

HMS/JSA

26th March, 1964.

Dear Mr. Cathie,

Following your telephone conversation about Culbin Forest I prepared a note covering the pre last war period and I enclose two copies so that if you want you can keep one copy for the District Office and one at the forest. I hope that this is the sort of information that you need but if there are any other points I shall be glad to answer them if I can.

I had a copy of the "Scottish Field" which contained the article I wrote before the war and I am almost sure that when I retired I left it in the Forestry Department at the University. Unfortunately it cannot be traced but if it comes to light I shall let you see it.

Yours sincerely,

sonl

R. G. Cathie Esq.,
District Officer.

1 Mr Oliver
2 Mr Home
3 File

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Notes on Culbin Forest in the 1930s

Two copies have been
sent to Mr. Cuthbert
who asked me for
information
voud 27/3/64

I Method of Sand Fixation until 1934. Marram Grass usually at 1 ft. x 1 ft. but sometimes as wide as 2 ft. x 2 ft. The usual technique was followed. Strong growing tussocks were loosened by a fork and the plants pulled up and divided. Plants dibbled out at agreed spacing; work usually done in winter and trees planted in the following spring.

II Pattern of annual planting areas. The annual planting programmes in the earlier years were large having regard to the difficulties. The naturally fixed areas, e.g. heath covered at Low Wood, damp hollows, shingle beds and partially fixed areas were tackled first and in order to meet programmes islands of such types surrounded by moving sand had to be included ahead of the main blocks.

The position in 1933 was briefly as follows:

- (a) The more fixed areas had been planted leaving dangerous islands of sand, moving eastwards, e.g. Hill 99, which were menacing these fixed and planted areas.
- (b) In many cases the sand areas fixed with marram grass and planted had suffered severe damage from further blowing. The marram grass method only worked when there was continual repair by further fixation of blow-outs, and this had been rarely possible. There were, therefore, heavy losses through trees being blown out and dying. Many compartments had losses of over 50% and further losses threatened. These areas were mainly east of line from Cloddy Moss to the sea.
- (c) At the westerly more fixed areas, broom had grown vigorously in many compartments to heights of over 6 feet and had killed the smaller trees.

III Introduction of thatching. In order to solve these problems drastic action had to be taken, a more certain method of fixing the sand had to be found not only on the moving sand to be planted, but also to save the areas already planted but devastated by further sand blow.

It was decided to use thatching. This had been used at the Landes on S.W. France for the coastal dunes and in other countries, but the method used at Culbin had certain unique features. It was decided to use three types of material:

- (a) The broom that was overgrowing the trees (see II (c)) thus taking the first step to repair these areas.
- (b) Birch scrub from woodlands that surrounded the so-called winter lakes which at that time occupied some of the hollows at Culbin (These have been dried up now for a long period).
- (c) Pine branchwood from thicket areas on Culbin, particularly from the woods on the 25 ft. beach round Cloddy Moss.

It was decided to start with the islands of moving sand which were menacing the already fixed and planted areas. The mass of moving sand known as Hill 99 was chosen for the first experiment, and an area on the west side of it was thatched with broom and planted in P.34. It was completely successful and the technique was then applied to other moving sand areas and those to be beat up as well as to all new areas to be planted on moving sand. The use of marram grass was completely given up. During these years about 20 tons of brushwood per acre was used. The material was pointed to the leeward and when

/expose

exposed, e.g. on sand hills fixed down with wire. Planting of trees followed at once and practically no further fixation or beating up was necessary. (In the post-war period larger amounts of brushwood - up to 40 tons per acre was used - in my opinion unnecessarily).

The brushwood was taken to the areas using a heavy sledge drawn by a caterpillar tractor (at that time the power unit was a petrol engine). The makers refused to be responsible for the effect of the sand on the bearings, but in fact no trouble was experienced while thousands of tons of material was being moved.

The beneficial effects of the brushwood is due, of course, first to its effect on stabilising the sand - one can't grow trees on a moving medium - , secondly, on its reduction of water loss from the sand surface, thirdly as it rots it adds organic matter to the sand from which in due course, nutrients, nitrogen and minerals are released. Further the trees are protected and ^{transpiration} ~~transportation~~ tends to be reduced.

At Culbin where the prevailing winds are westerly there is no problem of coastal dunes as on the Landes, the sand moves from west to east, and one must direct the fixation and planting in that direction.

IV Vermin

There was no problem except from roe deer. About 30 to 40 were killed annually within the forest. There was, however a steady migration from adjoining estates, particularly from Brodie to the west where there were open woods which gave cover and where they were undisturbed. While there was no sand troubles at the west end of Culbin, there was continual browsing and it was decided to erect a roe deer fence with wide mesh netting along the western and part of the southern boundaries. This was effective in getting the trees away.

H. M. Steven.