

the ground, and, if so, at what depths; it would also be necessary to know where the female deposits the eggs, whether in sheltered or exposed conditions.

The extinction of a natural enemy, whether parasitic or predaceous, would release a very important check on the increase of *Xanthorhoe*, and if this be so it would be necessary to discover what was the enemy, and what the cause of its extinction—whether due directly to new conditions or indirectly through those conditions causing an increase of a secondary enemy preying upon the first; also what stage of the metamorphosis of *Xanthorhoe* is the most vulnerable, and if any stage is yet attacked by parasitic or predaceous enemies, or if each stage is liable to be attacked by its particular enemy. As the greatest mortality to insect-life occurs in the wingless stages—*i.e.*, egg, larva, and pupa—it would be most reasonable in this case to apply a check during these periods. However, by the use of birds a considerable decrease of the moths might be brought about if it were known the extent of their flight, and whether the moth be agile or sluggish, how far and high it is capable of flying, also whether it usually alights near the ground or otherwise, as it often is to be found with wings expanded on the flax-blades, its white colour rendering it conspicuous under these conditions.

The larval attacks of *Xanthorhoe* have been noticed upon other plants, such as bullrushes, and the absence within a particular area of an abundance of food plants other than flax would cause the larvæ to concentrate their attention upon the remaining available food material. I have been unable to ascertain whether the grub selects one or more varieties of flax in preference to all others, but, so far as has been observed, most varieties are liable to be attacked.

The insect fauna of the flax areas does not vary to any great extent throughout New Zealand, although I cannot definitely report on the insects of Southland, as the weather was extremely cold when the observations were made there. However, of the predaceous forms, the *Libellulidae* (dragon-flies) exist in large numbers in all areas of flax; but during the period of my visit (February–March) they were more abundant in the North Island than in the South (visited during April). It is curious that the *Asilidae* (robber-flies) abound in the Makerua Swamp, which in many places is very dry and the ground bare—their natural habitat. But across the river in the Moutoa Swamp, which is moister and carries a growth of grass, those *Diptera* do not exist. They may have some secondary bearing on the increase of *Xanthorhoe* in that they prey upon some other insect or insects which, before the advent of the