

Day Excursion to Emo Forest

JUNE 20th, 1965

Despite delightful weather and an elaborately prepared and most instructive day the attendance at this excursion was very poor, a total of 15 members being present.

Mr. N. O'Carroll, leader, brought the party to Moanvane (trans. : Fair Meadow) Property where three sites were visited, the emphasis being on research into nutrient deficiencies on this bog type. The

site was a reedswamp peat which Mr. T. Barry stated would never have been covered by raised-type bog. The land had been drained and used for agriculture (mainly hay production) before being acquired for forestry. Planting took place between 1942 and 1944 using Norway spruce (*Picea abies*) and Scots pine (*Pinus sylvestris*). Growth was never good and this was particularly evident in the spruce. As a consequence, the Research Branch of the Forestry Division was called in to investigate the problem in 1961.

Stop 1:

Here Mr. O'Carroll described the site as being an extremely dry peat on which deep cracks, up to two feet, had developed due to drainage after planting and a major drainage scheme in the area. He described to us the development of research in the area. The first investigations centred on evaluating the effect of drainage on the growth of the trees. No relationship was found to exist between height growth and distance of trees from the nearest drain, nor was any relationship found between height growth, and moisture content of the peat. Relationship between water table and height growth was also investigated, with similarly negative results.

Foliar analysis for N, P, K, Ca and Mg were then carried out, a nutrient deficiency being suspected. Whereas the level of the other elements showed no pattern a strong positive relationship between height growth and foliar K was found to exist. The manurial experiment, laid down in spring 1964, had the following treatments:—

3 cwts. potassium sulphate per acre.

6 cwts. potassium sulphate per acre.

Control.

So far the effect has been to give a strong herbal response in the ground vegetation and a definite colour response in the trees. No improvement in growth had yet occurred. Dead trees in the area had been debilitated by K deficiency and killed by frost. To this Mr. L. Gallagher commented that increased salt concentration in the tissues would, by depressing freezing point, reduce the likelihood of frost injury and that workers in America had found increased frost resistance after application of potassium.

Stop 2:

This area constituted the best plot and was of Q.C. I Norway spruce, which was not included in the experiment. This excellent growth could not be attributed to any visible factors of site and discussion, while raising the question of N/K interaction, was inconclusive. It was explained at this point that pot-trials at Shelton Abbey were initiated to test if a relationship existed between the level of K in the soil and the soil-moisture content; different water

régimes were established and half of the pots in each condition were treated with K.

Stop 3 :

Two Norway spruce trees stood side by side, the first had vigorous green foliage and maintained good growth, the second had sparse, chlorotic foliage and growth was poor — why? This was not meant as a rhetorical question but, in any event, discussion presented no answer!

In thanking the Minister for Lands and the organisers of the excursion the President expressed his appreciation of revealing, at an early stage, the progress and results of the work of the Research Branch, and he hoped that this would continue.

L.U.G.
