

Society News

SOCIETY OF IRISH FORESTERS ANNUAL STUDY TOUR 1990 SOUTHERN SCOTLAND 15-19 MAY 1990

Day 1

The first day of the study tour began with a visit to the Forestry Commission Training Centre at Ae which was established in 1985 in response to increasing demand for properly trained machine operators. The Centre provides courses for operators, supervisors and service mechanics of forwarders, harvesters, processors and scarifiers.

Courses last for a period of 1 to 3 weeks depending on the machine and there is a follow-up training period of 1 week. It is considered important that the operator's first-line supervisor is also given a 2-3 day training course to give him an appreciation of the capabilities and limitations of the machines for which he is responsible. The value of comprehensive training courses is underlined by the fact that a poorly trained operator will only reach 65% of the output of a properly trained operator – this can have very practical implications when applied to machines costing £90,000-120,000.

Significant natural regeneration of Sitka spruce has occurred on clearfelled sites in the forest of Ae. Where 100% natural regeneration has occurred the cost of establishment (including drainage and respacing at 2m height) is reduced to £330/ha. The "normal" cost is £800/ha. To assess the economic potential of this form of regeneration, its occurrence has been monitored for the past 5 years. However, results to-date indicate that it is completely

unpredictable as to when or where it will occur, and it is therefore not possible to rely on natural regeneration as a means of crop establishment.

A premature clearfell site was visited which had a windthrow hazard rating of 3 and was being clearfelled before it reached the critical top height. The crop had not been thinned and had a standing volume of 300m³/ha with an average tree of 0.12m³ – yielding 40% pallet, 30% pulp and 30% dead trees (due to suppression). The timber was harvested by a Kochums processor and extracted by a Brunnett forwarder for a total cost of £12/m³. Prevailing timber prices were pallet (on roadside) £34.38/m³ and pulp (delivered) £21/m³. Thus the Forestry Commission was making a profit on the operation but the long term economics of this form of silviculture are extremely questionable.

The high priority attached to the visual impact of forestry on the landscape was highlighted at the final stop in Ae forest where a stand of Norway spruce (P/37) was being clearfelled as part of a national landscape plan. The replacement crop will be a mixture of Sitka spruce/Japanese larch and hardwoods. The mean tree size was 0.7m³ (yielding 12% pulp and 88% sawlog) and harvesting costs were £7.25/m³ on roadside (motor manual felling with extraction by Valmet 838 forwarder).

The day concluded with a visit to the estate of the Duke of Buccleuch near Castle Douglas. The estate is 40,000

ha in extent and contains 4,500 ha of woodlands which is 90% coniferous, with Sitka spruce the main species.

In marked contrast to the nearby Forestry Commission plantations, the estate foresters have not adopted a "no-thin" policy. Using a rack and selection thinning system they have carried out heavy first thinnings of Sitka spruce (P/64-67), removing approx 35% of the standing volume, and have not experienced any significant windthrow problems as a result. The thinnings were segregated into pallet and pulp which sell for £35/m³ (on roadside) and £22/m³ (delivered) respectively. The cost of harvesting and extraction was £16/m³.

Pat O'Sullivan

Day 2

Day two of the tour was spent in the Castle Douglas Forest District area of Galloway Forest Park.

On a wet morning we departed from our headquarters in Dumfries and travelled west through the rich Galloway countryside of green farmland liberally interspersed with belts of broadleaved trees. Fortunately as we approached the day's first stop the rain eased off and the sun made an effort to shine. Thankfully it kept dry for the remainder of the day.

Our first stop was by peaceful Woodhall Loch, North-West of the town of Castle Douglas. Here, as the sound of the curlew and oyster catcher filled the air, Gordon Cowie (Forest Commission Conservator for South Scotland) introduced the group to District Manager Ernie Michie and his assistants Tony Burns and Roy Harvey.

Mr Michie welcomed us to the District and outlined the route for the day and topics to be discussed at each stop. Although a timber producing area, it was the recreation and conservation aspects which we were looking at and how these can be integrated into normal forest operations.

Along with three other districts, Castle Douglas forms a major part of the Galloway Forest Park. This was opened in 1943 and occupies an area of 66,000 hectares (250 square miles) of which 40,000 hectares are planted.

