

Excursion to Athenry Forest.

ON August 24th, 1958 the Society of Irish Foresters visited the Derrydonnell property of the Department of Lands forest at Athenry. Despite the bad weather the members, including some from Northern Ireland, enjoyed a particularly stimulating and interesting excursion.

The party assembled at the entrance gate on the Galway road where the leader gave a brief account of land use prior to acquisition, and a history of treatment and management since acquisition. The forest comprises one block of 509 acres in the townlands of Tobberoe and Palmerstown. Elevation is 100 feet to 150 feet. The soil varies from brown earth directly over limestone pavement to permeable boulder till, light glacial gravels mostly derived from limestone and some limestone outcrop and crag on the hilltop. On the high ground leaching is very pronounced in the upper soil horizons as might be expected in this high rainfall area. The typical plant of these leached soils—juniper—the *lubár* Creige of the West—is very much in evidence, closely associated with strong *Calluna*, *Molinia*, and *Deschampsia*. On the better pockets *Rubus*, bracken and some agricultural grasses flourish.

The first planting took place in 1936 and was completed in 1937. The selection comprised mostly Scots pine/beech/European larch with pure plots of *Pinus radiata*, Lawson cypress and Japanese larch as ground dictated. The plantation, for about half its total area may now be considered a failure, although it flourished for the first five years after planting, a fact borne out by records which show no beeting up operations in the first ten years save replanting beech cut by hares. Pine sawfly and pine shoot beetle attacked in epidemic proportions from the eighth to the twelfth year resulting in large patches of Scots pine dying off, and leaving the plantation a sorry sight, stunted and practically needleless.

Now that the plantation looked a complete failure, an attempt to rehabilitate with *Pinus radiata*, *Pinus contorta* and Corsican pine was made, and since then at various times *Pinus radiata*, beech and European larch have been introduced. At present some 90 acres are being treated. Some manurial trials with basic slag carried out in 1953/54 have not proved helpful. Thinning has been carried out in *Pinus radiata*, Japanese larch and Lawson cypress, and in the better parts of Scots pine stands, which are few.

The party's first stop was at the *Pinus radiata* plot in Compartment 1, where discussion immediately centred on the soil profile, the pit specially opened showing 9-11 in. of brown earth over limestone pavement. Mr. Scully thought that *Pinus radiata* would not find a safe anchorage here on a 50 year rotation. The stand, planted in 1936 now carries 300 stems per acre, has a volume of 3,390 H. ft. O.B., a mean B.H.Q.G. of $9\frac{1}{2}$ in. and a mean height of 49 feet. This was considered

a very good return for the age of the stand. Discussion veered round to the old *Pinus radiata* bogey—transplanting. Mr. Collins favoured balling even though the cost was high. The new type peat/nitrogen impregnated pots were mentioned. Mr. Swan thought that the advent of polythene bags would reduce losses as plants would travel better with moisture conserved. Another member gave it as his experience that large 1 + 1 + 1 transplants, transplanted better than 1 + 1 plants, but thought the key lay in having minimum delay from lifting to planting out. The advanced transplant view seemed to have something to recommend it as the local County Committee of Agriculture used considerable amounts of the species in this advanced stage and had considerable success, often on diverse sites.

The Japanese larch stand produced the eloquence of the day. The stocking was 540 stems per acre, carrying 1,720 H. ft., a B.H.Q.G. of 5 in. and a mean height of 42 ft. It had already been thinned twice. Some members thought that much fuller use could have been made of this species in the property. One member thought that as the crop was now getting into the real wind zone that height growth would tend to fall off abruptly. Mr. Scully recommended that the stand be reduced to 60-70 trees per acre within the next 5 years and group underplanted with Douglas fir and *Tsuga*. Mr. Dallas said he had often heard this recommended but had never seen it practised. The merits and demerits of this treatment were then discussed and there was general agreement that the opening up and underplanting would produce a more valuable crop, make fuller use of soil horizons and help stratify the canopy.

After traversing the main block of woodland the last stop was at a 3 ft. deep pit in Compartment 7, where the profile revealed a glacial gravel with a 6 inch leached top horizon. The whole looked permeable and a good rooting medium, and carried dominant *Calluna/Molinia/Deschampsia* vegetation, with occasional juniper. The Scots pine, which covers most of this property, was very poor at this, the highest point of the ground (150 ft.). Over considerable areas large patches had died out or checked badly. The best plot of Scots pine in the property gave a stocking of 640 stems per acre, 480 H. ft. per acre, mean height 22 ft., and B.H.Q.G. 3½ in.

Immediately an inquest was opened, Mr. Swan suggesting that the dieback could be attributed to the high lime content of the soil, roots having penetrated through the leached upper layers to the lime rich subsoil, but in conflict with this there was a good crop of Scots pine (20 years old) at another property of this forest on apparently the same type of site. The fine Scots pine stands at Cong Forest were also cited as proof that the tree will grow on soils overlying limestone. Some members suggested exposure. Quite a few members thought that while the immediate cause was exposure, basically the trouble was a provenance one, as the fine stands of Scots pine here and there along the western seaboard were examples of the tree growing under similar or even more pronounced adverse conditions—high wind speeds and moist

salt laden winds. A provenance trial with plants raised from these fine stands was thought to be well worth while. As to suggestions for future treatment of the crop, opinion varied and such species as *Pinus contorta* (of which some had been introduced in beeting up some 10 years ago and was now well above anything in the original crop) *Abies nobilis* and common silver fir were mentioned and among the under-currents one could hear *Eucalyptus urnigera* mentioned. Some members thought that the planting of Scots pine should be discontinued until more information was available about the provenances of this species. A general remark as the party filed away to the cars was that the advent of the "research fellows" would throw welcome light on some aspects of this unsatisfactory crop, both above and below ground level, while more were heard to say that the choice was and is ecologically correct for the site.

Mr. O'Donovan, who represented the Minister for Lands, provided a welcome cup of tea after an interesting tour. Mr. Swan thanked all concerned with the outing.

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