

## ANNUAL STUDY TOUR 1977

Tuesday, 17th May

At the first stop, Rossacroonaloo property, Kilgarvan Forest (Forester-in-Charge, Mr. J. Donegan, Deputy, Mr. J. O'Sullivan), the President of the Society, Dr. P. Joyce welcomed the tour participants and introduced the tour leaders, Mr. P. White (Divisional Inspector) and Mr. D. Walsh (District Inspector). The President congratulated Mr. D. Mangan, the only society member present who had also attended the 1946 study tour which was held in the Killarney region and who moreover has attended all annual study tours since then. Mr. P. White remarked that forty years ago this pleasant picnic spot was a rock strewn mountain side supporting scattered oak and birch scrub. Lawson cypress planted along the roadside leading to the site had been thinned to give the area an open aspect. In response to a suggestion that water be laid on for picnics Mr. I. Sherriff maintained that such a service would be costly to provide and would look unnatural.

The group then travelled to Dromore Wood, Kenmare Forest (Forester-in-Charge, Mr. T. Hickey, Deputy, Mr. M. McGeralt and Assistant, Mr. M. Ruane). An excellent stand of Sitka spruce planted in 1937 had been severely damaged in the storm of January 1974 when approximately 10,000m<sup>3</sup> were blown. Mr. Walsh invited opinions on what was the best management policy for the remainder of the crop. Mr. O'Flanagan advocated an immediate clear felling programme because of the dangers of further windblow. Mr. J. O'Driscoll, however, advocated waiting for a good Sitka spruce seed year before felling. Part of this stand was designated an EEC approved stand for the purpose of providing selected seed; hence Mr. O'Driscoll's reservations on immediate felling. He also pointed out that as one tree could yield seed worth £40-£50 it made sound economic sense to delay felling until after a good seed year.

We next turned our attention to a section of the wood where extraction was in progress. Extraction costs had been considerably increased by the fact that much of the timber was sold in small lots to local people. Marketing was once again identified as being of critical importance to any forestry operation. Mr. Walsh claimed that marketing was particularly difficult in the south Kerry area because of the absence of any major timber user in this vicinity, a point emphasised by the fact that timber from the area was often sent to Scarriff in Clare and even as far as Longford.

After a scenic journey we stopped on the roadside for a discussion on the possible impact of afforestation on the aesthetics of the surrounding landscape. The usual concern was expressed with regard to straight lines and sharp edges so typical of

many of the earlier established plantations but it was generally agreed that foresters were now conscious of the need to tread carefully in such high value amenity areas. Considerable controversy arose with regard to whether the valley bottoms and flat areas in such regions should be planted with trees. Mr. O'Flanagan expressed the opinion that the establishment of tree plantations would bring about too much of a visual change in the landscape. Others pointed out that newly reclaimed farmland was as likely to offend the eye as plantations of Lodgepole pine or Sitka spruce. Mr. M. Carey contended that lower lying regions were in general also the most highly productive and in view of the fact that forestry was essentially concerned with producing wood these were the areas that should be concentrated on. One despaired at the lack of overall national planning within this context. Land that could be acquired for afforestation within the severe financial constraints imposed was planted, all other areas being left practically devoid of trees. It seemed appropriate that the forester, agriculturalist, and landscape architect should get together with the economists and try to resolve the problem and ensure that the best possible use is made of our greatest national resource, land.

Having convinced ourselves that large blocks of forests are visually attractive, at least to foresters, we then drove on past Moll's Gap to Ladies View. Here we were introduced to Mr. P. J. Bruton, Forester-in-Charge, Killarney Forest, his Deputy, Mr. T. Prendergast and Assistant, Mr. J. Maguire. Mr. Bruton, in welcoming the party officially, pointed out that the surrounding area was probably one of the most photographed in the world and that therefore the remarks concerning amenity at the previous stop were particularly relevant. Mr. Bruton gave an interesting history of Killarney and its valley. The valley is renowned for the botanical wealth of its oakwoods which boast a primary oak layer, a secondary layer comprising yew, holly and the strawberry tree and finally a woodland floor covered in bryophytes.

Muckross Estate comprising 11,000 acres of mountain, woodland and agricultural land was granted to the state in 1932, whereupon it was entrusted to the Office of Public Works from whom the then Forestry Division of the Department of Lands leased over 1,300 hectares.