The whole area experiences a mild oceanic climate with annual rainfall ranging from 750mm on the coast to 1500mm on the northern hills. Peat is the major soil type throughout having formed on both shale and granite bedrock. These factors combined with high growth rates makes Sitka spruce the major species planted. There are also considerable areas of pine, Douglas fir and larch.

Small areas of broadleaves have been established on the fertile flood plains of the major river systems. Overall, approximately 5% of the annual planting programme is broadleaves, on selected sites using tree shelters. Providing the deer leave them alone, this will have a significant effect on the woodland character of the park in years to come.

Roy Harvey, whose duties include forest landscape design, spoke about the area west of the lake which is in the process of systematic clearfelling. Like many of the forest blocks in the park it can be seen from one or more of the public roads. As a result, design of forests has become a big issue. Landscape architects are employed to design and put on maps layouts of felling and

planting coups. These plans are made as practical as possible to fit in with normal production forestry. However, a certain amount of revenue loss has to be accepted. Once approved, these plans are made permanent and incorporated in future working programmes.

In these times of increased environmental awareness, it is important and very beneficial to keep the public informed about forest design plans. Articles are placed in local papers and displays put on in community centres. Meetings are also held with such bodies as County Councils and The Royal Society for the Protection of Birds to put across the plans and to get suggestions and exchange of views. Political support is very forthcoming for forestry, provided it conforms to sound environmental practices.

The rest of the morning consisted of stops along the ten mile 'Raider's Road' forest drive which was opened in 1976. It is open to the public from Easter to October carrying about 11,000 cars. There is a fee of £1.00 per car. Drivers obtain a ticket from a machine situated at either end of the drive. Surveys have revealed a 15% dishonesty factor. Most cars come from within a 70 mile radius. For the most of its route it follows the banks of the Black Water of Dee. In former days it formed part of an old drive road featured in 'The Raiders', a romance by Samuel Rutherford-Crockett. On it, the outlaws used to come down from their hideouts among the Galloway hills, raid farms on the Solway Coast and return to the hills with prize cattle. From this we get the name 'Raiders Road'.

First stop along the road was at Stroam Loch car park and picnic area. Here, beside the fine stone viaduct

which carried the now closed Dumfries to Stranraer railway, Tony Burns gave us a further insight into the recreational uses of the Galloway Forest Park.

In comparison to the Lake District of England, the park is relatively under-used. Amenity facilities are concentrated in certain areas, and include car parks, picnic sites and walking trails. The areas most frequently used are the woods close to the towns of Newton Stewart and Castle Douglas, known as 'town woods'. There are two caravan parks and two major centres where visitors can learn something of the balanced approach to the timber production, wildlife and amenity uses of the park.

For the more energetic a series of long trails, including the Southern Upland Way, cross the park. On these one can get away from it all and 'get lost' in the remote beauty of Galloway Forest Park. Walkers have the use of several bothys where basic facilities exist (shelter from the weather). Firewood is provided.

The central area of the park, devoid of trees is called a Wilderness area. There are no roads, thus little human disturbance. It is intended to keep it this way and let nature rule supreme.

A popular activity is fishing the lakes and rivers for which there is a charge of £2 per day for coarse fishing, £4 for trout, and £6 for salmon.

Throughout all this the aim is to have high quality amenity facilities with back-up maintenance. With an annual amenity budget of £80,000, there are plans now to charge for certain facilities, such as car parking and also for publications. However, the Commission do receive a subsidy for recreational works. The fee charged for the 'Raiders Road' goes to

its upkeep, and also the car parks and picnic areas along the route.

Further developments along the drive include a selective clearfell programme spanning 20 years, where small blocks of trees will be removed from the roadsides to create new views. It is also planned to retain groups of not so common trees for show. With the ever present problem of windthrow, size and shape of the felling coupes are carefully chosen and mapped out. In restocking of these coupes a policy of using 5% broadleaves is used as much as possible. The presence of deer is a problem however. Roadside operations have to be done between October and Easter.

Before leaving the drive we had a very pleasant ten minute stop-over at the 'Otter Pool', a popular spot with visitors. Here the Black Water of Dee flows over a rock outcrop with a maze of shallow pools. It is also the most scenic section of the drive.

