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## Annual Study Tour

### *First Day.*

On Tuesday, 6th June, 1961, the 46 members attending the 1961 Study Tour assembled at the Eccles Hotel, Glengarriff, before moving to the Estate Property of Glengarriff Forest. At the first stop Mr. W. Shine, District Officer, welcomed the party on behalf of the Minister for Lands and introduced the Forester-in-Charge, Mr. Walsh, and the assistant Forester, Mr. McCarthy. This Property was originally part of the Bantry estate having been acquired by Lord Bantry at the end of the 18th century. In 1955 the Shelswell-White family, sold the lands, which comprised 424 acres of old woodland and 519 acres of bare land, to the Forestry Division.

Mr. Shine's opening remarks on the ever-present amenity question in Glengarriff Forest were to be re-echoed throughout this Study Tour, centred as it was, in one of our principal tourist areas. The tricky task of carrying out good commercial forestry while at the same time preserving the undoubted beauty of the area is being tackled by a gradual process, under four main headings :—

(a) Small fully stocked screens and knolls of old woodland, mainly oak, are being retained to preserve the "natural" appearance.

(b) By thinning out some of the oak which can be used for fencing stakes, bridging material and firewood, ground is made available for underplanting and group planting using *Eucalyptus* with some silver firs, beech and *Tsuga*, etc.

(c) In some areas away from the public eye, clear felling to the extent of about 20 acres per annum is carried out, followed by replanting using whatever species is best suited to the site.

(d) Bare areas, which are mainly low-lying boggy patches, are

also being planted up at the rate of 20-30 acres per annum, with Sitka spruce and *Pinus contorta*.

After looking at some of the underplanted eucalypts we were shown a 12 foot long oak bridging timber which had been squared to 12 inches in situ, by the novel method of using a two-man chain saw. This method greatly reduces the overall cost of production by overcoming the very difficult extraction problem. Following a working demonstration of this squaring operation, Mr. Shine showed us the small tractor-powered mill unit where oak is converted into fencing stakes and firewood. The mill was recently re-designed to operate with one tractor as the power unit, the side pulley driving the insert-tooth saw bench and the power-take-off driving a McConnell swing-bench. This, used in conjunction with a chain-saw for cross-cutting, has a remarkably high output but is only kept in operation for about a quarter of the year to prevent over-cutting in the forest. The party was struck by the ingenuity of this improvisation, operating, as it does, in the middle of the source of material and turning out fencing and bridging material for Glengarriff and other forests which would otherwise be far from any source of supply. Firewood in an area of comparative turf-scarcity finds a ready market locally.

A brief stop was made beside a delightfully harmless looking series of rapids in the Glengarriff River, which contain a "whirl-pool" with a most lethal reputation. As various members edged closer for a better look, speculation ran high regarding prospects of vacancies and promotions.

A plot of *Populus robusta* and *Populus gelrica* was the next point of interest but in spite of what appeared to be a favourable site this crop was considered disappointing by many of the party. The plants were 5 feet high, when planted in 1957, with a soil pH of 5, with no manurial treatment. Later the whole crop got 3 tons of lime per acre and two lines got a dose of nitro-chalk and potash which raised the pH to 6. The growth, however, is still slow and Mr. Morris favoured cultivating between the rows to suppress the lush growth of grass, rush and meadowsweet. However Professor Clear disagreed and cited the Dutch practice of growing alder at 5 foot spacing between the poplars.

Driving towards Macroom for lunch we were again forcibly reminded of the Forestry Division's responsibility with regard to the treatment of recognised and lesser known beauty spots. In the Pass of Keimaneigh we saw a variety of trees recently planted, including mimosa. However, the appearance of a fence and the inevitable exotic conifers in such a wild and hitherto tree-less place will inevitably cause some resentment until the public gradually comes around to recognising them as part of the scenery. One hopes that this same public will then become so attached to them that a similar outcry will be heard when an attempt is made to utilise these trees in the normal course of forest management. Time and hunger forced us to make one of the shortest

visits to Gougane Barra ever recorded, but we liked the look of the valley and also the very pleasing rural appearance of the twisty poles which held up the transmission wires.

The afternoon was spent in Glendav property of Macroom Forest, where we were first introduced to the Forester-in-Charge, Mr. Darcy, and to the assistant Forester, Mr. Murphy, by Mr. Shine, who then gave us a brief account of the size, progress to date and future programme for the whole Forest. Macroom Forest, employing from 60 to 80 men, has a planting programme of about 400 acres per year bringing the planted area to date up to 3,280 acres. As well as this, a large nursery has recently been opened and there is a  $5\frac{1}{2}$  miles per year roading programme.

