

Society Activities

SOCIETY OF IRISH FORESTERS TOUR: 21st-23rd MAY, 1985.

NORTH CORK AREA

President: Mr. M. O'Brien

Convener: J. O'Driscoll

Leaders: R. Griffin/M. O'Donovan

The annual study tour was based in Blarney and concentrated on the forests of Ballyhoura, Duhallow, Mullagharielk, Avondhu and Kilworth. 6.2% (46,444ha) of the land area in Co. Cork is afforested. There are 28 forest centres and a wide variety of site types. The greatest concentration of forest is on Old Red Sandstone areas. Much of this has been difficult to afforest and as a result the range of species used has been limited. Nowadays many problems have become apparent in plantations established in the 1950's and 1960's. Local hosts on this first day of the tour included, E. Fitzpatrick (Assistant District Inspector), J. Moran (Forester-in-Charge, Ballyhoura), C. O'Shea (Forester, Ballyhoura), T. Hunt (Work Study), S. Crowley (Forester-in-Charge, Doneraile), T. Horgan (Research Forester), I. Sherriff (Amenity Inspector), E. Hendrick (Research, Bray), J. O'Leary (Utilisation).

The main species at Ballyhoura Forest is lodgepole pine. Many of the provenances of the species planted in Ireland were encountered. The south coastal provenances grew vigorously, but the form is usually poor and branching is rough. North coast, inland or Lulu Island provenances are much slower growing (YC 6-8) but are of good form. Most forest managers are now faced with some very difficult decisions in relation to the future management of these stands. The touring party viewed some of those areas and some of the questions which arose are as follows: Is it worth while retaining rough, south coastal crops and treating them by thinning and pruning in the hope of getting a final crop of fairly good quality trees? Should the less vigorous crops be given additional fertiliser to boost their growth rate and to produce high quality timber, on long rotations? Will there be markets for the latter type of material and will manufacturers pay a premium (estimated at £5/m³ above current prices) for such high quality logs, in order to compensate the grower for the cost of treatment and longer rotations? In the discussion, there were almost as many differing opinions as there were participants. It was generally agreed, however, that markets should not be a problem.

A possibility in the future in the Ballyhoura region is to plant more Sitka spruce or Japanese larch or mixtures of both these two. Some good stands of these species were visited but many of the party felt that the sites on which these crops were growing were either significantly better sites initially or had been improved through agricultural use. Certainly there appears to be no question of a blanket prescription of Sitka spruce on these soils especially where peat harvesting has taken place, because nitrogen deficiency is normally a major limiting factor. Indeed, repeated applications of nitrogenous fertilisers may be necessary to get pure crops of Sitka to canopy closure stage. At present local management favour Sitka spruce/Japanese larch mixtures in the reafforestation of those poor sites. The final stop on this first day was at Doneraile Forest Park which is, at present, being redeveloped as a landscaped estate and red deer park. The great meadows and fringe belts will be retained to give the illusion that the meadows are clearings in the woodlands. The fences are sunk into the ground to give uninterrupted vistas and the oak/beech woods are being rejuvenated in such a way as to conserve the main landscaping features.

Duhallow and Mullaghareirk Forests. Local hosts: J. J. Cooney (Forester-in-Charge, Duhallow Forest), A. Pfeifer (Research, Bray), T. O'Sullivan, P. Peters (Research Foresters, Brosna), J. O'Mahony (Forester-in-Charge, Mullaghareirk), D. Scannell (Wildlife). Duhallow forest was established in 1965 and consists mainly of two large blocks of woodlands. It is approximately 2,200ha in extent. The main soil type is a shallow amorphous peat over loose mineral subsoil derived from ORS parent material. In 1982 one of a series of Monterey pine trials was established at this forest, to test the resistance of various clones, to "yellows". This trial is replicated on a blanket peat and on a midland peat. It consists of 44 clones of rooted cuttings which were selected from 8-year old trees, showing apparent resistance to yellows and with sealed buds. It was designed to determine how individual trees react in different environments. Monterey pine is probably at its range limit on this site which is 213m is elevation and quite exposed. In practice the species would prefer a more fertile, sheltered site. It is not seen as a species which might replace lodgepole but might be competing for sites with more exacting species such as Douglas fir. On this site the failure rate has been high but home collected lots have shown a marked improvement in resistance to yellows.

Mullaghareirk Forest is about 2,000ha in extent. Elevation, ranges from 240-410m. The main soil types are peaty gleys and blanket peats. Much of this area, particularly the peaty gley sites, has been planted with Sitka spruce. Spacing was generally at 1.6m x 1.6m. These crops have grown vigorously (Yield Classes 20-24) and many are now being thinned. This has given rise to windthrow problems. A number of vigorous stands of Sitka spruce were visited but most discussion was provoked by a series of sample plots designed to demonstrate the effects of line thinning and no thinning upon crop development. These plots were established in 1957, received a line thinning in 1976 and were selectively thinned in 1981 and 1985. The relevant crop treatments and statistics are as follows:

