

Occurrence of Manuka Manna II.

By F. P. WORLEY, Professor of Chemistry,
Auckland University College.

[Read before the N.Z. Institute Science Congress, 26th January, 1929;
received by Editor, 26th April, 1929; issued separately,
30th November, 1929.]

PLATE 33.

IN the *Transactions of the New Zealand Institute*, vol. 59, 1928, pp. 404-405, an account was given of an occurrence of Manuka manna produced by a sap sucking plant hopper, *Scolypopa australis*, in the nymph stage. This summer, 1928-1929, several occurrences of manna produced in this way were observed, and in addition a number of occurrences of an entirely different character, the manna being associated with the operations of a boring grub. This manna is apparently that known to the Maoris and to early settlers. A large area of Manuka containing both *Leptospermum scoparium* and *L. ericoides* in all stages of growth on the coast about six miles north of Thames was carefully examined and about a dozen occurrences of manna observed on *L. scoparium*; no manna was found on *L. ericoides*. In every instance it occurred either on comparatively small branches or, more frequently, not far from the ground on the trunks of young trees. Several of the branches affected were split open and in every instance a small grub was found which Dr. David Miller of the Cawthron Institute has kindly identified as the grub of *Aemonu hirta*, a native longhorn beetle. The manna was found exuding from an air-hole below where the beetle was actively at work. When freshly exuded, it was in the form of a viscous syrup thicker than honey which afterwards crystallised to a fairly hard, white mass.

In the area examined many of the trees were badly affected by borers of a larger nature but in no case was manna associated with their operations.

In Fig. 1 are shown the general appearance and mode of occurrence of two specimens from near Thames. Some larger specimens were found but could not be photographed. Fig. 2 is a photograph of two specimens from the Buller Valley, near Lake Rotoiti, Nelson. These were sent to me by Mrs. Fitzsimmons of Wakefield, whose son discovered them. On opening up the excellent large specimen, after photographing, a grub of *A. hirta* was found in the wood near the middle of the specimen.



FIG. 1.

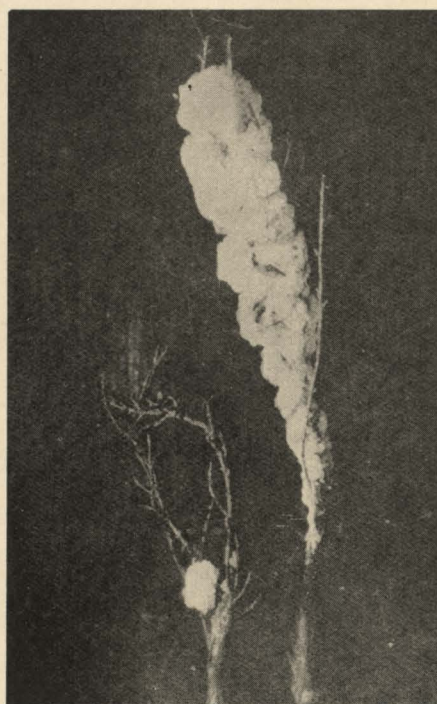


FIG. 2.

Manuka manna produced by larva of *Aemona hirta*. $\frac{1}{2}$ nat. size.