A 25-year old stand of Sitka spruce was the first item for discussion. An estimated Top Height of 57 feet would put this in Quality Class II by British standards, but the volume given, of almost 4,000 Hoppus feet per acre, would appear, once again, to be the result of higher Stems Per Acre than that given in the Yield Tables. Mr. Shine sparked off a discussion by pointing out that the crown percentage of this stand was abnormally high, at 49%, taking the close espacement into consideration. Mr. Johnston thought that a deep soil gives a crop an increased volume combined with a capacity to stand a greater density with the crown persisting lower down the trees. Professor Clear produced again the useful rule of thumb which states that "20% of the top height = the spacing (in feet)". In the case of larch, 25% should be used. He was inclined to favour the view that the deep crown was due to the crop only receiving a light, and then an exceptionally heavy second thinning.

In his opening remarks Mr. Shine had mentioned the fact that in Glendav there was about 200 acres of *Pinus contorta* which was being badly blown and had to be cleared. We were shown the solution to this problem in the form of a creosoting plant in which the *Pinus contorta* poles were treated in the form of fencing stakes. The local farmers are very pleased with *Pinus contorta* as fence material claiming a life, untreated, of up to 10 years for a stake. Mr. Shine claims a 20 year life for the creosoted pole which they turn out at the rate of 15,000 a year at a cost of 1/4½d. each. Half of each stake is treated at a time, boiling for one hour and cooling for one hour. In reply to a query from Dr. Murray, Mr. Shine said that a second boiling might save creosote but the saving would be more than offset by the increased cost of the labour involved. The possibility of a mobile unit to bring the plant to the stakes is being investigated.

A further example of the increased efficiency in the Forest by using the right tool for the particular job was next demonstrated when we saw a "Cobra" portable rock-drill preparing road material for loading on to trailers. A saving of 10d. or 0.3 Standard Man Hours per cubic yard was effected by using this drill with spade-lug attachment in a very compact gravel quarry.

Following further discussions and demonstrations concerning road-making and bridging problems, the party returned to Glengarriff for dinner.

This year the Convenor had an innovation in the form of an evening excursion. Accordingly, after a somewhat shaky start, due to over-enthusiasm amongst the boatmen looking for custom, we were transported safely to Garinish Island. This island, now the care of the Board of Works, contains an outstanding collection of trees, shrubs and plants, many of them of sub-tropical origin. We were lucky to have the overseer, Mr. McKenzie, to guide us around the gardens and from him we learned something of their history. Garinish, formerly Ilnacullin, was originally little more than bare rock, clad only in patches of heather and holly, and it is recorded that it took about 100 men three years to lay out the gardens as they are now. These gardens, designed by Mr. F. A. Bryce, 50 years ago, comprise a formal Italian garden, rockeries, shrubberies, water gardens and arboreta of such variety that it is hard to record all one saw in so short a visit. Suffice to say that we were left with the impression that Mr. McKenzie and the Board of Works appear to be sparing no effort to keep up, and improve, this very beautiful and valuable collection. Of the many rare conifers perhaps the most interesting specimens seen were *Thuja koraiensis*, *Dacrydium cupressinum*, *Taiwania cryptomerioides* and *Tsuga yunnanensis*.

The return journey to the mainland in the twilight was not without incident and one likes to remember the unusual sight of Mr. Galvin being rapidly trans-shipped from one small boat to another in the middle of the bay, the operation having something to do with the loading limits enforced by the law!

A.M.S.H.

### *Second Day.*

The party set out at 9 o'clock on the second morning, in rather overcast weather. The buses stopped for a short period some miles outside Glengarriff to enable a bird's eye view to be seen of the forest. We were informed by Mr. Shine, at this point, (illustrating the tour of the previous day) how felling and replanting was being carried out so that amenity would be in no way lessened.

Our next stop was at the well known 'Ladies View' where we were introduced to the Forester, Mr. T. Moynihan and his assistant, Mr. B. O'Reilly. An extensive view of the forest area could be seen from the car park at which we had halted. It was easy for the party to comprehend the importance of amenity consideration.

Mr. Shine told us that 2,000 acres had been acquired from the Board of Works but due to objection from the local populace and other bodies, regarding the possible interference by forestry with scenic beauty and indigenous flora 1,247 acres had been left for amenity. Discussion followed as to the merits and demerits of tourism versus forestry.

