DIVISIONAL EXPERIMENTS

Birch-Scrub Treatment: GLENURQUHART FOREST:

from DBS 9/6/49

(a) Object:

The object of the experiment is to ascertain the effect of different methods of treatment of birch scrub in relation to the growth of trees planted under it.

(b) Methods:

There will be three different methods of treatment and one control and the experiment will be repeated once.

(1) Thinning:

(2) Girdling one year in advance of planting.

(3) Girdling in year of planting.

(4) Planting without any treatment of scrub.

Procedure:

Each plot will be ¼ acre in form of a square.

In May vegetation conditions will be noted for each plot.

The number of stems per acre will at the same time be noted and at the same time basal area at 4' 3" will be taken. Soil samples will be made and any variation in the different plots noted on a plan.

Spring 1927 before 2nd week in May if possible plots No. 1 and 8 will be girdled and in these plots any branches within 6 ft. of ground will be removed together with any swayed or blown stems.

Summer - The whole area will be fenced against deer and rabbits, the fence to be in no place nearer than 10 ft. to edge of any plot. A gate will be erected on the N.W. corner of plot 8. All wet area will be drained.

Winter 1927-28: Plots 4 and 5 will be thinned out. Stems to be left at reguler intervals. Spacing to be determined after a trial has been made.

Spring 1928: Plots 3 and 6 will be girdled and in first week of April the whole of the plots will be planted up with 2+2 Dg. The trees will be planted by pitting at an average distance of 6' x 6'.

14/5/27

Plot 7

7/5/27

Plot 7 6/10/27

Plot 1
7/8/28

Plot 7
28/10/28

PLOT 7

3/11/29

Plot: 7

23/9/30

Plot 7

10/10/30

PLOT #7

26/5/31

PLOT 7

28/10/31

PLOT 7

1/31/33

Glenmorhart Bush Scrub Treatment Plot
Vegetation Analysis - June 5th 1930

Plot (1) - advance girdled.

Fine grasses ++++ - very abundant

Bracken absent, ferns few only +small.

Herbs in order of abundance +++.

& ~~Woodsorrel, violets, woodanemones, etc.~~

Woodanemone, sorrel, violets, speedwell.

Mosses ++ - now almost hidden by grass

(2) control.

Grasses ++++

Bracken ++

Mosses ++

~~Wo~~Sorrel, violets, woodanemones, etc.

No vaccinium

(3) - girdled in year of planting

Grasses ++++ including tufts of sedges.

Bracken fairly plentiful ++

Herbs +++, Oxalis, anemones, strawberry, violets.

Vaccinium almost absent.

Ferns +.

Mosses +

(4). thinned

Grasses. +++ - not so dense as others.

Bracken rather sparse

Vaccinium ++ - spreading all over plot.

Moss abundant ++

Herbs + ferns sparse.

(5) - Hummed.

Grasses ++++

Bracken +

Herbs ++

Mosses ++

Ferns - few.

(6) - girdled in year of planting.

Grasses ++++ - edges plentiful

Bracken very sparse

Herbs +++. Violets, anemone, thistle, etc.

Ferns absent.

Moss. decreasing

(7) - control.

Grasses ++++

Bracken ++

Herbs ++ Woodanemone plentiful, violets

Mosses tending to decrease.

(8). advance girdled.

True grasses ++++

Bracken sparse.

Vaccinium appearing

Herbs. ++. Violets, woodanemone, sorrel, etc.

Moss ++. Hypnum, Hylocomium, Polytrichum, etc.

FS/EM.

Telephone—
BRISTOL 33997.

All communications to
be addressed to—
THE DIVISIONAL OFFICER.

FILE No.....

DIVISIONAL OFFICE No. 3.
FORESTRY COMMISSION,
(ENGLAND & WALES).
BEACON HOUSE,
QUEEN'S ROAD,
BRISTOL, 8.

28th November 1936.

James Fraser, Esq.,
Forestry Commission,
31, Church Street,
Inverness,
Scotland,

Dear Fraser,

Glennquhart - Scrub Plot.

I am very grateful for perusal of the album which is being returned to you today under separate cover and registered. One now realises that these plots were much too small to be solely influenced by the treatment carried out within the limits of each.

In view of the fact that they were enclosed at a time when the area was open to grazing by deer one cannot accept the vegetation changes which in some cases are quite striking as being entirely due to the reduction in canopy and consequent increase in light.

