

A NOTE ON *CASSYTHA PANICULATA*. R.BR.

(A. D. McKinnon.)

This leafless member of the Lauraceae is confined to the North Auckland District, and, normally, is parasitic on *Leptospermum scoparium* and some of its associates of the gum-lands. These associated species are *Pomaderris phyllaefolia*, *P. Edgerleyi*, *P. elliptica*, *Leucopogon fasciculatus*, *Dracophyllum Lessonianum* and *Schoenus tendo*. The parasite twines several times round the soft branchlets of a host plant, sending forth haustoria into the tissues at each point of contact, and absorbs food from the host to such an extent that each branchlet attacked withers and dies. Lateral shoots sent forth from the parasite, sprawl from one plant to another, forming a thick network over their foliage, and under favourable conditions *Cassytha* may dominate an area of several square chains.

Plants are vulnerable only so long as their foliage and soft stems are near the ground, and the area infested is governed by the closeness of suitable host plants. When the foliage of the host is about five feet or more above the ground, the parasite may twine round the main stem, but its haustoria are unable to penetrate the bark, with the result that it loses vigour and withers.

At Waipoua Plantation *Pinus radiata* is a host plant. The trees attacked are seven years old, 30 to 35 feet high, and 6 to 9 inches D.B.H. At eight feet spacing the crowns of the trees are just beginning to touch, though suppression of lower limbs has not yet begun. The needles of these lower limbs are attacked by *Cassytha*; small branches and branchlets appear to be too tough or too resinous. The parasite twines round a small bunch of needles, sends forth haustoria into the tissues, and the needles turn yellow and wither. The parasite appears to have little or no effect on the general health of well established trees; under certain conditions, however, it could be responsible for complete mortality over a restricted area, as, for instance, in the case of young pines recently planted out.

To avoid such losses it is necessary to give the pines a start over the parasite; a matter easily and cheaply accomplished by burning off the land prior to planting.