

that I would recommend the planting of indigenous trees. It is different with the planting of exotics. There are no light-wood trees in Victoria of any value, and the cedar of New South Wales, and other trees having similar qualities, are reported to disappear rapidly, owing to large demand and uncontrolled working. To what extent the light-wood forests of New Zealand are protected is beyond my ken, but under any circumstances it is undoubtedly a step in the right direction to introduce woods into Victoria which have qualities not found in the indigenous timber, for that a demand exists for material of this kind is proved by the large annual imports. The choice of trees to be introduced should be made with the greatest care and circumspection, and, if decided upon, rapidly and systematically pushed. The introduction of oak is excusable only for reasons of sentiment or for the improvement of the landscape, for, as regards the technical qualities of the timber, it like 'carrying coals to Newcastle.' The broadcast introduction of *Pinus insignis* has no excuse whatever, for, though it is doubtless one of the fastest growing pines, its wood is of a low character.*

"I have great sympathy with the plantations which have been established with a view of the broadcast distribution of useful exotic plants, and I have taken steps to secure for them for some time to come an annual supply of seed from India of such trees as I think may be useful. These central plantations have been established by the Victorian Forest Department, and are worked with great success, upwards of one hundred and fifty thousand trees per annum being distributed free of charge.

"I cannot speak too highly of the officers in charge. They are men who have gained their experience in practical work, and know their business thoroughly.

"I have often been asked my opinion as regards the prospects of an export of timber from the colonies, and I have given considerable thought to the subject, which has been for years in my mind with reference to our Indian heavy woods. We have in India a considerable number of timbers which do not compare unfavourably with the best of the *Eucalypti*. I need only mention *Fragraea fragrans*, *Shorea robusta*, *Mesua ferea*, *Xylia dolabriformis*, and *Pterocarpus indicus*, but there are many others. We have, however, succeeded only in establishing an export trade in *Pterocarpus indicus*, and that, not on account of its exceptional strength, but for its richness of colour and capacity for taking a high polish. It is used for panelling, parqueting, staircases, &c. In the same way I think an export trade might be established in Australian blackwood. There is, in my opinion, no hope of placing any of the Australian or Indian heavy timbers on the European or American market for purposes of superstructure or ship-building. Their use as paving-blocks is all we can expect as regards those which are not sufficiently handsome in design or colour for parquet, veneering, or other decorative purposes. The demand, however, for paving-blocks may at any moment assume gigantic proportions.

"I cannot conclude this letter without paying a tribute to your eminent scientist, Baron Ferdinand von Mueller, who, as far back as 1871, and probably earlier, recommended the rational treatment of the Victorian forests."

THE INDUSTRIAL AND COMMERCIAL USE OF THE TIMBER-TREES OF NEW ZEALAND.

Kauri (*Agathis australis*), Salisbury.

Among the timber-trees of New Zealand, and, indeed, of Australia, for manufacturing purposes the kauri stands pre-eminent. All writers concur in placing this noble tree *facile princeps*. No one, indeed, entering a kauri forest for the first time could fail to be struck with astonishment and admiration at the height and majestic proportions of this timber giant. Straight, massive boles carry aloft great branches that tower above the surrounding vegetation, imparting to the beholder the impression at sight of great height rather than of bulk.

I have been among the giants of Cape Otway, of Gippsland, of Yea River, and of Sassafras Gully, in Victoria. I have explored the habitat of giant trees in Tasmania, at the Huon, Port Esperance, Hastings, and the west coast; and have assisted in measuring *Eucalypti* in both colonies up to 330 ft., and seen scores of over 300 ft. Yet none of these so impressed me with the sense of great height as did the kauri, and it took some consideration to realise that these trees appear taller than others of twice their height; solely because of the beautiful proportions of their cylindrical and massive boles—which are carried up like the tubular column of a substantive bridge—and the absence of knobs or excrescences.

Now, many of our tallest gums are not solid in the butt. They are generally supported by buttresses. At, say, 30 ft. the bole tapers rapidly, and at 60 ft. from the ground is not more than half the diameter at 8 ft. Then an even diameter is preserved for the next 100 ft. or so. It is a quite common thing to see gum saplings of, say, 3 ft. to 5 ft. diameter run up from 100 ft. to 200 ft., straight and slender.

Now, the kauri is essentially a timber-producing medium, and in the proportion of convertible wood to the height of the tree emulates the *sequoias*, or giant trees of America. The kauri puts on wood year after year, each foot of growth in height marked by a regular and well-proportioned increase in girth, so symmetrical and so beautifully balanced that the tree would almost stand unsupported when sawn through. The quality of its timber, is of course, too well known all over Australasia to need comment here.

Professor Kirk's fine work on "The Flora of New Zealand" gives every information. It may briefly be mentioned, however, that for furniture and general cabinet-work kauri is much used; for flooring it is unrivalled, and is in great demand for engineering works of construction. Tough, elastic, buoyant, and easily worked, it is, *par excellence*, the timber, not only for use in New Zealand, but in all parts of Australasia.

* For the last four years these have only been planted for shelter purposes.—G.S.P.