SOME NOTES UPON AMBEODONTUS TRISTIS FABR.

(A. F. Clark.)

The occurrence of this native Cerambycid beetle, which is popularly named the Two-toothed Longhorn, has been already noted by Miller* who gives a description of the insect and some account of its damage.

During recent years the insect appears to have become of greater importance; the occurrence of the insect being reported from all parts of the country. There seems to be no doubt that its incidence is actually increasing, although in past years it is probable that it was more extensively present than was then recognised. One correspondent has informed the writer that of houses reported to be infested by borers and subsequently examined, in a large city in the South Island, he found that 40% showed signs of being infested by *A. tristis*. However, this figure must be regarded with considerable caution, but nevertheless there is no doubt that many houses do suffer from infestations of this insect.

The adult female beetle (the sexes are difficult to distinguish without close examination), places the eggs in cracks, crevices or under slight projections on the timber, or even will, under some circumstances, place them on a smooth surface. When it is available, however, the insect makes use of any protection. The eggs are yellowish, ovoid with a fairly tough shell, and are readily discernible, being approximately 1/12th of an inch in length, and often placed in batches of 4 - 5. Upon hatching the larva tunnels through the timber, completely reducing the wood material, packing the frass behind in the burrows and reducing the piece to merely a shell if the infestation is severe. The length of life of the larva is not definitely known, but there is no doubt that it extends for two or more years and, like the larvae of similar beetles, will be prolonged by those local conditions which have an immediate effect. The moisture content of the wood very possibly plays a large part.

In order to ascertain whether it might be practicable to obtain some control of the insect by reducing the moisture content of the wood by ventilation, some tests were made upon material in which larvae were boring. The tests were made by the usual oven-dried method of determining moisture content and 15 pieces of rimu taken each from a tongue and groove board and from a floor joist, were used.

In the case of the tongue and groove board the minimum moisture content was 17.34% and the maximum 19.21% with an average of 17.2%. The joist showed a minimum moisture content of 11.45%, a maximum of 15.20% and an average of 13.15%. It is seen from these two small tests that the insect is able to infest timber with a fairly wide range of moisture, and it is particularly noteworthy that it can develop when such a low figure as 11.45% is recorded. It appears therefore that there is little chance of dealing adequately with the insect by means of ventilation, but the tests, of course, were upon a small scale and they may be considered as indicative rather than conclusive.

The vexed question which generally arises is how the insect gets into the house timber. In this connection it must be noted that *A. tristis* is a typical forest insect and is found infesting dead portions of native timbers in the bush and also the introduced *Cupressus macrocarpa*. There is thus a possibility that the insect may be present in the timber when it is put into the house. Again it is possible that it may spread from the wooden piles which are so often used, and the third possibility is that it may spread from one house to another by the flight of the adult beetle. To say exactly how an infestation started is therefore by no means easy in most cases.

It has been reported that the insect has occurred in timber-yards where it is thought that timber has first become infested. So far the writer has no conclusive evidence upon this point although one timber-yard upon the West Coast of the South Island appeared to be affected in this way. It was found that the stickers being used were certainly infested and so, too, was some of the timber, but there was no certain evidence to show that the timber was not infested in the bush, and since another beetle was concerned the matter must still remain doubtful.

With regard to the emergence of the adult beetles, specimens sent to the writer from all parts of the country indicate that the maximum emergence period occurs in the months of April, May and June. In the laboratory eggs have been obtained from beetles in May, but no doubt oviposition occurs also later.

In conclusion it should be noted that all wood boring insects commenced as forest insects, even the imported common house-borer so prevalent in structural timbers will still be found infesting standing timber at times, and that therefore our native Two-toothed Longhorn is not by any
means unique in this respect. In fact, considering the number of wood boring forms and the large area originally under native forest, together with the extensive use of wood in building construction throughout the Dominion, we may perhaps be considered to some extent fortunate that not more indigenous forest insects have become pests of structural timbers.

A NOTE ON THE OCCURRENCE OF RIMU IN NORTH CANTERBURY.

(F. E. Hutchinson.)

Although Canterbury was at the time of European settlement a relatively treeless province, yet there were, as is generally known, a few areas of native forest on the plains, as the Riccarton Bush; on the downs at Geraldine, Peel Forest, Waimate, and Oxford; and covering the greater part of Banks Peninsula. These forests were almost completely destroyed by fire and by milling in the early days of settlement, but small scenic reserves in each of the localities named serve to typify fairly well the original composition of these forests.

An excellent account of these forests and their milling, by A. F. Clark, appeared in Te Kura Ngahere, Vol. II., No. 1, 1926.

In all these areas, totara, matai and kahikatea are found, but rimu, the dominant podocarp of most of New Zealand, is absent. It has, therefore, come to be said that rimu does not occur in Canterbury. and statements that rimu was among the timbers milled in North Canterbury in early days have been questioned by botanists and others. The following note may therefore be of some general interest.

Davie, the Chief Surveyor, and a keen botanist, presented to the Provincial Government in 1869 a report on the forests of the province. In this report, as quoted by Mr. Clark in the article mentioned above, it is stated that the Oxford Bush of 56,000 acres, was comprised of beech (N. solandri, N. menziesii, and N. fusca) with a sprinkling of rimu and kahikatea.

This is the only mention of rimu in Davie's descriptions of the forests. Seemingly it did not occur on Banks Peninsula, nor in South Canterbury at all. However, its presence in the Oxford bush in early days is quite definite. Mr. Clark, giving the history of the milling of this bush