

TENTH ANNUAL EXCURSION

FIRST DAY

THE Councils decision to return to the Valley of the Suir for the Society's 10th annual excursion, proved to be a very popular one, and the attendance included 14 of those who attended the first outing of the Society there ten years ago. Clonmel again proved to be an excellent headquarters and members freely expressed their appreciation of the accommodation it provided.

The party travelled in two buses to the Department's forest at Carrick-on-Suir. Here, our President, Mr. H. M. Fitzpatrick, welcomed the members and the guests of the society, among whom were Mr. Burgess representing the Northern Ireland Ministry of Agriculture and Mrs. Burgess, and Mr. McPhearson of Argyleshire. Mr. Fitzpatrick went on to give an interesting dissertation on the history of the district, with particular reference to the de la Poer family, former owners of the lands we were about to visit. He referred to an account by Dr. Nesbitt of a visit to these woods some 50 years ago. Quoting from Dr. Nesbitt's account he said: "The plantations extend to about 1,200 acres, most of which consist of Larch, Scots Pine and Spruce under 40 years of age, those about 20 years predominating. The system aimed at is to thin freely all the young plantations at about 15 years, some of the biggest poles being cut as well as all the smaller ones. Then at about 20 years, the plantations are again thinned rather freely, and once more at about 27 years, and then finally clear felled when about 33 to 35 years, after which the lands are replanted with larch chiefly, at 4' x 4'.

"This system is based on the two main facts (1) that larch is the only timber which can at present be easily or profitably disposed of, and (2) that the only favourable market at present is for pitwood, down to 3" diameter for export to Wales and it yields altogether about 115 tons per acre or an annual increment of 3.3 tons per acre. The land is well sheltered and of good quality." Mr. J. A. Crammond, representing the Minister for Lands, welcomed the party to Carrick-on-Suir Forest and gave a brief outline of the route to be taken. He then handed the party over to the convener, Mr. T. McEvoy who conducted us through the Forest.

Our first stop was at a 64-years-old European Larch stand. Planted in 1889 its present stocking is 120 stems to the acre. Average B.H.Q.G. is 8½" and average total height 76'. Volume 2,300 c. ft. per acre. We next saw a Scots Pine stand planted the same year having a stocking of 240 stems per acre with a B.H.Q.G. of 7¼" and a total height of 54'. The volume was 2,000 c.ft. to the acre. Members were very interested in these stands and agreed that they had benefitted by treatment since our last visit. The party was unanimous that these crops should be allowed to stand for some time longer despite the fact that a ready market exists for this type of material. The next stands visited revived the

evergreen question of thinning. Mr. Clear held that in vigorously growing stands such as those we were looking at, heavier thinning would be more beneficial to the crop and more economical. Mr. Crammond pointed out that frequent light thinnings made it possible to meet market demands better. Mr. Bogue supported Mr. Crammond and emphasised the importance of marketing timber when the demand existed. Mr. Galvin expressed the view that market reporting should be a Government function.

Mr. Mangan gave details of tests carried out by the E.S.B. on native poles. He said that tests were carried out at Inchicore on five species of native poles, and for comparison purposes, one imported species, Baltic Redwood (*Pinus sylvestris*). Each pole was held between two rigid supports 6' apart and a gradually increasing load was applied. He summarised results of the test as follows.

(1) Only one type of native pole (*Thuya plicata*) had a breaking stress considerably less than the imported pole.

(2) One type (Douglas Fir) had a value well above the imported pole.

(3) All the poles except *Thuya plicata* had a breaking stress greater than the Board's calculated ultimate breaking stress for safety.

Individual results were :—

Species	Breaking Strength in lbs. per sq. in. as per experiments	Breaking strength in lbs. per sq. in. as per Dept. of Scientific and Industrial Research (Princes Risboro')
Imported		
Baltic Fir	8,400	8,850
Sitka		
Spruce	9,500	6,800
Norway		
Spruce	8,300	7,850
Douglas		
Fir	10,420	9,600
<i>Thuya plicata</i>	5,320	not available
Corsican		
Pine	8,740	8,100

Mr. Clear said that it was very important that architects and engineers should be educated to the quality of our home grown timbers.

At the end of the trip through Carrick-on-Suir Forest, the party enjoyed an al fresco meal in pleasant sylvan surroundings.

