

bearers, in anticipation of thus being able to more successfully combat the fungus. In young plantations much vigilance is exercised for the presence of the disease, and each employee is educated sufficiently to be able to also instantly detect same. Instantaneous action in removing affected trees and decayed timber and branches in the vicinity is taken on the officers being made aware of the outbreak, and this is frequently followed by underplanting with tolerant varieties.

In the damper localities plantations of larch were seen where *Fumago vagans* had obtained a hold. I understand this form of honeydew is best overcome by thinning, and allowing more air to circulate through the plantation. The ill effects arising from the presence of such diseases as pine-needle blister (*Peridermium pini*), ash-canker (*Nectria ditissima*), coral spot (*Nectria cinnabarina*), beech-scale (*Cryptococcus fagi*), pine-sawfly (*Spiphyrus pini*), and pine-weevil (*Hylobius abietes*) were also noticed, and valuable notes taken in reference to remedial measures.

The destructive squirrel now abounds in the British Isles, and instances were numerous of the damage caused by its presence. Evidently few varieties of trees are immune from the attack, but generally pines and larch suffer mostly. The animals ringbark the trees some distance below the crown, which in course of time dies. Strong laterals are then usually developed.

BRIEF REMARKS ON CERTAIN TREES.

In placing our reliance specially upon *Pinus Laricio*, *P. ponderosa*, *P. radiata*, *Pseudotsuga taxifolia*, *Populus deltoides*, and selected eucalypts to fulfil future requirements, the Department cannot reasonably be accused of indiscretion; but the wisdom of having operated so largely with European larch in pure stands is problematical. At all events, our oldest larch plantations have now reached the critical period, when disease in various forms might be expected, and extreme vigilance for any outbreak of fungus should be exercised. Pure planting of larch in Great Britain is looked upon as being a decidedly doubtful proposition, owing to the susceptibility of the tree to canker; but many planters evidently still risk this wholesale loss in their eagerness to raise similar magnificent larch forests to those seen frequently during our tour. Larch-timber commands a much higher price than the largely grown Scots pine, and in consequence of its greater durability is more needed for the requirements of the country.

Pinus sylvestris undoubtedly occupies first place in Scotland's native forests. The species admirably lends itself to reforestation by reason of its simplicity of propagation and, strangely enough, only isolated trees were noticed affected by *Chermes laricis*. At every attempt to grow the Scots pine in the Dominion we have been frustrated by the attacks of this aphid. The question arises again, however, whether the seed used was gathered from healthy specimens; and a further trial sowing of special seed selected from some of the famous "Laird's Walking-sticks" will be made in the hope of raising a few pines of excellent parentage for experimenting with on high altitudes. It might be mentioned here that much success is attained throughout portion of the prairie country in Canada with *Pinus sylvestris*, which is also recognized as being adaptable for the creation of dense shelter-belts.

I was much impressed with the vigour of the Russian poplars—*Populus Petrovski*, *P. certinensis*, and *P. wobsteriga*; and each species also makes rapid headway, even when planted on alkali surfaces.

It would appear that the requirements of Manitoba maple (*Acer negundo*), *Picea alba*, and the excellent leguminous Siberian pea-tree could also be furnished in Central Otago, where specimens will be sent on trial as soon as possible.

In Scotland, *Pinus Laricio* does not seem to have been persevered with to any great extent, and nurserymen complain of the high transplanting death-rate in operating with this species. In England, however, rather more value is placed upon the Corsican pine, but it also is excluded from the list of the principal trees grown.

The bull-pine is also dealt with similarly, and it is surprising that even in America, where such magnificent forests of *Pinus ponderosa* abound, only comparatively little has been done with the species in the drier localities.

Along the Pacific coast was noticed growing profusely the red-cedar (*Thuja plicata*), the timber of which is used extensively for shingles. In view of the value of the timber, experiments now being conducted with the red-cedar in the South Island should be undertaken with greater vigour.

Both *Tsuga Mertensiana* and *Abies grandis* are recognized as being very valuable for ground-protective work, and should, in my opinion, receive more consideration in the future.

In the eucalypts it is absolutely impossible to recommend with any degree of certainty the general planting of any particular species, and it is purely a matter of experimenting with seedlings raised from known, valuable, acclimatized trees. A brief discussion in Sydney with Mr. J. H. Maiden on the subject convinced me of the great study that is entailed in becoming thoroughly conversant with the Australian hardwoods. In Victoria and New South Wales the Forestry Department are aiming in the meantime at producing soft timber by planting *Pinus radiata*, *P. Laricio*, and in a less degree *P. maritima*, believing that by the conservation of existing gum forests and assistance in natural regeneration of same the supply of hardwood will be sufficiently regulated to meet anticipated future demands.

Several demonstrations of the value of *Pinus radiata* for case-making and indoor construction-work point to the ultimate success of our extensive operations with this fast-growing tree. It is well to bear in mind, however, the havoc that high winds occasionally play with the species, particularly when the ground is in a thoroughly moist state, and care should be exercised to judiciously include protective belts of deeper-rooting trees less liable to be uprooted or broken off in situations requiring this provision.