure that the regeneration crop was well established before taking any risks by giving light for weed growth. Until this stage was reached, a heavy canopy should be retained.

Mr. O'Beirne said that he would favour a bolder approach in the opening up of the canopy but that in this particular case the advent of too strong weed growth could be subdued by scarifying the ground. Looking at it from a general point of view, he did not agree that so much effort and time should be given over to the regeneration of Beech, as it was not an economic tree for timber production and should be kept out and some of the quicker growing and more valuable timbers of the present and the future should be brought in.

Mr. Clear thought that scarifying would not do much good and that canopy shade alone kept down grass for Beech regeneration, and that therefore the best course was a firm but gradual opening of the canopy.

In dealing with problems of Beech regeneration such as was presented to the party at Dunmore, a view is held, not unreasonably, that a great deal of harm can be caused to Beech regeneration in the young seedling stages by retaining too heavy overhead shade for too long. There seems to be abundant evidence that when subjected to such conditions the young Beech go into a state of suppression and live but do not grow and eventually develop into hard, thick, misshapen things of some age but no size. Attempts to obtain normal vigorous growth by eventually admitting an abundance of light does not usually prove successful, and they seem very reluctant to be drawn from their state of stagnation at that stage.

Castledurrow.

From Dunmore the party drove to Castledurrow area where the Convener, Mr. FitzPatrick, gave the members an introductory talk. He said that we now stood in Capponellan Wood, part of an estate once owned by Lord Ashbrook. This area, together with other properties amounting to 752 acres, which later came into the possession of Maher Bros., Ltd., was sold to the Department in 1931. Previously the woods had been mainly stocked with Oak, Ash and

Beech but it was not a high quality stand and it was practically all removed and later replaced by the Department with conifers, for which the ground was thought better suited. The part of Capponellan Wood which the party would see was more or less flat and lay between 330' and 550' elevation on carboniferous limestone with limestone gravel soils to brown sandy loams. The ground conditions were generally dry and the area had been planted in 1934.

The afternoon was now advancing and the party pressed for time, but a very tidy nursery was first seen, with some excellent Beech seedlings and transplants. In the seed beds Sycamore had germinated but a bed of Cupressus Lawsoniana seed was still dormant. Good transplants of Oak, Sitka spruce and Alder were also seen.

The party then proceeded along the main ride and viewed the plantations.

Mr. McMenamin told the members that Scots pine and Norway spruce had been planted mainly in the first place, with some areas of Sitka spruce and other species. Ash, Hazel and Birch, which had been on the ground at the taking over, had been suitably retained as nurses to the young conifer crop but despite this, the area had suffered from frost and in May, 1945, the exceptional late spring frost caused really severe damage and they were now faced with some really difficult problems in the handling of the plantation. Sitka spruce had been practically killed out by the 1945 frost. In such areas Ash, where available on the ground, was being treated as the ultimate final crop and Birch used as a "filler" with a view to future underplanting. Rabbits had now come into the area in numbers and added to the difficulties. A soil pit was examined and revealed the presence of solid "craggy" limestone at about a foot down overlain by gravelly loam.

Certainly the evidence before the members was one of exceptional frost damage, and it was noted that even the Birch had been severely cut back while young trees under more or less complete cover had also been severely burned. Norway spruce had been affected and to a lesser degree, Scots pine, but neither to such an extent as to prevent their development as satisfactory crops. Many suggestions were made. Mr. Clear thought that opening out of Ash and underplanting with *Abies grandis* might only lead to further and similar complications.

Mr. O'Beirne said that a policy of early replacement by Beech and Larch mixture should be adopted.

The day and the excursion had then to be concluded as members had to make train and 'bus connections to many parts of the country.

Mr. FitzPatrick thanked all the members for coming and for their keenness and enthusiasm throughout the excursion and in particular he wished to register an appreciation of the work done

by Mr. O'Leary and Mr. Crerand in their organisation and laying out of such excellent routes which presented items of such varied interest to the party. They had also obviously gone to great trouble to ensure the members' comfort throughout. Thanks were also due in great measure to Messrs. Dalton, Cronin and McMenamin for their hospitality and shepherding of the party within their charges.

Mr. O'Beirne (Vice-President) thanked all for coming and for their staunch support, and praised the skill of Mr. FitzPatrick's convening and the continual and valuable contribution that he had given in the running and support of the Society. He hoped that he would see a bigger gathering next year.

Mr. Clear appealed to the members for any suggestions for improvements in the organisation of the excursions and said that it might be a good idea if the Society were to hire a 'bus for these occasions.

After some further conversation among the individual members and leave-taking, the party regretfully broke up.

Cinematograph Show

On the Wednesday night of the excursion the Society, for the first time in its history, presented a cinema show for the entertainment of its members. Judging alone on the comments of the members after the show the venture was an unqualified success and it is to be hoped that it was the forerunner of many of its kind. The films chosen were very well shown and had high entertainment value and were of general and technical interest. Variety of subject was a high note and any feelings of monotony were far away.

Of particular forest interest were items showing timber felling and extraction operations by up-to-date methods and the full and speedy use of the tractor and timber truck together with overhead wires in timber extraction. Labour saving nursery methods with the Forestry Commission were shown and the much heard of tractor plough for preparing ground was seen in action on some rough bracken-heather ground. From the context of the latter item it was interesting to note that the planting of the young trees was carried out in the ploughed out furrow and not on the inverted sod. A very vivid picture was also given of the great forest destroyer, fire, in Canadian timber country. Methods of combating these great fires were well brought out and apparently in Canada they value their forests sufficiently to bring every applicable modern invention to bear on fire protection. Watch towers, telephones, wireless and aircraft are all employed to pin point an outbreak at the very earliest moment and then up-to-date fire engines and fast trucks are used to get the defence to the spot in the shortest possible time.

All these pictures were an inspiring lesson to Irish Foresters and many of them sitting in the audience could scarcely have avoided some feeling of envy.

The Department's forestry film, "From Seed to Sawdust" was also very well shown and gave in successive stages the important operations in forestry including seed sowing and lining out transplants in the nursery, planting out on the mountain side, cleaning of the plants afterwards, thinnings and ultimately felling and sawmilling operations. A remarkable performance was put on by Mr. FitzPatrick who gave a running commentary on this film which did not in effect fall short of his better known namesake of the "travelogues." This, it might be noted, is a new inclusion amongst the duties of Convener.

Films of general interest gave us excellent technicolour records of wild bird life in Canada and Canadian methods of identifying and controlling farm weeds. In lighter vein were two films entitled "Let's All Sing Together" and "Broncho Busters" and these gave good value too, though in the former case this was not altogether projected from the screen. At the conclusion of the show Mr. O'Beirne (Vice-President) thanked the Portlaoighise Film Society for their co-operation in showing the films. For this most enjoyable and instructive show the Society are indebted to a number of people. To Mrs. Henry greatest thanks are due for the instigation of the project and without whose generous gift to the Society the show could not have taken place. To Mr. Clear we are indebted for his energetic organisation and to Mr. Delaney and Mr. Odlum of the Portlaoighise Film Society who put on the show with such skill and technical perfection. Finally thanks are due to the Canadian High Commissioner, the British Forestry Commission, and the Department of Lands (Forestry Division) for supplying the films.