There will probably be a marked difference later on when the remaining living stems interfere with the underplanted trees.

The maintenance of overhead cover is, I think, very important in the case of Douglas and other shade-varying species but the timely reduction of canopy is a problem requiring very careful study.

Yours sincerely,

Frank Scott

Forest - GLENURQUHART. #

Location - P.35. C.47b & 48b

Area - 2 ac.

Description: Birch Scrub Treatment Plot

See Photographic Record in Dist. Office

8 plots of 1/4 ac: covered mature birch

2 plots thinned F.Y. 28.

2 " girdled F.Y. 27

2 " " F.Y. 28

2 " control.

All plots pitplanted Dg. at 6'x6' F.Y. 28

Divisional Experiment.

Forest. GLENURQUHART #

Location P.32. C.21b & 22b.

Description: Divisional Work for Research Branch

E.L. & J.L. seedling trial

1 yr. J.L. 1 yr & 2 yr. E.L. 1.1 of each

on turves - 1 yr. notched in centre of turf

2 yr. side notched.

Total deaths of original plants at 3rd assessment in Oct. 1934

E.L. 1 yr. ... 70%

" 2 " ... 12%

J.L. 1 " ... 75%

No assessment in F.Y. 35

Detailed forms in Dist. Office

Forest - GLENURQUHART #

Location - P.25. C.18.

Area - 0.125 ac. (approx)

Description - District Plot only

Trial of slagging of checked N.S, notchplanted, in poor conditions, Ca-Sc. on shallow peat (1/2") on heavily leached soil

Planted 1925. Interplanted S.P. in F.Y. 29. N.S. were dressed with 3 oz. Basic slag per plant in F.Y. 33. One row as control. Plants were in almost complete check

In Dec. 1935. no apparent benefit was observed. Living plants (N.S.) are almost bare & approx. 33% are dead. S.P. are doing well & may have shelter effect soon.

Forest. GLENURQUHART #

Location. P.26. C.21

Area. 1.5 ac.

Description: Forest or Div! Trial of S.P. direct sowing. Seed was sown in 2 lines on prepared plots each about 15" in diameter.

In 1929 blank plots were B.U. from the better ones. Data in Feb. 1936 are.

Average number plants per plot ... 33

Maximum - " - - ... 54

Minimum - - - ... 14

March '36. - noted that in at least 60% of plots one plant is taking lead.

Total Heights of leading plants

Maximum - 7'

Minimum - 19"

Average - 4'.

Forest - GUISACHAN.

Location - Coille na Tuathanaich (Top)

Area - app. 1·6 acres.

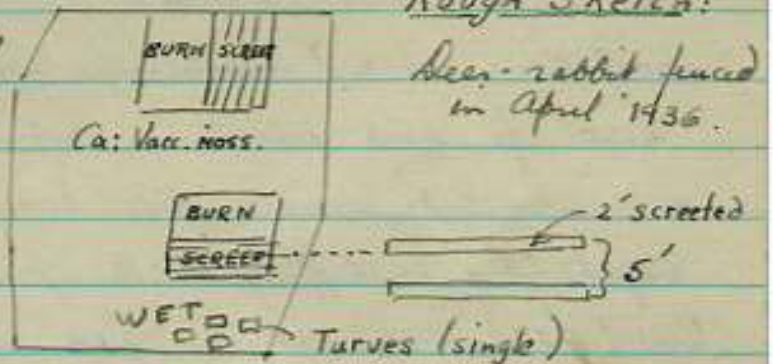
Description - District plot only.

Test of nat. regen. possibilities from old native S.P.

Note: Scarf exposes peat only, not mineral soil.

Rough Sketch:

Deer-rabbit fenced in April 1936.



Two trial seedboxes, examined 2/6/36 gave ① --- 71 S.P. seed } boxes
② --- 100 S.P. seed } 32" x 30"
(average --- 540,000 ~~trees~~ seed p.a.)

① not under trees. ② under trees

On same date seedlings were germinating satisfactorily on screefed strips, & on a few turves in wet area

Assessed (Inspection only) 25:6:37

Excellent survival on screefed strips & turves, probably due to snow covering in winter & spring. New growth satisfactory.

Burnt areas give fair count, especially in slight small hollows.

Vegetation, dom.ᵗ blaeberry, growing fast.

Seedlings also present, but sparse, on untouched areas - well covered by vegetation & difficult to find.

New (1937) seedlings on 1930 holdovers, are very scarce.