

Welcome to the Culbin section of Laigh of Moray Forest. The area of Culbin, which was previously a forest on its own, is approximately 7700 acres or 3500 hectares. The forest is approximately seven miles long and two miles wide at its widest point. It stretches from the western shore of Findhorn Bay (show on map) to Kingsteps, just east of the town of Nairn. The climate is dry and cool and the average annual rainfall within the forest is approximately 23". The area is subject to both early and late frosts.

(54km)

History

The history of the area is somewhat sketchy. The earliest known records of the area are round about the twelfth century when the area known as the Barony of Culbin was owned by the family De Moravia, who were gifted the ground by William the Lion. Their origin is somewhat obscure, but they are believed to have been descendants of Freskin of Freskinus, Bishop of Duffus. From all accounts, the area known as the barony yielded a fairly good living to its inhabitants. The area was divided into 16 small farms (crofts) surrounding a mansion house. A "mansion" house probably merely meant a more substantial dwelling house than the natives' dwellings. The land appeared to be fairly fertile and the River Findhorn nearby was rich in salmon and sea-trout. Fish and shell-fish would appear to be the staple diet. Eventually the De Moravias landed in the position of having a daughter, but no son and heir. The daughter, Egidia, married a Thomas Kinnaird and their son fell heir to the barony. The course of the River Findhorn in those days was nearly 2 miles further west than at present. The swift flowing river was continually bringing down silt and sand, which was swept east along the coast by the prevailing current and deposited on the coast to the west of the barony. So we had the situation where a huge mass of unstable sand was building up to the west of Culbin, a very menacing state of affairs, bearing in mind that the prevailing wind was from west to east. To make the situation even worse, the marram grass which was the natural sand stabiliser, was extensively used by the inhabitants for thatching purposes. Folklore has it that a huge storm from the west in 1694 completely covered the barony leaving what was once a fertile plain, a virtual desert. Probably a more accurate assessment is that the process had been going on for several decades, culminating in the disastrous gale of 1694. To cut a long story short, the Kinnairds, then bankrupt, eventually sold the land to Sir William Colquhoun of Luss and after other changes of ownership, the land was acquired by the Forestry Commission in five different acquisitions, the earliest of which was 1922.

Trees

After the storm of 1694, the area remained a desert for about 150 years. Then some of the local landlords, Kincorth, Brodie, Dalvey, and later Binsness decided to plant some trees. At this point no attempt was made to plant the "desert". The idea was to plant a strip to the south and west of the sand area to prevent further encroachment. The species used were the native Scots Pine and the European Larch. Both species were successful, the Pine growing 28 feet in 28 years and the larch 45 feet in the same period. Around 1870 a significant planting was made by Major Chadwick, owner of Binsness Estate, who introduced Corsican Pine to the area. The native pine of Corsica has proved to be a significantly higher volume producer than SP and now accounts for about 30% of the planted area. Its one serious drawback is its inability to withstand frost. Consequently it is planted on the dune slopes with the flat frost-holding areas planted with SP or LP.

Replanting

The task facing the Forestry Commission after acquisition was a mammoth one :- how to first stabilise the continually drifting sand and then introduce a tree crop. The initial method used was to plant tufts of marram approximately 2ft x 2ft, let the marram grow for two or three years and then introduce the young trees to the stabilised area. This method proved to be successful, but time consuming and expensive so eventually the idea of thatching the area was tried. Thatching simply means covering the area with rushwood and then planting the trees through the thatch. Thatching was done from west to east with the thick end of the branch facing west. In ~~extensively~~ ^{Excessively} exposed areas, the thatch had to be wired down.

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a method has several distinct advantages ie Stabilisation of the sand, conservation of water, shelter for the plant, and much needed humus for the young tree from the decaying brushwood. The whole sand area was eventually treated in this way, the job being finished in the mid fifties. Everything was far from plain sailing due to a disastrous fire in 1939 which destroyed about 400 acres and the ravages of the second world war when the area was used as a target range. While going round the forest one should not compare it to a high production inland forest, but rather think of the transformation from a barren desert to the present, stable, pleasant pine woodland.

Stop (1) Wellhill Gate

This one of the four main entry points to the forest. For those interested in politics the two beech trees within the rails were planted by Harold Wilson and Willie Ross. (1969) The trees around the bus are LP, very hardy species native of North West America. They occupy approximately 3% of the forest area.