We then proceeded to Kilsheelan forest. Our first stop here was in Gurteen where *Tsuga heterophylla* had been introduced as a filler through an open crop of oak. The oak was subsequently removed and the *Tsuga* has developed into a healthy vigorous crop. Commenting on this crop, Mr. Clear suggested that *Tsuga heterophylla* might be grown more extensively. Mr. Mooney said that the species had become more popular in recent years and would probably supercede Silver Fir

for shade planting. Mr. McEvoy remarked that the timber of this species imported to the London market had a higher moisture content than other conifers, but that kiln drying proved successful, and a ready market was available for the timber. Mr. Deasy said that *Tsuga heterophylla* was difficult to grow due to its poor germination, its susceptibility to frost damage in the seed beds, the difficulty of importing reliable seed and the scarcity of suitable parent trees at home. During a discussion on a shelter belt of scrub oak left after the remainder of the crop had been removed, Mr. Mooney said that the belt was justified as a fire break as well as a shelter belt. He recommended the establishment of hardwood belts around most of our conifer areas. Such belts were good for three generations of spruce.

In compartment 104 we saw a pure crop of Douglas Fir which was planted in 1918 and is at present carrying 250 stems to the acre. The present average B.H.Q.G. is $7\frac{1}{4}$ " and the average total height is 60', giving a volume per acre of 2,660 c. ft. It was noticed that trees which had enjoyed ample growing space all their lives had Quarter Girths of up to 11". A lively discussion on spacing ensued.

We next visited a 50 acre E.L. plantation belonging to Messrs. McAinsh and Co. where we were met by Mr. A. B. Ross, managing director and Mr. Hamilton. Mr. Hamilton gave the party a brief history of the plantation which is carrying a crop of 260 trees per acre having a volume of 2,600 c. ft. The party was impressed by the excellent condition in which the plantation was maintained. We were pleasantly surprised when Messrs. McAinsh's representatives treated us to refreshments which were very welcome after a long day's walking. Mr. Mooney thanked Messrs. Ross and Hamilton on behalf of the party.

The Society's annual dinner which was held in the Ormond Hotel, provided an excellent ending to a very interesting if somewhat strenuous day.

SECOND DAY

ON the second day the party first visited Bansha Forest. Lying on the slopes of the Slievenamuc ridge this forest comprises about 2,837 acres in a compact block. The soil, derived from O.R.S. series is light and generally suitable for pines. On the lower sheltered slopes, however, Douglas Fir and spruce compete for pride of place.

Our inspection started at Kilshane property and we then proceeded along the wooded southern slopes. It was noted that on this ridge Douglas Fir was having a lean time and that pine might have been a happier choice. Further on we observed some promising groups of pole stage Douglas Fir. They had been heavily thinned at 15 years of age as a safeguard against snow-damage. Shoot growth was quite good and the strain was considered to be good also, judging by the fine branching and straight stems.

Continuing, the party moved through some promising thicket stage Norway spruce. Some checked patches were observed and it was noted that calluna formed 50% of the ground vegetation, which brought on

the familiar questions regarding the advisability of planting spruce on such sites. Some members contended that the crop would pick up on suppressing the heather; Mr. Clear was of the opinion that Japanese Larch or a pine would have been more satisfactory. It was generally agreed that pine would be more economical in the long run considering the initial checks suffered by spruce.

The next halt was made in Ballagh Property to study the 40-years-old mixed stand of Scots Pine and European Larch. This stand was originally planted as a mixture by groups and records reveal that per acre there are at present 190 E.L., and 400 S.P. The respective Quarter girths at breast height are $5\frac{1}{2}$ " and $6\frac{1}{2}$ ", while their respective heights are 58' and 55'. Mr. Crammond informed us that the crop was thinned in 1946, 1947, 1951 and 1953. The thinnings were light, about 60 stems per acre being removed at each thinning. Members expressed surprise at such frequent light thinning. Some members were of the opinion that heavier less frequent thinning would have been more economical and sounder from a silvicultural point of view. Mr. Crammond in reply pointed out that from the financial point of view it was wiser to fell and sell when the price was favourable other things being equal. Many poles, he explained, were found suitable for transmission poles and consequently fetched high prices.

