late spring frosts, which has proved to be the case in this district. The first plantings of this species were made in mixture with larch, the Douglas fir being 8 ft. apart. This, however, proved an unsatisfactory method, as the Douglas fir was mostly outgrown by the larch, and constant attention is required to prevent the suppression of the weaker species. In this part of the plantation Douglas fir of the same age show individually most uneven growth, some of the trees being only 2 ft. high whilst others are 20 ft. in height. This may to a great extent be accounted for by the fact that the trees, being on rather low-lying ground, were severely frosted soon after planting, and have never properly recovered; there is also some reason to believe that the seed may not have all been of the true species, but that some of it may have belonged to the Colorado variety, which is of much slower growth. According to authorities the appearance of both types is very similar, the difference in height and rate of growth being the most distinguishing characteristics. Small lots planted later on higher ground appear likely to do much better, and later on it may be found a useful species for underplanting the larch. Owing to its rapid growth, great dimensions, and the excellence of its timber the Douglas fir is considered the most valuable forest-tree of North America. The timber is fine-grained, heavy, strong, easily wrought, and capable of receiving a high finish; is not very resinous, but very durable, and does not warp or splinter. It is used in constructive building-work, bridge-building, for railway-sleepers, pit-props, masts and spars of ships, and for all interior house-decorative work, such as panelling, skirting, shelving, &c.

Sequoia sempervirens (*Redwood*).—A native of the California coast region, not widely distributed. One of the largest trees of the globe, it grows to a height of from 200 ft. to 300 ft., with a diameter of 10 ft., occasionally becoming over 20 ft. in diameter. The planting of this species has not been altogether successful, the majority of the first lot put out being destroyed by frost, and it has been found that it succeeded only in warm sheltered situations. In situations that suited it, however, very good growth has been made; and as it bears a considerable amount of shade it may perhaps be used for underplanting. When cut down the redwood reproduces by stool-shoots and root-suckers. The wood is soft, easily split, very durable, but light and brittle; also takes a high polish. It is used for building-material, shingles, fence-posts, telegraph-poles, railway-sleepers, wine-butts, water-tanks, coffins, and veneering. The timber in buildings known to be a hundred years old has been found still quite sound.

Picea excelsa (*Norway Spruce*).—Norway spruce is a native of middle and northern Europe, where it is one of the largest indigenous trees, attaining a height of 150 ft. with a diameter up to 5 ft. It thrives best in very moist climates, and is found in its natural state mostly in hilly or mountainous country. Norway spruce develops a straight undivided stem with thin branches, which become drooping with advancing age; as it bears a considerable amount of shade, a very close canopy is required when young in order to suppress the side branches. It transplants very well, but is rather susceptible to damage by late spring frosts. For several years after planting its growth is very slow, and for this reason it is not altogether suitable for planting in this district, where the fern quickly overgrows it, and considerable expense is entailed in its protection. On this account no spruce has been planted during the past five years. The Norway spruce is the principal tree of the European timber trade, the timber being commonly known as white deal or white Baltic pine. It is used for flooring-boards, planks, scantlings, mouldings, packing-cases, and scaffold-poles, and also makes excellent wood-pulp for the manufacture of paper.

Picea sitchensis (*Tideland Spruce*).—This spruce is a native of the Sitka Sound and the coast region of British Columbia. In appearance it is somewhat similar to the Norway spruce, but when mature is a much larger tree, growing to a height of 200 ft., with a diameter of 15 ft. Both spruces thrive best under similar conditions, and in rate of growth and suitability for extensive planting here there is practically no difference between them. Sitka spruce, however, is rather more shade-enduring, and in consequence may be found more useful in underplanting operations. The timber of well-grown trees is of excellent quality, and may be used for the same purposes as Norway spruce.

Thuja plicata (*White-cedar*).—A native of the north-western part of North America, being found from Alaska to California and Montana. Height from 150 ft. to 200 ft., with a stem-diameter of 15 ft. The white-cedar is still in the experimental stage here, small numbers having been planted during the past two seasons. It is quite hardy, is easily transplanted, and at present the young trees are looking remarkably well. As a rule it takes two or three years to become established, and for this reason is not suitable for extensive planting on heavy fern land, but, as it bears a great amount of shade, will probably be one of the most useful species for underplanting. The timber is light, soft, and very durable, and is used for fencing, weatherboarding, sashes, doors, interior house-finishing, cabinetmaking, and cooperage.

Alnus glutinosa (*Alder*).—The common alder is found throughout Europe and is also indigenous in Great Britain. It is a deciduous light-demanding tree, with a straight stem, thin foliage, and small branches, which soon die and drop off in the shade. Growing very fast, it is, however, never a large tree, rarely exceeding 75 ft. in height; and is hardy, late frosts having little or no effect upon it. Here it has been used very successfully for planting very wet land where no other species would grow, and shows an annual average growth of nearly 3 ft. The timber is soft, splits easily, and will last for a long time under water, but is not durable where subjected to the combined influences of air and water. It is used for clog-making, herring-barrel staves, cigar-boxes, and for cooperage, and also produces the best charcoal for the manufacture of gunpowder.

Acer pseudo-platanus (*Sycamore*).—Native of middle and southern Europe and western Asia. Grows to 100 ft. in height. It was planted here in mixture with the Austrian pine, but was cut down by successive unseasonable frosts, and, save for a few specimens on the outer edges of the block, never had a chance to compete with its hardy neighbour, the majority of the trees being gradually killed out. Like other broad-leaved species of deciduous trees which have proved climatically unsuitable, the