Between (1) and (2)

We are passing through one of the more fertile and productive areas of the forest. This is apparent from the vigour of the trees and the lushness of the undergrowth. Note where the natural hardwoods, oak, beech, sycamore, maple, and birch are growing below the pines. This area is a good example of CP planted on the dune slopes and SP on the frosty flats. The way that the bare dune under the pylon line is being whipped away by the wind is an example of what would happen if all the trees were cut. Our clear felling at Culbin so far has been confined to fairly small areas of acquired trees.

Stop (2) Opposite gate at the top of Findhorn Bay

(1888)

On the right of the bus you can see some old P88 SP. These are rather poor and have virtually stopped growing. This is obvious from the flat shape of the crowns. Through the trees is the edge of the forest, the southern tip of the Findhorn Bay, and the estuary of the Muckle Burn. This area is rich in sea birds and waders of many kinds. On the left of the bus is an area which has been felled and replanted using SP and CP. Before replanting, the young trees have to be dipped in a substance called Gammacol (a DDT product) to prevent attack from the pine shoot and pine root beetles which breed in the stumps of the old crop.

Between (2) and (3)

On the right of the bus we can see some of the remnants of the P88 CP planted by Major Chadwick. Those magnificent trees are a good indicator of what to plant and the area on the left was replanted with CP 2 years ago. On the right now you can see a naturally regenerated area of SP. The parent trees, long since felled, were on the hillock to the left. Note how the natural trees are very thick on the ground. Some of these may go as pokers to the aluminium works.

Walking down to Stop (3)

This is probably one of the best stands in the forest of CP. The trees on the right were planted in 1912 and on the left in 1907. Both were Major Chadwick's plantations. Notice how the broom is growing, and the young natural DF on the left.

Stop (3)

As far as we know, we are standing in the old community at this point. Certainly there is an old agricultural layer in the soil profile here. The DF which you see growing below the road would certainly not thrive in most of the Culbin soils. The old mansion house was apparently sited near the Lady Culbin dune which is north and west of this point. Legend has it that many years after the 1694 storm a great storm rose from the east and part of the mansion house was laid bare. One of the more hardy citizens shouted a greeting down the exposed chimney and lo and behold he got an answer.

The tree behind presents one of the stranger aspects of the blown sand. This tree has approximately 30' of its length buried in the sand. The trees on the dune are actually the same height as those on the flat below. This of course is a dune which was built up after, and as a direct result of the tree planting. Note how the taper of the buried tree differs from normal. It actually has a larger girth higher up the stem. This is the result of lack of light and constriction of the stem due to the packing effect of the sand.

Walking from (3) to (4)

We are now walking along the top of the dune created by the planting of the CP in 1912. The cones lying around are CP which are easily recognisable by the pronounced "knob" on the cone scale. The 1907 CP opposite has the distinction of being the most northerly CP seed stand in Europe. By a 'seed stand' we mean an area of particularly good tree form specially thinned and treated to produce good parent tree stock.

Stop (4) Heronry

Here we have an important colony of herons. There are approximately 14 breeding pairs in this area. They appear to have chosen this site because of its proximity to the river and Muckle Burn estuaries. Their diet is mainly fish, augmented with frogs, newts, etc. They nest in February/March and have anything from 2 to 5 eggs. The hatching period is roughly 5 weeks and the young birds remain in the nest for probably another 8 weeks. The nesting trees are not felled during normal forest thinnings.

Between (4) and (5)

On the left is one of the few places left where the original thatching remains. Note how the brushwood is ^{rolling} away and in doing so is providing humus for the young trees.
Ref. X

Stop (5) Optional

An experiment was laid down in this, one of the poorest areas of the forest to find out the basic manurial element which was most important to the trees. Briefly what was done was to lay out a series of small plots and treat with various fertilisers. In each case, one element was absent and from a quick glance it is apparent that far and away the most important element is nitrogen. Without added nitrogen tree growth on these sites will be extremely poor. Culbin is one of only two forests which has a programme of pine pole stage fertilisation. Briefly this means that after each thinning, nitrogen is applied to the trees from the air using either helicopters or fixed wing aircraft. The thinning cycle, or period between thinnings can be anything from 5 to 10 years, depending on the vigour of the crop and by applying the nitrogen immediately after thinning the trees have the maximum time to take up the fertiliser and increase their height and girth. This method is also advantageous in that poor trees removed in thinning receive no fertiliser. CP is much more responsive to the nitrogen application than SP.