A landscaped car park and toilet facilities are located among the trees. Close to the western entrance a path for the less able has been developed. North of the same entrance, on the public road is located The Galloway Deer Museum, one of two visitor centres in the park. With the aid of fine displays, visitors can learn about the Galloway red deer and other species of wildlife that find their home here. Adjacent to the building we ate our lunch, looking out over Clatteringshaws Loch.

Following lunch, we headed north into the hills towards Loch Dee stopping on route to the Commission's Clatteringshaws trout hatchery. We were introduced to Ian Murray who very enthusiastically showed us around. The nearby Loch Dee has a long tradition

of tourist fishing. However, since the early seventies, the fishing was declining partly due to the increasing acidity of the water. Around this time the hatchery was set up to raise trout, thus getting them over the critical early years of their life. They are later released into the lake. Ian Murray explained that in October-November wild trout are caught in special traps. Females are 'stripped' of their eggs and sperm is taken from males. The eggs are taken to the hatchery where they overwinter in an insulated shed. Hatching occurs in February, in tanks fed by lime rich water. Once the fry have used up the contents of the egg sac, hand feeding begins using fish meal. As they develop, grading takes place whereby the bigger, healthier fish are retained. The others are released into the wild. From the hatchery the big fish are released into cages in Loch Dee, to be further fed until they are three years of age when they are finally released into the lake proper. Each fish carries a special mark, and with the co-operation of fishermen, Ian can trace their movements, life span and eating habits. Not all fish are used in local waters, some are sold to outside bodies, thus gaining revenue to fund the hatchery. We were very impressed with several fine specimens of trout on display for us in one of the big tanks.

Moving on up to Loch Dee, situated in the heart of the Galloway hills, Ernie Michie spoke of the Loch Dee Project set up in 1980 by the Forestry Commission in association with the Solway River Purification Board. The aim of this project is to monitor the causes, effects and treatments of the high acidity levels in the water.

The study has attracted considerable

interest being a major research project of national importance. The Scottish Development Department has given financial support for instrumentation and the employment of a full-time field technician. Loch Dee is a shallow lake covering an area of about 1 square km. It is fed by three main rivers flowing down from the granite hills. Water takes 28 days to pass through the loch. It has been found that the influence of winter storms carrying salt laden rain reduce pH levels considerably. Lorry loads of lime dumped into the rivers have increased the pH.

Leaving the wildness of Loch Dee, we retraced our course back to the A712, New Galloway to Newton Stewart road and drove south-west for our final three stops. Adjacent to this road is situated the Red deer range, set up by the Commission in 1977. Ranger Peter Kelly, met us on our arrival and outlined the operations of the range.

Covering approximately 200 hectares, the range contains about 70 deer made up of stags, hinds and calves. The aim of the range is to preserve the Galloway red deer and to give the public an opportunity to see them at close hand. As a result of Peter's feeding the deer have got very tame. The herd is free from tuberculosis, and despite the occasional poachers raid, numbers have built up. Surplus calves are sold to deer farms, and fetch high prices.

Further west along 'The Queen's Way', we stopped briefly to view the wild goat park. It was set up in 1970 and covers 60 hectares. The park shows feral goats to the public all year round in their natural habitats. Presently it contains about 50-60 animals. Research is being carried out in cross breeding these goats

with certain breeds from overseas to produce a high quality cashmere.

Our final stop of the day was at Tulnotry campsite, one of two located within the forest park. In comparison to the site in Glen Trool, Tulnotry provides only basic facilities for caravans, and tents. It is a very pleasant site set among the trees on the banks of Palmure Burn. Very popular with visitors during the summer, it has reduced the incidence of 'wild' camping in the park. And so our day at Galloway Forest Park came to an end. The leader for the day Jim Neilan, thanked Gordon Cowie, Ernie Michie and everyone else involved in making our visit so interesting and enjoyable. A lot of enthusiastic effort went into the day, and was very evident at all of the stops.

Richard D. Jack.

Day 3

Eskdale Muir

Economic Forestry Group plc

We were met at the Eskdale Interpretation and Training Centre by Mr. David Woolfenden and Mr. Ronnie Rose.