At our next halt near Torc waterfall, Mr. Shine gave us the rele-

vant data for Killarney Forest. Established in 1933-34 it consists of areas, donated by Mr. Vincent, acquired from the Board of Works and from the Killarney Estate. Total area is 3,885 acres of which 820 acres is the plantable reserve. A large area of that classified as productive is in fact not so, as in Killarney the emphasis must be on amenity, so that much old, uneconomic and scrub timber must be held for scenic purposes. This was so, near our stopping place where 100 acres of scrub oak served the purpose of an amenity screen. The present labour force of the forest is 38 men.

We were told by Mr. Shine as we made our way to the foot of Torc, that the policy regarding the old hardwoods in the stand through which we passed, was that eucalypts should replace the oak without drastically altering the appearance of the Forest. The area in question had been planted with some 700 eucalypts of 3 different species using moss balled plants from Glengarriff nursery. Planting was carried out 15'  $\times$  18' apart in cleared strips along the contours. Cost of clearing was £5 per acre and of fencing individual plants, £6 per acre. Damage occurred from deer and man. Various methods of protection were discussed including deer fencing, other fencing modifications, closer planting and elimination of competing vegetation (primarily the rhododendrons). The rate at which the oak could be replaced was commented on with regard to the rapid growth of *Eucalyptus*—up to 6' per annum, enabling the painless removal of the oak in 10 years under the screen of 60' high *Eucalyptus*. Some of the problems arising from a *Eucalyptus* crop were commented on particularly the fact that the texture of the timber might not facilitate marketing, though indeed possibilities existed for the use of *Eucalyptus* for boards and furniture. Mr. Mooney mentioned that young *Eucalyptus* timber was considered unreliable and tended to split, but that good hardboard had been got from *E. muelleri*, *E. urnigera* and *E. globulus*. These species may possibly grow successfully in Killarney.

We walked on to the waterfall where we saw a stand of Scots pine, Norway spruce, European larch and Japanese larch planted on the site of what was said to be the best larch stand in the country (sold to the State in 1915). Planting was carried out in 1923 at 6'  $\times$  6' spacing. The waterfall slope was planted with Scots pine, Japanese larch, Douglas fir, Sitka spruce and European larch.

Mr. Shine informed us that here the roading target was 25 miles, of which 15 had already been completed. The road was to be a circular one, from the Kenmare-Killarney road around the waterfall. The planning was at present being carried out by engineers and surveyors. A number of difficulties were involved, including the proximity of the road site to the brow of the hill, and the bridging of streams.

Questions arose regarding the treatment of stands on both sides of the streams and waterfall. On one side could be seen how the problem of building up an uneven amenity stand under scattered old stems was being tackled. On the other, the difficulties of applying

treatment to the removal and replanting of a crop nearly ready for felling. Various aspects of the problem were commented on. Mr. McNamara said that he agreed with the treatment of the over mature stand by the underplanting of silver fir, Douglas fir, beech, accompanied by the gradual removal of old stems, where an annual cut could be contemplated; but on the other side a more difficult problem presented itself and the same treatment could not be applied. Professor Clear mentioned the difficulties of management and protection. A number of other suggestions were given as to how the P.23 stand should be treated, such as the introduction of an understorey, heavy thinning or clear felling, removal of plots at a time, and the allied dangers of windblow in applying these solutions.

Before moving on for lunch a few more general points were raised regarding good public relations with local and other bodies, and the necessity that in amenity areas such as Killarney and Wicklow, forestry must at times bow to its master, the public.

We then re-embussed and travelled on to Killarney where a satisfactory lunch was enjoyed by the party.

After lunch we set out for Killarney Forest stopping first at Rose Wood Property where, to commence the afternoon's proceedings, we viewed an impressive stand of European larch. Planting of the crop was carried out 3'  $\times$  3' in 1912-13. The area had previously been growing larch and due to a residue of lop and top, suffered in its early years from weevil damage. The crop was thinned in 1923-25-26 but no present records exist of these thinnings. We then examined a one-tenth acre sample plot the statistics of which are—

Average tree	...	10½ ins. B.H.Q.G.
Volume per acre	...	3,333 cubic feet.
Crown	...	32 ft.
Form Factor	...	.48.
Stems per acre	...	130.
Age	...	48 years.
Quality Class	...	I.
Total Volume	...	4,329 cubic feet.

