

18. Co-operation with the recently established Animal Ecology Section of the Department of Scientific and Industrial Research was effected by the setting aside of a definite area of Gwavas State Forest for the site of its field research station. Despite a certain amount of public incomprehension, this station marks an advance in research on rabbit problems that carries New Zealand to the world forefront; and the Forest Service is glad to have the opportunity to be associated with it even though it is only in the role of passive but interested spectator and guardian. Already the station has begun tabulated observations on the anatomy, physiology, parasite population, and allied phenomena of over five hundred carcasses collected and dissected at the station; and the permanence of the station affords the investigating officers the chance of making recurrent seasonal observations on an almost uncontrolled rabbit population on a scale that no other zoological station has yet achieved. Locally it means that a small, otherwise unused area of the forest is not administered for rabbit-control purposes in quite the same way as the rest of the forest; and this has given rise to some adverse local comment. But Forest Officers and Rabbit Destruction Council members are in close touch with what the zoologists are attempting and doing: and are more than convinced that the potential accretions to present zoological knowledge of the rabbit which will accrue from the consistent operation of the station over a considerable period of time will far more than compensate for any temporary local inconvenience of administration.

19. *Goats*.—These destructive animals are on the increase, particularly so in South Westland (where damage of considerable extent has been reported, in some cases almost all undergrowth being attacked), in Hawke's Bay, and in the area between the Buller and the Motueka Rivers. On Great Barrier Island damage has been caused to kauri, saplings being completely ring barked. A more intensive war on this pest has been waged during the year, and it will continue until some measure of control has been established.

20. *Insect Damage*.—With the exception of *Sirex noctilio* and *Nascioides enysii* (both referred to below) damage by insects has been normal and no new dangerous species have been recorded. Local attacks of a minor nature have been recorded as follows: In Gwavas Forest some defoliation of young larch by the manuka beetle (*Pyronota festiva*); on Great Barrier cicadas (*Melampsalta* spp.) damaged kauri saplings; in Waitapu Forest underplanted Douglas fir was attacked by the bronze beetle (*Eucolepis brunneus*); in the regeneration of insignis pine resulting from the 1946 Taupo fires some mortality from *Tortrix*; while in Whakarewarewa Nursery considerable mortality among Douglas-fir seedlings was caused by the grass grub (*Odontia* spp.).

21. *Sirex noctilio* (*Steel-blue Wood Wasp*).—The depredations of the steel-blue wood wasp reached epidemic proportions in the Rotorua Conservancy during the summer of 1948-49, and in consequence a committee known as "The Sirex Advisory Committee" has been set up to advise the Minister of Forests on control measures. By the end of the year under review, although activities of *Sirex* were reported from all districts, populations appeared to be receding in most areas. Deaths were in the main of unthrifty trees, but a few apparently healthy trees were also attacked. (See Chapter V.)

22. *Nascioides Enysii* (*Beech Buprestid*).—One of the periodic attacks on beech by this native beetle occurred in the Reefton district, and was also reported as causing mortality in mature red and silver beech at Rangataua in the Wellington Conservancy. The reasons for these outbreaks were probably the same as for the *Sirex* epidemic—namely, overstocking in this case in natural forest, coupled with climatic conditions particularly favourable to the insect.

23. *Manuka Blight*.—Although not primarily a forest pest this "blight," through its evil effect on a valuable "nurse" species, is a matter of moment to foresters, and reported sales of infected manuka to North Island districts has given rise to concern. Further mention is made of this in the paragraph headed "Soil Conservation."

24. *Damage by Fungi*.—No serious outbreak of damage caused primarily by fungi has occurred. There have been the usual isolated attacks by *Diplodia*, following frosts, and *Armillaria mellea* (honey fungus), which caused isolated deaths in eight to ten year old insignis pine.