Mr. David Woolfenden gave us a brief history of the development of private forestry in Scotland. Development began in the 1960's when full tax relief was available for forestry (at the time the top tax rate was 98%). Things went very well for private forestry in the early years. Then in 1978-79 the Green Lobby arrived on the scene and in particular attacked the practice of blanket afforestation with Sitka spruce. Foresters were not seen to be environmentally conscious and the campaign against forestry continued to gain momentum.

As a direct result of this campaign the tax relief on forestry was terminated in 1988. This was purely as a result of lobbying by environmentalists rather than any significant saving on behalf of the British Exchequer. The result of this has been that planting is now down by 75% from the mid 1980's.

The British Government now encourages afforestation with a grant of 615 per hectare under the new Woodland Grant Scheme, this however, has had only a limited effect on the amount of afforestation carried out.

Two interesting conditions of this Scheme are:

1. that the afforestation project does not have to be economic
2. that there is a minimum requirement for the planting of 5% broadleaves.

Having a Scheme approved for a grant is now a complicated process and can take up to 6 months and involves the employment of landscape architects. The complicated nature of this grant approval process can mean that an investor may have to spend up to £6,000 before a Scheme even reaches the approval stage.

Mr. Woolfenden finished off his talk by pointing out the contrast between Britain, where forestry, in general, has a poor public image (public and private forestry), and Ireland, where in general forestry has a good name and is certainly not subject to the same restrictions as those that apply in Britain. This he predicts will not remain the case in Ireland if foresters are not seen to respond effectively to the environmental issues raised.

Mr. Ronnie Rose, who is EFG Chief Wildlife Manager for South Scotland

and Northern England, then gave us some "straight talking" as he described it himself, about wildlife. In summary, there are 200,000 deer in Scotland, and shooting and fencing are not sufficient to control this population. Planting started in Eskdale Muir about 20 years ago and there is now an area of 14,000 ha under forest. At the time that planting started, there were 10 deer in the area, there are now 3,000. The deer population is kept under control and there is practically no damage – the deer are looked on as an asset.

Young plantations provide ideal feeding ground for deer. One of the principles of deer management is the need to leave open spaces (approximately 15% of the total area). This is achieved by keeping back from the streams and rivers, which is good forestry practice anyway and leaves the deer areas to feed in. In Scotland the best areas to leave are wet flushes with mineral soil where the deer find their favourite food. Good areas to leave for deer are stream sides, it is important not to leave straight hard edges as these create wind tunnels that do not attract wildlife.

Mr. Ronnie Rose's staff of Wildlife Managers are managers and not just deer shooters. Wildlife management is something that can't be leased out to outside interests. This is because deer hunters as such, are primarily interested in trophies and do not effectively control the population. Shooting older stags only disrupts the deer population, where younger stags then try to establish territories. What is wanted is a stable predictable population.

All species of deer can be a problem. Red deer prefer grass and meadow plants, but when this is in short supply

they will eat trees. All deer have their food preferences, and if they are under pressure they will simply work down the list. It is not possible therefore to avoid damage simply by species selection. Red deer are not noted for bark stripping, but Sika deer are quite inclined to do this. Red Sika hybrids are the most destructive. Bark stripping by deer can be a major problem, if the population is not controlled.

At Eskdale Muir from the start foresters have tried to develop a natural ecosystem. This has been of enormous benefit to wildlife – at the time the development started there were 35 species of birds in the area, there are now 117, this is despite the fact that the main species used is Sitka spruce.

Voles can be a problem in Britain, where they strip the bark and kill young trees. Biological control is the only real answer, this is achieved by encouraging predators. Owls will keep the vole population under control. Carrion crows need to be kept under control as they feed on owl's eggs.

Later on we saw Eskdale Muir Forest itself and it was clear that the policies suggested by Mr. Ronnie Rose in relation to open spaces etc, were being implemented and in fact had been practised for many years, giving the plantation a varied and natural appearance.