A discussion arose as to the treatment of the crop, whether or not to cash in on the timber as it stood, or to wait further. Many questions arose as to use and treatment of the stand. Concerning the risks of holding on to the crop, Mr. Mooney asked whether value of the timber would increase sufficiently with growth. Reference was made to the boat-building market, its possibilities and limitations especially with a view to disposing of timber larger than transmission pole size. Mr. Maher mentioned that group clearing might be attempted to cater for the transmission pole market. This could be carried on over a number of years and the spaces replanted with Douglas fir. One conclusion reached, was that trees at present suitable for transmission poles should be felled now, and the rest could be held for a further period.

Reference was made to the large income to be obtained from transmission poles. Out of receipts from forestry amounting to £500,000, £100,000 or one-fifth came from this market. Mr. Mangan said that though the demand for transmission poles was of late somewhat reduced it was still there. 800,000 had now been put up and a replacement programme of 10,000-12,000 per annum was in operation. Mr. McNamara stressed the importance of maintaining supply to meet the demand.

We moved on to our next stop Compartment 12, Mossy Farm Wood, where a Scots pine, European larch stand planted at 4' × 4' spacing in 1917 to replace a stand of Sitka spruce, Norway spruce, Scots pine which was sold in 1916, was observed. The plantation had suffered from weevil attack and 4 acres were replanted in 1924 at 4' × 4' spacing. Beside this plot we were shown a stand of Sitka spruce p. 1917.

We were told that butt rot occurred in Sitka spruce and Japanese larch in 1954—a rather alarming fact. Mr. Morris posed the question as to why the Sitka should be poor on the site under observation and suggested the theory that the influx of grass might cause checking in the spruce. A question was raised by Mr. Shine as to why Sitka should develop butt rot on dry sites.

We then moved to C.13 and viewed a  $\frac{1}{4}$  acre plot of Corsican pine p. 1917. Statistics of the crop compared with those of Yield Tables were as follows:

	<i>Stand</i>	<i>British Yield Table</i> <i>Quality Class II.</i>
Age	44	45
Stems per acre	372	305
B.H.Q.G.	8 ins.	8 ins.
Total height	60 ft.	61½ ft.
Timber height	55 ft.	
Vol. per acre	4,884 cu.ft.	4,060 cu.ft.
M.A.I.		156 cu.ft.
Form factor	.493	.49 cu.ft.
Length of crown	43 ft.	

Mr. Mangan spoke on the use of Corsican pine for transmission poles by the E.S.B. Stems had been taken from this stand. They had been at first creosoted. It was noted that they absorbed a large quantity. They were erected on an experimental line at Kilcock. On testing (boring etc.) good results showed. In strength Corsican pine appeared equal to Scots pine. One pole showed rot, but that was ascribed to the fact that the rot probably occurred before creosoting because it had not been placed on scids. Here, rot had occurred 10' from the butt of the pole.

Our last stop was in the same compartment at a stand of Scots pine the statistics of which were as follows :

			Stand	British Yield Table Quality Class III.
Age	...	...	44	45
Stems per acre	...	...	430	550
B.H.Q.G.	...	...	6 ins.	5½ ft.
Total height	...	...	43½ ft.	42½ ft.
Timber height	...	...	34 ft.	
Vol. per tree	...	...	23½ cu.ft.	
Vol. per acre	...	...	2,055 cu.ft.	1,970 cu.ft.
Form factor	...	...	.439	.45

The stand had been planted with 1 + 1 + 1 plants, and after planting, suffered from pine shoot beetle attack. This was mentioned as a reason as to why 3-4 year old Corsican pine plants had been chosen in the previous stand.

Mr. Maher mentioned the influx of holly as an especial point of interest.

Other problems discussed regarding the crops, included the disposal of the crop in question. It was noted that the growth quality of the Scots pine was poor, as seemed to be the quality of Scots pine throughout Europe. Mention was made as to the importance of local provenance, a specific example given being the Sitka spruce from Ballygar. The discussion finished with comparison between contorta pine and Scots pine losses, the possibilities of *Pinus radiata* and the effect on crops of the wide variety of soil types in the district.

We adjourned once more to the buses and set off via a circuitous but picturesque route through Kilgarvan Forest and by Ballingearry where we saw recent land acquisitions, to Glengarriff.