The party then visited a mature 80-year-old stand of S.P. which had been opened out very heavily with the object of inducing natural regeneration. Unfortunately, however, a dense growth of calluna and *Vaccinium* had completely negated the effort. Mr. Bogue was of the opinion that ground preparation such as mechanical scarifying would increase considerably the chances of success by giving a better seed bed. We then continued the ascent to Lisnagaul property on the hill top. Here, on this exposed height, interest was immediately focussed on the poor performance of Scots pine and the remarkable performance of *Pinus contorta*. Here, too, we had the unique experience of comparing the mountain type *contorta* with the low land variety. As thinning was in progress it was natural to expect a lively discussion on the treatment of this species. This stand had been green pruned—the thinning was in the nature of a light crown thinning and the removal of crooked stems. It was agreed that it is important to thin this species early owing to its fast rate of growth and tendency to windfall. Mr. Condon considered it a wasteful practice to "brash" all stems prior to thinning.

It was gratifying to learn that the thinnings were being sold profitably to the Wallboard Factory at Athy. The unspoken question in everybody's mind was, "How are the poles extracted?" because there was no road for miles, the terrain was rough and steep and altogether unsuitable for slinging with horses. The answer came abruptly even dramatically in the shape of a large lumbering vehicle which bumped and tore its way effortlessly up the steep heathery slope. It was a converted Artillery Quad car designed to haul guns and crews on ground such as this. Its four wheel drive and powerful engine rendered it ideal for its present tasks.

Descending the slopes we passed through a thriving stand of mixed Douglas Fir and Sitka spruce. Here the soil was more fertile and kinder conditions prevailed, and it was noted with satisfaction that the aim in previous thinnings was to maintain this happy mixture.

After lunch we travelled to Dundrum to inspect the modern sawmill and drying kilns, and to visit the forest. At the mills we were welcomed on behalf of the Minister for Lands by Mr. G. Haas and then addressed by Mr. Meldrum who during his term as Director of Forestry had been responsible for modernising this sawmill. In his address Mr. Meldrum said that his object in modernising this mill was to refute the general opinion that our native timber was inferior to imported stock. He said that native timber subjected to proper treatment could compare with any but he emphasised that proper seasoning was essential.

Mr. Moriarty first described briefly the lay-out of the mill and drying kilns then conducted the party on a tour of inspection which included a brief description and a practical demonstration on each machine. At the drying kilns he explained fully the theory of kiln-drying as well as demonstrating the working of the kiln.

From the sawmill we visited some of the older stands of this centre but the main interest was centred in a stand of Black Italian Poplar planted in 1927. Originally the planting was of poplar and alder in mixture at 5' x 5' spacing but the alder has nearly all been cut out so that the present crop is almost pure Poplar at 10' x 10' spacing. The average height is 78 ft. and the crop now carries just on 3,000 cubic feet per acre. Mr. Clear admired the stand but questioned the wisdom of growing poplars on a site which would have produced excellent spruce. He believed that poplar was essentially a farmland tree in that it can be grown admirably in hedgerows producing early shelter and a large volume of reasonably good commercial timber. Many members contributed to the lively and interesting debate which was wound up by Mr. Morris with a resume of poplar culture as practised on the Continent and particularly in Germany. He pointed out that there was no finality or general agreement, even among the acknowledged experts of other countries, on the general treatment, spacing, etc., for poplars.

THIRD DAY

ON the morning of the third day the party assembled at the State Forest of Curraghmore. This area comprises 2,680 acres of plantation and woodland, most of which is leased from the Marquis of Waterford, and contains various age classes.

Attention was concentrated in the Tower Hill section on the lower slopes of which the party first inspected a crop of 19-year-old sitka spruce which had just received its first thinning. In this operation 114 cubic feet per acre had been removed and some high pruning of selected stems had been carried out. It was stated that this crop had had a tough struggle in the early stages having suffered severe competition

from lush habaceous vegetation and damage from Spring frosts, but that since it established its ascendancy growth had been extremely rapid.

Further up the slope, however, another plantation of nineteen-year-old sitka spruce was inspected which presented a different picture. The soil here is dry but deep and the vegetation is predominantly "Irish" furze (*Ulex gallii*). The trees were not on an average more than four feet high and members were unanimous in ascribing such slow growth to the notoriously severe competition which this species of furze can offer. Any gloomy prognostications in respect of the crop were offset by reference to examples of similar severe inhibition of the growth of sitka spruce by this furze, which check however was followed by rapid and sustained growth as soon as canopy was formed and the furze suppressed. On the higher reaches of the slope the sitka spruce had been beaten up with Japanese larch and the latter had grown comparatively well, competition from furze notwithstanding. This aroused a brisk discussion on the relative suitability of these two species for such sites. It was generally agreed that, with modern mechanical equipment, pre-planting cultivation of similar sites is now not only possible but highly desirable. At an elevation of 700-800 feet an 18-years-old crop of Corsican pine on a dry grass site was inspected. The crop was poor and the local officers stated that the species does not thrive in that locality. Some were of the opinion that *Abies nobilis* might be tried on such sites.