Oak regeneration was a major problem in these woods because of the presence of large numbers (up to 1,500) of Sika deer who were also threatening to take over from the smaller (about 350) population of native red deer. The problems and politics of culling the Sika deer population were explained by Mr. Mulloy and Mr. Maguire. It was obvious that the deer were interfering considerably with the management of the forest.

Our last stop for the afternoon was at Huntsmans Hill also in Killarney forest. There the problems and cost of controlling *Rhododendron ponticum* were spelled out by Mr. Bruton. The rhododendron grows vigorously in Killarney and the heavy shade it casts prevents oak regeneration. In recent years 160 ha had been cut and the subsequent regrowth sprayed with 2, 4, 5-T (7 gallons of 2, 4, 5-T in 100 gallons of water). The total cost of this operation was up to £200 per ha but unlike hand cutting which encouraged regrowth chemical control virtually eliminated the shrub. Mr. Brosnan pointed out that the cheapest method of getting rid of rhododendron was to use a bulldozer. However, this was not always feasible for a variety of reasons including uneven topography and lack of top soil. 2, 4, 5-t was now he said the most effective chemical to use and although Mr. Purcell expressed concern regarding its safety Mr. Brosnan pointed out that it contained less than 0.01 ppm (an internationally recognised safe level) of *Dioxine*, a toxic contaminant of all 2, 4, 5-T. In commenting on the dangers of the chemical Mr. Kerr said that in Northern Ireland forest workers were given an option as to whether or not to use it.

Wednesday, 18th May

The first stop was at Toomies Wood, part of Killarney forest, situated on the western shore of the lower lake. Mr. H. Kerr of the Northern Ireland Forest Service, Chairman for the day, introduced Mr. M. Neff, Ecology Section, FWS who discussed the history of Toomies Wood. With its history of exploitation, there is considerable doubt as to whether or not this actually is the remains of a natural oakwood or if it was replanted. Nevertheless, it is one of the most extensive and scientifically important oakwoods in the country.

Mr. Neff showed us an enclosure erected in an attempt to quantify the destruction of regeneration by grazing deer. The forest floor inside the enclosure in contrast to that outside was covered with oak, birch, strawberry tree rowan, and many other species. However Mr. Neff expressed the view that should the deer be controlled then holly could become the dominant shrub layer. Much like rhododendron this canopy would exclude oak regeneration. A catch 22 situation in conservation!

The second stop of the day was at a Sitka spruce provenance experiment established in 1960. The Killarney region was chosen as it was practically frost free. Mr. J. O'Driscoll described the plot layout and explained that using tree height and diameter as parameters there is a highly significant difference between the provenances.

The party then travelled to Castleisland Forest where they were welcomed by Mr. J. Crowley, Forester-in-Charge, and Mr. P. McGrath, Deputy Forester. After lunch at Dooneen property, fire beaters of a type used locally were demonstrated and discussed. These beaters were made up of a long wooden handle to which a piece of durable and flexible rubber was attached. Local forestry personnel claimed they were very effective on a *Molinia* or low heather fire. Ironically as fire fighting equipment was being discussed news of a fire in the forest reached the party; at this stage two sections of the fire brigade were dealing with the situation.

Doneen property (32 ha in extent) was planted in 1959 with Sitka spruce. The soil is a peaty gley. The production as one would expect on this type of soil is mainly yield class 24+. Mr. Crowley maintained that there is no tradition of timber harvesting in the area. To date therefore local staff were dependent on local sales, satisfying mainly a demand for fencing materials. Mr. T. Purcell said the forest was about seventy miles from the nearest pulpmill, that at Scarriff, and as more thinnings were due this must offer an outlet, albeit a distant one, for the produce.

Thinning had been delayed from three to five years. Windblow was already in evidence, the danger being accentuated by the removal of a belt of trees on the most vulnerable side for road widening by Kerry County Council. How this area should be thinned, if at all, and how similar areas should be treated to avoid windblow were topics of discussion. Mr. Kerr expressed the Northern Irish preference for not thinning and a short rotation. His Southern counterparts favoured normal thinning using a line and chevron or line and selection methods. The advantages and costs of full pole as against shortwood extraction were discussed.

General opinions expressed on the treatment of these areas were:-

- (a) Complete ploughing, modified double mouldboard ploughing or ripping in areas with a high stone content to improve rooting and so stability.
- (b) Planting espacement wide, at least 2.4 metres.
- (c) Thinning early and heavy in the hope of improving stability and the value of the final crop.