First Thinning	Total Vol. Removed m ³ /ha	Stems/ha	Diameter (cms.)	Mean Stem Vol. (m) ³	Mean Vol./ ha (m) ³
No thinning	Nil	3,933	15.4	0.140	524.7
1 line in 3	202.8	1,306	21.0	0.292	381.4
2 lines in 5	198.9	1,094	21.7	0.303	331.5

A wide ranging discussion on the merits and demerits of thinning crops which are liable to windthrow took place. It was admitted that a general no thinning policy is not possible because the Forest and Wildlife Service is committed to supply wood processing industries. However, it was felt that some sites should be designated as no thinning areas because of the high risk of windthrow. This might apply particularly to areas where thinning had been delayed. Removing one line in three was criticised because it appears to make plantations very susceptible to wind damage and some observers felt that it is not particularly useful from an extraction point-of-view. It was generally felt that current soil cultivation techniques such as ripping and mole drainage are advantageous in improving crop stability.

The last *scheduled* stop was to view and discuss a site which had recently been replanted following a major fire (area destroyed 325ha) in 1984. The difficulties in replanting such an area were outlined and the danger of weevil attack was discussed. There is no evidence of weevil attack at present and very little evidence of damage

from this insect within the forest. All plants were carefully dipped prior to planting. Despite these facts it was felt that a significant increase in insect numbers and damage can be anticipated.

Avondhu and Kilworth Forest: Woodfab, Fermoy and Fota.

Local hosts: J. Dalton (District Inspector), D. Fitzpatrick (Assistant District Inspector), J. Greehy (Forester-in-Charge, Avondhu), M. Carey (F.W.S., Bray), T. Horgan, J. Finn (Research Foresters, Mallow), H. Maher (F.W.S., Bray), J. C. Crowley (Forester-in-Charge, Kilworth), D. J. Crowley (Forester, Kilworth), M. Joyce, M. Holly, J. Brady (Woodfab Group).

The parent rock in Avondhu Forest is Old Red Sandstone and the predominant soils derived from this are ironpan poddols and peaty podsolised gleys. Nitrogen deficiency is one of the major problems associated with the growing of Sitka spruce on these soils when *Ulex* is not present. One way of overcoming this is to use nurse species such as Japanese larch, lodgepole pine or Scots pine. In 1960 a series of mixtures were formed at Avondhu Forest to examine this nursing effect. In addition to monitoring crop parameters, rainfall amounts and chemistry are also being examined. As the thoughfall was particularly heavy on this morning there was little discussion on these extremely interesting experiments. However, it did emerge that the pH of rainfall at Avondhu is normally 5.6, whereas at Glencree, rainfall can sometimes have a pH of 3.5. An interesting factor at Avondhu is that fog and mist may account for a very significant proportion of total precipitation. At present it is difficult to 'pin-down' the actual nursing effect, but the presence of the nurse species undoubtedly enhances the availability of nitrogen in the mixture.

In Kilworth forest the topography is typical ORS, with gently sloping hillsides interspersed by deep narrow glens. The soils are approximately 50% acid brown earth and 50% brown podsolics. Much of this forest was planted in the period 1924-34, without soil cultivation. Many of these old crops have now been felled and the question of soil preparation at reafforestation has arisen. Experimentation currently in progress indicates that cultivation (ploughing or ripping) has no effect upon growth. However, survival of Douglas fir is substantially higher following cultivation, whereas cultivation has no effect upon the survival rate of Sitka or lodgepole pine. It was suggested that this may be due to the fact that these sites may be a little too exposed for Douglas fir. The cost of replanting these sites, through the lop-and-top can be high, but cultivation loosens the soil and makes replanting easier. Local management believe that it should be possible to grow crops of Sitka spruce and Douglas fir without nitrogen additions where furze invades the site.

On the afternoon of this last day the Society were guests of Woodfab Group at their Fermoy sawmill. The group viewed the log sorting yard, the sawmill, the drying kilns and the drypack unit for the assembly of finished products. All agreed that this mill was a most impressive production unit and following refreshments generously provided by our hosts, the President expressed our gratitude to Woodfab for this opportunity to get a glimpse of this side of the forestry enterprise in Ireland. The tour ended on a high note with a most enjoyable conducted tour of Fota Estate at Carrigtohill.

1985 Study Tour Participants

John Barrett, J. Brady, J. Brosnan, N. Browner, E. Collen, L. Collen, K. Collins, J. Connolly, M. Conway, T. Corcoran, M. Davoren, A. Duffy, J. Finn, L. Furlong, D. Gallagher, J. Gardiner, G. Harney, J. Healy, E. Hendrick, G. Hipwell, M. Holly, T. Horgan, D. Houlihan, T. Hunt, R. Jack, P. Joyce, N. Kavanagh, M. McNamara, M. McNamara, H. Maher, D. Magner, T. Mannion, M. Newman, C. Nyhan, M. O'Brien, J. O'Dowd, J. O'Driscoll, L. O'Flanagan, M. O'Malley, T. O'Regan, L. O'Reilly, P. O'Rourke, D. O'Sullivan, T. O'Sullivan, D. Scannell, D. Sweetnam, F. Topping, J. Tottenham, R. Tottenham, A. van der Wel, R. Wilson-Wright.