

high altitude in Canterbury and lost them all. Had this planting been done in the Marlborough Sounds or on warm lowlands of the North Island most of the species would now have been yielding poles for carrying wires and logs for the sawmill.

#### SPECIES FOR WIRE-CARRYING POLES.

There are at least sixty timber-yielding species of *Eucalyptus* that can be grown somewhere and to some extent in New Zealand. To the timber list there may be added a large number of ornamental species of smaller dimensions. In a handbook which the writer hopes soon to publish all the most important of these species will be given detailed description, with notes on climatic requirements and uses of the trees. The purpose of the present article is to meet an urgent demand for information that will enable local bodies, syndicates, or private owners of land to start plantations for the production of wire-carrying poles.

The task of selection will be made easier if we place the several available species in groups. For those who are not botanists the most convenient basis for grouping is bark. The living bark of *Eucalyptus* trees, like that of many other trees, is always gradually changing into dead bark. The dead bark may cling to the tree, or it may fall away, leaving the living bark bare; it may be stringy, fibrous, sub-fibrous, or entirely non-fibrous; it may be soft or hard. On this bark basis we easily form five groups, as follows: (1) Stringy-barks, (2) gums, (3) woolly-butts, (4) ironbarks, (5) boxes. The order in which the groups are here placed is determined by value of the crop they can return to us in New Zealand. Two factors enter into the value of a timber-tree—(a) Quality and durability of the mature wood, (b) rapidity and abundance of its production. The best tree is that which most completely combines both factors, and the best group is that which includes the largest number of such trees. The stringy-barks and gums are placed first because they are the groups that can produce the largest quantity of good timber in the shortest period of time; the ironbarks and boxes come last because, although their mature wood is of exceedingly high merit, their prospective productivity is low.

#### STRINGY-BARKS.

The term "stringy-bark" is here used in the widest sense, so as to include all the eucalypts whose dead bark is distinctly fibrous or stringy. So numerous and so generally valuable are the members of this group that it would be easy to write a pamphlet about them. In this article on trees for electric power transmission poles we must be content to mention a few.

*Eucalyptus pilularis*.—This species has dead bark persistent on the stem only, fibrous but not stringy; leaves in juvenile stage sessile (without stalks), lance-shaped, richly coloured, on adult trees deep green and shiny on upper surface; seed-cups about  $\frac{3}{8}$  in. in width; mature wood pale, easily worked, strong, durable in the ground. The species has its native home in warm parts of eastern Australia. It was introduced into New Zealand about fifty years ago, and is now represented by vigorous millable specimens on the Auckland Isthmus, in three separate plantations near Papakura, and in two localities in the Hawke's Bay District. The trees grow rapidly to a large size, and, if intended for power-line poles, must be matured in close stands. In the seedling stage