### Dinner.

Our last night commenced with an enjoyable dinner at which foresters and local dignitaries were present. Professor Clear, the President, thanked Mr. Shine, the local organisers and the Convenor, Mr. McNamara, for work well done in the organisation of this extensive and interesting Study Tour. He praised the co-operation existing between the local and visiting forestry personnel. He mentioned the beauty of the district and emphasised how lucky we in Ireland were to possess this heritage. He stressed the problems of management and acquisition in a county which had to cater for both the practical and aesthetic, and emphasised how we in forestry must be prepared at all times to understand the needs of the tourist and local populace, on whose goodwill the future forests depended. On this note the President called on Mr. Dallas to propose a vote of thanks.

Mr. Dallas mentioned how pleased he was to speak as a member of the Society and as a representative from Northern Ireland. He praised



the organisers and qualifying his words with a suitable anecdote gave tribute to the local personnel.

Mr. Shine answering brought the proceedings to a fitting close.

G.J.G.

### *Final Day.*

On the morning of the third and final day we started off from Glengarriff to Kenmare Forest.

The main subject of the morning's inspection was Dromore Property. The estate was bought from a Colonel Hood in 1935-36. The lands, formerly the property of the O'Sullivan's, passed on in time to the O'Mahoney's into whose family the Hood's married. The property, planted in 1937, consisted of 500 acres, of which, formerly 151 acres were old woodland. Of this latter now only 50 acres remained. The clearance of the old woodland was slow, as it was difficult to dispose of the timber, much of which was firewood quality. The policy now, however, was to try and bring on a type of selection forest with the emphasis on hardwoods and *Abies alba*, and in this connection we were informed that the natural regeneration of *Abies alba* was an outstanding feature of the property. Of the conifers, Sitka spruce, *Abies alba*, and *Pinus radiata* were the best species, to such an extent in the case of the *Pinus radiata*, that it was a problem to keep them standing. Scots pine did not do so well here and larch fared even worse; the sticky clay nature of the soil was blamed for this, and larch was prone to attack by canker.

The first stop was in one of the old woodland areas in Dromore. Here, most of the former crop has been felled out, leaving odd standards of silver fir, beech and oak. Under these was a thriving mass of naturally regenerated *Abies alba* and beech in all stages of growth, up to 12 ft. or more. Here we could see, was the raw material for an active and vital mixed forest in years to come.

We moved on to Compartment 17 and into a stand of 23 years old Sitka spruce. From a 1/10th acre sample plot the figures which emerged were:—

	<i>Stand</i>	<i>British Yield Table</i> <i>Quality Class II.</i>
No. of trees per acre	560	555
Basal area per acre	149.8 sq. ft.	124 sq. ft.
Average tree B.H.Q.G.	6¼ ins.	5¾ ins.
Average tree M.Q.G.	5¼ ins.	
Total Height	52 ft. 10 ins.	48½ ft.
Timber Height	40 ft.	
Vol. of average tree	7.66 cu.ft.	
Vol. per acre	4,289 cu.ft.	2,750 cu.ft.
Crown %	50%	
Form Factor	.533	.46
Vol. of thinnings, 1955/59	478 Poles—536 cu.ft.	

A general discussion followed. Mr. Shine commented on the high form factor. Certain other members were sceptical as to whether this high form factor would be, in fact, general throughout the plantation. Mr. Morris pointed out that there was often a wide variation in form factor between individual trees, and that it was not strictly accurate to judge form factor, for all, from one sample felling. A soil pit on the site revealed a good deep, sandy soil of derived O.R.S.S. origin.

In contrast to the first plot, the second, in Compartment 16, was poor. Though only across the road from the first, it was on slightly higher ground, and the plot details showed quite a big drop in volume per acre.

	Stand	British Yield Table Quality Class III.
No. of trees per acre	820	750
Basal area per acre	136.3 sq. ft.	118 sq. ft.
Average tree B.H.Q.G.	5 ins.	4 $\frac{3}{4}$ ins.
Average tree M.Q.G.	4 ins.	
Total Height	44 ft.	40 $\frac{1}{2}$ ft.
Timber Height	31 ft.	
Vol. of average tree	3.44 cu.ft.	
Vol. per acre	2,820 cu.ft.	2,130 cu.ft.
Crown %	61%	
Form Factor	.45	.44
Vol. of thinnings, 1960	70 Poles-140 cu.ft.	