There was a demonstration of harvesting techniques which included the use of a cant-hook, breaker bar and crown puller. A neat box which carried sodium nitrate, brush, petrol etc. was on display. A tree was felled using a chain saw and this gave rise to a discussion of chain saw safety. This demonstration of a practical forest

operation sparked many into breaking their vows of silence and the overall participation in group discussion was very encouraging.

From Doneen the party was transported to Rathmore property. At this stage news arrived that the fire reported earlier was quite serious and hundreds of hectares of plantation were in danger. The President of the Society, on behalf of the members, offered the manual assistance of all the fighting fit participants to the local staff. This offer was gratefully accepted so it was decided to shorten discussion at the last stop and then hurry to the scene of the fire.

The area in question was planted with Sitka spruce in 1964 following double mouldboard ploughing. There was spot fertilisation at planting with 375 kg per hectare of ground mineral phosphate. Drainage was adequate. The spruce was in severe check and a strong growth of heather was present. Discussion centered around the reasons for growth limitation and how the area should be managed in the future.

From the discussion three main ideas on treatment were put forward.

- (a) Application of nitrogen—500 kilograms per hectare of calcium ammonium nitrate was suggested by Mr. M. Carey. He pointed out that this is expensive and that the response may be limited to three to four years.
- (b) Elimination of heather with 8 litres of 2,4-D per hectare plus the application of nitrogen if necessary. Mr. Brosnan stressed that if the site was of low nutrient status (particularly as Sitka spruce was a high nutrient demander) eliminating the heather was unlikely to provide the complete answer on its own. Nevertheless he felt that if the forest manager decided to retain his spruce then eliminating the heather should be his first remedial measure.
- (c) Interplanting with Lodgepole pine on the old plough ribbon. Mr. L. O'Flanagan and Mr. T. Purcell felt that on oligotrophic peats this seems to be the surest and least expensive method of growing a tree crop.

After this discussion a bus load of members armed with Lodgepole pine branches were brought to assist in bringing the forest fire under control. Certainly a dramatic close to the day as with tanned faces and tired brows the fire-fighters returned to a welcome late meal conjured up by the 'eminence grise' Miss L. Furlong.

F. SHAKLETON, T. PURCELL

#### Thursday, 19th May

Muckcross Gardens and nature trails were the setting for a pleasant Thursday morning session. Mr. J. Fennessy as Group Chairman introduced Mr. C. Foley, Assistant Park Superintendent and Mr. W. Carson, Head Gardener. Mr. C. Foley welcomed the party to the Bourne Vincent Memorial Park and gave a brief history of Muckcross House and Park. It was interesting to learn that the house had the inevitable 365 windows without which any home worthy of the name would be incomplete. A visit by Queen Victoria in 1861 placed the house firmly among the elite of nineteenth century aristocratic mansions.

Mr. Carson enthusiastically led the party into the landscaped gardens which stretched from the house to the edge of the lake. Clever use of a rock outcrop has resulted in a rock garden sporting an array of alpiners, dwarf conifers and shrubs. Warning to his subject he pointed out the world famous *Rhododendron* and *Azalea* shrubberies with their splash of colour which to the onlookers appeared as blossoms of each colour on the rainbow.

The party moved on to the Mossy Woods Nature Trail. Mr. J. Larnar, Tour Guide and nature enthusiast explained that the trail was named after the abundance of mosses in these woodlands which stretch along a limestone ridge bordering the lake. Mr.

Larner drew our attention to the dwarfed natural yew, strawberry tree glades and the mosses, ferns and lichens present on the branches of the oak. Magnificent views of the Macgilllicuddy Reeks across the island dotted lake were afforded on parts of this walk.

Mr. Larner was prompted into answering how the Office of Public Works dealt with Killarney's twin pests of Sika deer and *Rhododendron ponticum*. He favoured the dart gun and Dubai export approach to the former. At present *Rhododendron* is cut, windrowed and burnt and the cut stumps painted with 2, 4, 5-T. Mr. Brosnan commented that the method was labour intensive and that he felt foliar application as practised by Mr. Bruton in Killarney forest gave a more complete kill. We were shown some wire enclosures erected in 1969 to observe yew regeneration without deer grazing pressure. There were no yew suckers within the enclosure. Mr. O'Flanagan said that he felt the yew should be thinned to create a more ideal environment for its regeneration. There was evidence of deer damage to the bark of many of the mature trees some of which had wire screens to protect them.