We then went on to see an area of Sitka spruce which had been chemically thinned a number of years previously. The particular crop which we visited was chemically thinned at a time when there was a particularly poor market for thinnings. The thinning would have cost £5 per cubic metre if the trees had been harvested. The advantage of chemical

thinning, is that it can be used on high windthrow hazard classification crops to maximise volume production without increasing the risk of wind damage. The EFG have used chemical thinning on quite a large scale. Two cc of Roundup squirted into an axe cut, results in a 75-100% death rate of the trees treated. The normal treatment used is to treat 50% of the crop. It was found to be cheapest to chainsaw brash the crop prior to treatment when the crop has reached a height of approximately 8 metres. The cost of this operation is £170 per hectare to the client, leaving 1,100 trees per hectare. The present policy is to plant mixtures on high windthrow hazard sites. Much of this forest area has a windthrow hazard class of 5-6 (on a scale of 1-6). Commonly used mixtures are Sitka spruce with lodgepole pine or larch.

The EFG looked after us very well, providing us with much appreciated refreshments on our arrival and again at lunch time. Kieran O'Brien, our driver for the trip, surprised everybody and treated us to a few tunes on the bag-pipes.

In the afternoon we visited the James Jones and Sons Ltd. Sawmills in Dumfries. James Jones & Sons Ltd are the largest sawmillers in Scotland and expect to produce 140,000 cubic metres of sawn timber this year. There are two mills in Dumfries, the Commercial Timber Mill and the Boxwood Mill. The two mills are approximately 1 mile apart.

On our arrival we were met by Mr. Brian J. Thompson, who is the overall manager for the two mills in Dumfries, and by Mr. Ian Gray, the manager for the Commercial Mill.

The Commercial Mill is built in a large aircraft hanger. Stocks in the yard are kept to a minimum and it is normal to have two to six weeks supply in the yard. The mill also has one months supply at the roadside in the forest.

The buttresses of the logs are trimmed before they enter the main mill, this reduces hold-up during sawing. The main species used are Norway and Sitka spruce. The mill has a normal production of 140-150 cubic metres per day of sawn material. James Jones & Sons, buy approximately 80% of their timber supply at the roadside and do approximately 20% of their own harvesting. Mr. Thompson was particularly critical of harvesting machines and he believes that a much higher recovery rate could be achieved in the mill, with more accurate selective cross cutting in the forest. In the Commercial Mill they normally achieve a recovery rate of 57%, (depending on the log size under bark).

James Jones & Sons Limited were typically paying £45-50 per cubic metre for sawlog at the roadside (March 1990). The average volume to weight ratio, for the year is 1.0 for Sitka spruce (measured in cubic metres per ton, under bark). In summer the volume to weight ratio varies from 1.1 to 1.15 and in winter the ratio is typically 0.85.

We were shown around the Boxwood Mill by Mr. Stuart Hastings. This is quite an old mill, which was refitted in July 1989. It produces mining and fencing material along with pallet boards. The mill currently has a production rate

of 150 cubic metres per week and it is hoped eventually to produce 200 cubic metres per week. The Boxwood Mill has a conversion rate of 48-49%. The chips and sawdust are sold from both mills and the bark is sold to garden centres.

One problem encountered with Norway spruce in particular in the mill is butt rot *Heterobasidion annosum* (commonly known as *Fomes annosus*). This in many cases has entered the trees through blaze marks. After marking, the trees were then left unthinned for a number of months or even years. This practice allows an entry point for the disease and time for it to develop.

Participants:

Jack Barrett, Denis Beirne, John Brady, Maureen Cosgrave, Myles Cosgrave, Tony Crehan, Jim Crowley, Joe Doyle, Mathias Fogarty, Lily Furlong, George Hipwell, Dermot Houlihan, Richard Jack, Pat Kelleher, John Kelly, Larry Kelly, Pat Kelly, David Knox, Jimmy Lehart, Tom Luddy, Kevin McDonald, Tom McDonald, Michael McElroy, Arthur McGinley, Michael Mac Giolla Coda, Tony Mannion, Gerard Mawn, Donal Murphy, Padraig Naughton, Jimmy Neilan, Con Nyhan, Des O'Brien, Michael O'Brien, Con O'Driscoll, Paddy O'Kelly, Brendan O'Neill, Tim O'Regan, Pat O'Sullivan, Tom Purcell, Gerry Riordan, Noel Teague, Robert Tottenham, Arie van der Wel.

Convenor: Eugene Hendrick

President: Bill Wright