

6. WOOD-PRESERVATION.

Extensive replacements of building and constructional timbers, both native and imported, stress the importance of wood-preservation. Further inspections were made during the year of the 100 rimu poles creosoted in Westland in 1930 and placed in service lines in Canterbury and Greymouth by the Post and Telegraph Department. Although heavily checked since their erection, the treated poles still appear perfectly sound. Creosoted eucalypt poles in the North Island are also in good condition after six years' service. Having been only butt-treated, however, it is not anticipated that they will display as long a life as the full-length-treated rimu poles.

A commencement was made with the creosoting of 1,000 fencing-posts of larch and pines at both Hanmer and Conical Hills, the larch posts at Hanmer having already been treated and placed in use. This project has been undertaken as a result of the excellent results secured from the creosoted posts still under observation in test fencing-post lines after thirteen years of use. A leaflet dealing with the preservative treatment of fencing-posts was also printed and distributed.

Damage by sap-stain, &c., continues to rank as a major problem in the utilization of several commercial timbers. As a result of further experiments in the seasoning of silver-beech for export the conclusion has been reached that this timber should not be air-dried in the open for more than one winter owing to a tendency to develop serious sticker stain. Experiments with tawa were also continued during the year, a chemical treatment with an ethyl-mercury-chlorine dip being investigated as a possible means of overcoming the greyish discoloration so characteristic of this timber. The sticker rot which occurs with tawa when seasoned in the open proved to be entirely absent in both the untreated and treated stock seasoned completely under cover. Likewise the greyish discoloration was entirely absent in all 1 in. stock when seasoned under cover, but universally present in 4 in. stock, with little difference in occurrence between untreated and treated material.

Various stains continue to prejudice consumers against the use of exotic timbers and to depreciate their value. Generally speaking, however, all stains are traceable to bad logging and seasoning practices. Provided logs are sawn immediately after the trees are felled and the sawn timber likewise carefully open-stacked or kiln-dried immediately after sawing, there is little difficulty in producing bright, clear stock suitable for a large variety of uses.

7. CONTROL AND PREVENTION OF BORER-ATTACK.

In an effort to develop practical measures for the control and prevention of borer-attack numerous inspections and examinations of infested material were made throughout the year. While the common house-borer (*Anobium domesticum*) has undoubtedly been responsible for the greater part of the attack of the softwood timbers, it now appears that it has been erroneously credited with the attack of such hardwoods as tawa, taraire, &c., which are commonly infested with the powder-post beetles (*Lyctus* spp.). The insect now causing most damage, however, is undoubtedly the native two-toothed longhorn (*Ambeodontus tristis*), the ravages of which are being reported in increasing numbers from all parts of the Dominion. It cannot be emphasized too strongly that continual inspection of all woodwork is necessary if practical control-measures of this and other wood-boring insects are to be effected. To broadcast known means of control for wood-boring insects a leaflet dealing with the subject was published for free distribution.

8. GENERAL UTILIZATION PROJECTS.

No further progress has been recorded in the standardization of butter-boxes although the "Saranac" type of wire-bound box continues to grow in popularity, primarily owing to its lower cost. On the other hand, this type of package, manufactured from $\frac{1}{4}$ in. timber, has undoubtedly been responsible for the increased occurrence of mould, the rotary-peeled timber much more so than the sawn. Efforts are being made to eliminate this trouble by the development of a fibre-board liner, although the standardization of the existing sub-standard box manufactured from $\frac{3}{8}$ in. timber is probably the simplest and cheapest solution of the mould problem. The possibility of using sap-rimu butter-boxes for the export trade does not appear to be fully appreciated by the dairy industry. Small trial tests carried out in past years have indicated that untreated sap rimu does not taint butter, and it is hoped that a comprehensive export trial will shortly be undertaken with this timber. During the year the use of Scandinavian spruce (*Picea excelsa*) for butter-boxes was prohibited unless impregnated with paraffin.

Experiments with the use of split silver-beech stave billets for the manufacture of casks have been carried out with satisfaction by New Zealand Breweries, Ltd., but the development of a practical splitting industry in the forest offers considerable difficulty.

A number of locally-grown eucalypt timbers were tested by an Auckland handle-manufacturer, but with little success owing to the warping of the timber and its poor strength properties. Hoe and rake handles manufactured from tawa and slasher handles from manuka, however, have been giving satisfactory results under actual working conditions.

The products of the exotic forests continue to find more diversified uses every year. Round products include fencing-posts and rails, telegraph, power, and wireless poles, mine-props, and other timbers and firewood, while logs are sawn largely for box and crating timber, and also for building purposes to a minor degree.