A soil pit here revealed part of the reason for the dramatic fall in volume. This was a much shallower soil type with a tendency to gley in the sub-soil; in all, a less fertile site, as compared with the deeper soil of Plot I. It was suggested that this should be a good site for *Abies grandis*, and there followed a discussion on the pros and cons of this tree. Mr. Mooney referred to the immense volume production of *Abies grandis*. Professor Clear, to a curious fact that, in Wales, it had been found that the species was prone to attack from *Phomes annosus*, but, in Holland, it was thought to be resistant. Mr. Hanan said that in Avondale, after a wind blow, there was no evidence of the disease. The discussion continued as to the quality of the timber of Sitka spruce and *Abies grandis*, and it was agreed that in this respect, Sitka spruce had many advantages over *Abies grandis*. Mr. Mooney reminded us, that the size of the knot and the angle of the grain were more important than rings to the inch, where strength were concerned.

*En route* to the next plot we stopped to look over a "Sill bridge". Mr. Shine explained that its special feature was, the low cost of con-

struction; some £140. This was achieved by cutting out the work of building up the abutments. Further on, we saw some more excellent examples of the natural regeneration of silver fir, where the seed-trees had been removed.

The third plot, in Compartment 2 was another excellent stand of Sitka spruce.

<i>Compartment 3</i>		<i>British Yield Table</i>
<i>P/37. 24 Yrs. Quality Class I.</i>		<i>24 Years Quality Class I.</i>
	<i>Stand</i>	
No. of trees per acre	540 stems	390 stems
Basal area per acre	184.6 sq. ft.	130 sq. ft.
Average tree B.H.Q.G.	7½ ins.	7 ins.
Average tree M.Q.G.	6 ins.	
Total Height	61 ft.	59 ft.
Timber Height	49 ft.	
Vol. of average tree	12.25 cu.ft.	
Vol. per acre	5,615 cu.ft.	3,590 cu.ft.
Crown %	54%	
Form Factor	.53	.47
Vol. of thinnings, 1953-55-58 633 Poles-920 cu.ft.		

After he had read out the impressive details, Mr. Shine asked us for our comments, as to whether we thought the stand, as it stood, was overstocked or not. There followed a vigorous discussion on this topic and also on the form factor, which was again high. While it was felt the stocking was high, it was thought by some, that this stand could hold its present rate of growth without thinning, for the present. Others would have preferred to see it less heavily stocked and maintained that the average quarter girth could be higher with less trees per acre. Müller's theory was quoted in support of this view. Mr. Morris, at this stage, informed us of the sobering facts as found in the Department's recent assessments of its growing timber. Of the 201 sample plots they took in Sitka spruce, one was Quality Class I, 25, Quality Class II; the average run was Quality Class IV. Norway spruce averaged in the vicinity of Quality Class I and II.

Those depressed by Mr. Morris's gloomy statistics were quickly cheered up again by the last stand of Sitka spruce. This was the best we had seen—surely super-quality Class I! The soil here was a deep brown earth.

## Compartment 2

P/37. 24 Yrs. Quality Class I.

## British Yield Table

24 Years Quality  
Class I.

	Stand	
No. of trees per acre	460 stems	390 stems
Basal area per acre	168.3 sq. ft.	130 sq. ft.
Average tree B.H.Q.G.	7¼ ins.	7 ins.
Average tree M.Q.G.	6¼ ins.	
Total Height	65½ ft.	59 ft.
Timber Height	54 ft.	
Vol. of average tree	14.65 c.ft.	
Vol. per acre	6,739 cu.ft.	3,590 c.ft.
Crown %	52%	
Form Factor	.617	.47
Vol. of thinnings, 1953-55-58	502 Poles-983 cu.ft.	
M.A.I. of total yield to date	317 cu.ft.	

After this nobody wished to argue and most of us were ready for lunch.

When lunch had been finished we moved off to Lansdowne Estate just outside Kenmare where we were met by Mr. Johnston, the estate agent. As time was short, we had a tour, at what might be described as, at break-neck speed, around the estate. We were shown through beautiful gardens with a wide variety of shrubs and trees; the *Araucaria* caused the chief interest. Then we moved along rhododendron strewn avenues by the sea, with overhanging gnarled *Pinus maritima* and Scots pine. Further on, we passed through what, to some members, must have seemed like "Colonel Fawcett's last stand"; the luxuriant growth of the royal fern, bamboo and numerous other species of exotic vegetation was very spectacular.

Outside the beautiful house the President closed the tour saying that we were all very grateful to the Minister of Lands, and in particular to Mr. Shine and all the other field officers who put such meticulous work into the preparation of a very enjoyable tour over the last three days. He also thanked Mr. Johnston for showing us around the estate. With that the Forestry Society's tour of Killarney 1961 was brought to a satisfactory close.

M.J.S.