Between (5) and (6)

You are now passing through the poorest area of the forest. This area was planted in the mid fifties so the poor height growth is immediately obvious. The general debility of the crop can also be seen from the poor colour, shortness of the needles and the trees' inability to retain more than the current year's needles. The very poorest growth is on the shingle ridges, a series of diagonal north-east to south-west shingle bars running through the eastern end of the forest. Shingle, of course, is devoid of nutrients and has no ability to hold either moisture or organic matter.

Stop (6) Shore defences

The magnificent Culbin beach line is gradually being whittled away by the combination of high tides and gales. These usually occur in March and November. In one storm

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About 3 years ago almost 30 feet was lost off the shore in one night. As you can see coastal dune runs parallel to the beach and, so far, has held firm. If this dune is breached, several hundred acres of plantation will be lost to the sea. The wooden structures built out into the sea are known as groynes, those running parallel to the beach as wave screens and the wire filled baskets as gabions. All have basically the same purpose i.e. to make the waves break further out and to create a second sand bar. The breaking of two waves close together causes a whirlpool effect and this causes the sand on the shore line to be dragged away. The posts with the plastic strip between them are supposed to have the same effect as snow barriers except that they are there to build up sand. 1974

Between (6) and (7)

On our right is the area known as the Buckie Loch. This area was previously sea-covered but has become part of the mainland as the sea receded. It is rich in very many rare plants and is frequently visited by botanists.

Produce

Three main products are produced in Culbin, the main one being pulpwood which is sent to Fort William. Virtually all the earlier thinnings go to this market which takes logs down to 7cm top diameter. ~~The mid range of timber goes as wood wool. This is cut in 1 or 2 m lengths and sent to Newcastle or Manchester.~~ The larger logs, provided they are straight, are bought by local timber merchants for saw-milling. Another market which is becoming more important is for telegraph poles. This is a lucrative market, but of course the trees must be ~~cut~~ straight.

Stop (7) Optional

On both sides of the road here we have what are known as flint knapping sites. Briefly this means that in these places ancient man searched for flints, and on finding them, split them to the shapes he wanted. Some of the broken stones are the residue from this practice. Flint was a material much sought after to create scrapers, axe heads, arrow heads, and any sharp edged tool.

Stop (8) Badger's Setts

We saw a slide of a badger earlier on and here is the badger's home. There are many badger's setts in Culbin, particularly near the edges of the forest and the outlying plantations. A badger's sett is easily recognisable from a fox's den by the absence of any litter round the area. No carcasses or bones are left lying around. The badger also uses a latrine outside the actual sett. Badgers are nocturnal animals and are very rarely seen during daylight. Occasionally one will not get back to his own sett before daylight and when this happens he usually goes to the nearest sett and stays there until darkness falls again. Badgers and foxes have been known to share a sett if it is big enough, but the badger, an extremely strong, fierce animal when cornered, would undoubtedly be the boss. Badgers are protected animals and do no harm to the Forestry Commission but old beasts have been known to take poultry from farms. On badger tracks which cross fences the Forestry Commission provide wooden flaps known as badger gates to prevent damage to wire netting.

Stop (9) Shell Middens

Neolithic man was apparently a sociable person and large groups fed together. As has said earlier, shellfish was their staple diet and this was one of their eating places. A fire was built (note the blackened stones), shellfish (mainly oysters, cockles and mussels) were heated and then eaten. The shells here are what remain of their feasts.

Between (9) and gate

We are now on our way out of the forest and one subject as yet not touched on is fire. ~~As we leave the forest we shall see on our right, one of the fire towers.~~

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A FIRE TOWER IS
~~these towers are~~ manned during the danger season. The most fire dangerous period of the year is the spring when the old grass is dry and dead and the new ~~grass has not~~ GROWTH ~~STARTED~~. The forestry commission have installed fire tanks at strategic points in the forest and, where water is near the surface, fire dams have been excavated. A bad fire can destroy in minutes what has taken years to create.