

Laggandrishraig Plantation.—This is a thriving young plantation of about 60 acres, consisting of a mixture of larch, Scots pine, and spruce. It takes the form of a belt running along the loch-side, and is bounded all the way by the road. It was established seven years ago on a cleared area, upon which, after draining, two-year seedlings were notched about 2 ft. 6 in. apart.

Benmore.

About three miles beyond the last plantation visited the marsh is crossed and the adjoining estate of Benmore entered upon. This estate extends along Loch Long for about three miles to Strone Point, from which it continues along the eastern shores of the Holy Loch and the slopes of the Echig Valley to Loch Eck. The remainder of the estate occupies a position to the west of Loch Eck and lies between it and the Masson Valley. On the estate there are some 2,000 acres of woodlands between thirty and forty years of age, in addition to some 200 acres of natural oak and birch scrub. These occur in scattered blocks and separate enclosures, some of them a few feet above sea-level, while others rise to a height of 1,200 ft. The dominant species comprising the woodlands are larch, Douglas fir, Scots pine, spruce, and *Thuja gigantea*. In addition a large variety of exotic conifers have been planted in small groups throughout the plantation.

Gairletter Plantation.—This is situated on the north-east shore of Loch Long, with an easterly exposure, and rises from sea-level to about 130 ft. Two years ago, when it was blown down, the plantation was fully stocked, the trees standing 4 ft. to 9 ft. apart. The average height-growth of the Douglas fir was about 70 ft., while that of the *Thuja* was about 60 ft. The stems of the Douglas fir showed natural pruning up to two-thirds of their height. Average annual increment per stem was about 0.6 cubic feet for Douglas fir, and for *Thuja* about 0.3 cubic feet. The stems numbered on the average about 890 per acre, half of that number being pole-size, while the remainder were of timber-size. There were about equal numbers of Douglas and *Thuja*. The volume of timber per acre, according to quarter-girth measurement (deducting 1 in. for bark) was as follows: Douglas fir, 5,000 cubic feet; and *Thuja*, 2,430 cubic feet. This gives the high total of 7,430 cubic feet per acre.

Natural Regeneration Plots.—On the lee side of Rashfield Wood two small areas were enclosed about four years ago with the idea of obtaining natural regeneration. These plots will now be found to contain a fair crop of *Thuja* seedlings.

Japanese Larch.—At Puck's Glen, on the lowland, two strips of Japanese larch have been successfully established. These are now nine years of age, and range from 14 ft. to 18 ft. high. It is interesting to note that it has been found impossible to establish European larch on this land on account of disease.

Nursery.—An area of about 4 acres was broken in last year to form a nursery. The soil seems well suited for the raising of seedlings, and it is naturally drained by a gravelly subsoil. In the spring of the year breaks were laid out 30 by 40 yards, in which the following plants were lined out: 100,000 one-year seedling larch, 100,000 one-year seedling silver-fir, 50,000 two-year seedling silver-fir, 20,000 one-year seedling Douglas fir, 110,000 two-year seedling *Thuja gigantea*. Sowing operations were delayed until the 18th May on account of wet weather, when ten seed-beds were laid off and the following seeds sown: 100 lb. Douglas fir (which was purchased direct from America), 30 lb. *Cupressus Lawsoniana* (home seed), 11 lb. Norway spruce, 1 lb. Sitka spruce, and small quantities of birch and alder. It is intended to utilize these seedlings mainly for underplanting larch and Scots pine.

Cruach Wood (Sample Plot).—The sample plot selected, 1 chain in width at base, and extending for 2 chains up the hillside, has an elevation of about 500 ft. above sea-level, and is situated on a steep slope with an eastern exposure. It consists of a practically pure crop of Douglas fir, which is now thirty-five years of age. At the time of planting the ground was described as being steep, undulating, and rocky. The surface soil was a sandy peat, with heather on the ridges and the tops of rocks, while the intervening hollows were of an open, sandy, and gravelly nature. The subsoil consisted of clay slate and quartz rock, which occurred in alternating layers. The soil is now greatly improved by the humus formed from the rich fall of foliage annually, but the peaty nature of the ground is still very apparent in many places. The age of the plants at time of planting is said to have been "two-year seedlings, twice and thrice transplanted," and the planting method adopted seems probably to have been a rough form of pitting. The hillside is so steep that the planters are said to have been obliged to kneel on the ground while planting to avoid slipping down the hill.

In default of exact measurements and stem-analysis, it may be taken that the mean of the percentages of the current annual growth in girth and growth in height will give a fairly correct estimate of the percentage of current annual growth in cubic contents. In such case it would be 5 per cent.; and with the present volume of 3,255 cubic feet per acre, the increment for the year 1912 may be estimated at 5 per cent. of this, or 162½ cubic feet, making a total of 3,417 cubic feet when the plantation will have completed its thirty-fourth year of growth. This shows an average annual increment of 100½ cubic feet (square of quarter-girth measurement and with full bark allowance deducted).

Larch Wood (Golden Gates).—This contains the oldest standing timber on the estate. It is composed of a mixture of larch, Scots pine, and spruce, from seventy-five to ninety years of age. The wood is now mature and has been sold. As a preliminary to selling, the standing trees were surveyed with a view of arriving at the average of stems. This was found to contain 60 cubic feet of timber (quarter-girth measurement), and was used as an indicator to calculate the total volume of timber in the wood.

The annual excursion concluded with the party returning to Dunoon about 3.45 p.m., in time to allow members to leave for their destinations by the afternoon steamers. The society's guests returned to Edinburgh, and were accommodated in the North British Station Hotel, Princes Street.