When the party arrived back at Muckcross House, the Chairman thanked our hosts and guides and our bus moved onwards and upwards towards the homely forested hills overlooking Killarney.

A Scots pine stand at the final stop before lunch provoked an interesting debate on species selection. Mr. Walsh claimed that the stand (P/Year 1948, volume 194m<sup>3</sup> per ha) was badly in need of a thinning but that timber merchants were reluctant to handle such a small lot. Nevertheless by including this quantity with a more attractive larger lot this problem could be overcome. Dr. Joyce estimated that a Sitka spruce crop on the same site would have in excess of 300m<sup>3</sup> per ha at present and further he stressed its heavy canopy effect in controlling the *Rhododendron* shrub layer which had build up under the Scots pine. Mr. P. White, while agreeing with Dr. Joyce's selection of species on purely economic grounds spoke of the importance of amenity planting in the Killarney region. This consideration could, he argued, stay the executioner's hand on a number of attractive but low productive stands. Dr. Joyce countered by suggesting a 2 storey high forest, interplanting the Scots pine with either Sitka spruce or Western Hemlock and on this sophisticated but compromising note the party repaired to a canvas canopy to lunch.

In the afternoon our first stop was at a European larch wood. The plantation which is on part of the Bourne Vincent Memorial Park was laid down in 1910 by Mr. Vincent. The area was heavily thinned over the years and many of the stems removed were used for transmission poles. The stocking is about 150 stems per hectare and there was a suggestion that at least part of the plantation should be retained, with its present rather open appearance, as a deer lawn.

Our final visit in Killarney forest was at Dark Wood, property which was acquired from Lord Kenmare in 1940. An interesting talk on bird life in woodlands was given by Mr. J. Wilson, Wildlife Inspector. He said that a census in 1973 showed that the greatest density of Goldcrest in Great Britain and Ireland was to be found in Dark Wood. During the discussion which followed it transpired that, contrary to popular opinion, birds in a forest do not play a significant role in controlling insect pests such as aphids.

We then visited a plantation consisting of oak, beech and European larch planted in 1941. Mr. Bruton said that final crop trees had been selected about twenty feet apart and the aim was to produce a final crop of broadleaved trees. The subsequent discussion centered on the growing of good quality oak.

The President, Dr. P. Joyce, thanked the Forester-in-Charge, Mr. Bruton and his assistants for a most interesting day at Killarney Forest. Mr. P. White on behalf of the organisers hoped that all who attended had benefitted from the tour.

The tour ended as it had begun in bright sunshine and this sunny spirit was carried

over to the annual dinner where members and guests enjoyed a most pleasant evening.

J. BROSNAN, S. McNAMARA

**Participants**

Dr. Padraic Joyce (President), Pat White and Dan Walsh (Tour Leaders), Lily Furlong and Fergal Mulloy (Meetings Committee), Marie Aherne, George Beirne, John Brosnan, Michael Carey, Pauline Cleary, Michael Costello, Pat Doolan, John Fennessy, Michael Forde, John Gillespie, John Healy, Harry Kerr, Dermot Mangan, Tony Mannion, Liam Moloney, Evelyn McCreesh, Jim McSorley, Liam O'Flanagan, Martin O'Neachtain, Gordon Pickles, Tom Purcell, Margot Robinson, Freddie Shakleton, Harry van der Wel, Liam Berkery, Celli Breathnach, P. J. Bruton, Bernard Burke, Michael Byrne, Sean Carney, Charlie Crowley, Seamus Crowley, Noel Cullinane, David Cusack, Michael Donnelly, Declan Egan, Pat Fallon, Matthias Fogarty, Martin Lynch, M. Lynch, Jim Maguire, Jeremiah McCarthy, Ted McCarthy, Michael MacGiolla Coda, John McLoughlin, Sean McNamara, Con Nyhan, Seamus O'Domhnaill, Sean O'Laoighe, Brendan O'Neill, Jim O'Riordan, Con O'Shea, Tim O'Sullivan, Noel Ryan, Dan Scannell, Con Warren, Michael Ward.

**EDITOR'S NOTE**

Apologies for omitting to list those who acted as recorders during the Sitka Spruce Symposium (*Irish Forestry*, Vol. 34 (1)). So a belated word of thanks to J. Gillespie, E. Joyce, P. Saville, N. O'Carroll and J. Dillon.