On descending the western slope the party inspected an area carrying old, widely spaced, spreading beeches. An attempt was being made to restock the area by natural reproduction of the beech. Much success had been achieved but in some cases the operation was proving very difficult as the necessary conditions normally brought about by the "light and often" regeneration fellings were not possible of attainment here due to the great area exposed by the removal of any one of the trees. Seedlings are not able to survive for long the heavy shade of the parent tree but on the other hand the felling of the parent tree in time to save the seedlings is providing its own problems—seedlings given full light are smothered by the vegetation that springs up. The periodic removal of some of the heavier limbs where such is practicable was suggested as one way of overcoming the difficulty here.

From the State forest the party passed into the Curraghmore estate property of the Marquis of Waterford where we were welcomed by Lt.-Col. Silcock. Near the nursery an old wood of about 15 acres was inspected. The striking feature here was the abundant and vigorous regeneration of the common silver fir (*Abies alba*). Lt.-Colonel Silcock outlined the technique employed in achieving such successful restocking and mentioned the difficulty experienced in preventing damage to the young growth during felling operations. In the pleasure grounds members had a delightful time examining the fine collection of rare and beautiful trees and shrubs. Among the well known major tree species

in adjoining groves were some massive oaks and truly lordly pines, the latter (*Pinus sylvestris*) being up to 15 feet in circumference and 120 feet high. A specimen of Sitka spruce, probably one of the earliest introductions of that species to this country, stated to be 166 feet high with a circumference of 18 feet at 5 feet from the ground illustrated the possibilities of the species in this country.

Oak is an important constituent of the old woodlands and the average volume per acre in the pure oak stands of over 100 years is 2,700 cubic feet.

On leaving the estate the President, on behalf of the Society, thanked Lt.-Col. Silcock for his kindness in conducting the party through the estate.

After lunch which was taken at St. Joseph's Convent, Portlaw, the party travelled in buses to the Lismore estate, property of His Grace, the Duke of Devonshire. The party was met on arrival by Mr. Cantillon, who stated that the estate contained 2,000 acres of forest, 1,700 acres of which were productive and 300 acres scrub. Most of the planting had been done prior to 1900, the total planting during the period 1935-50 being only 58 acres. A nursery and sawmills are attached to the forest in which all the estate plant requirements are produced and all timber felled is converted.

One of the areas visited was Knocknagoppul Wood. This comprised two sections, one planted in 1831 and the other in 1851. The species was Scots pine mainly with some hardwoods, chiefly oak. The Scots pine in the first section numbered on an average 75 trees per acre with a volume of 5,000 cubic feet while in the second section the stocking was similar with a volume of 4,850 cubic feet per acre. Mr. Cantillon stated that it is intended to carry out clear felling in two ten-year felling cycles and to replant the felled areas immediately, mainly with fast growing species such as poplars of the Black group, the aim being the largest volume tree in the shortest possible time. To achieve this an initial spacing of 20 feet apart will be adopted for the poplars.

In this wood members inspected a 10 h.p. petrol driven "McConnell" saw unit which was being used in the conversion of inferior logs to fuel blocks.

In the nursery were stool beds of six varieties of Black poplar which had been imported from England and which were certified canker free and true to name. One purpose of these stool beds is to provide high-grade cuttings from which will be derived the planting stock required in the replanting work mentioned above.

Some seed beds of *Pinus contorta*, *Pinus radiata* and Sitka spruce sown with a McCormick corndrill were inspected. This machine has thirteen tines and it was stated that by closing the centre seed outlet an alley 12 to 14 inches can be left between every 6 rows which rows are themselves 6 to 7 inches apart. To facilitate distribution the seeds are mixed with sand in the ratio of 1 part of seed to 3 parts of sand. Norway spruce had been sown by this method the previous year with a fair

measure of success, but some members were rather dubious of the suitability of the method for the smaller seeded species such as *Pinus contorta* and Sitka spruce (the sowing of these species had been carried out only a few days before and it was not possible to judge results).

Before leaving Lismore the party was very kindly treated to refreshments by the Estate on behalf of the Duke of Devonshire.

On the return journey to Clonmel the party were given the opportunity of inspecting the recently constructed foresters house at Clogheen forest.