

Auckland, Westland, and Southland Conservancies suffered no damage from forest fires, Southland having a season which enabled even the normal fire patrols to be dispensed with.

The comparative freedom from forest fires enjoyed by the State forests for some years past has been achieved only at the cost of a very considerable expenditure on regular patrols and maintenance of fire-preventive equipment, as well as of much public criticism incurred by the total exclusion of the public from planted areas. The policy of refusal of rights-of-way to both stock and vehicle traffic over many forest roads, and of exclusion of anglers where possible from streams, has been much criticized. It will therefore be of interest to quote from a recently published report from the British Forestry Commission on the position in Britain :—

“During the eight years 1929–36 about three thousand fires took place on Forestry Commission land. Half of these were caused by sparks from railway-engines and about 20 per cent. by the public. *The majority of fires thus caused by the public originated from roads or paths which were open to them* . . . 9,000 acres of plantations have been destroyed by fire, causing a loss of £100,000 (inclusive of the cost of extinguishing the fires).”

The public entry to British forests, then—despite the facts of the comparative docility of that public, of the smaller plantations units tending to distribute danger and so to minimize loss, and of the denser population giving more ready mobilization of fire-fighting forces—is stated to have destroyed 1,800 acres of plantation at a cost of £20,000 in eight years. New Zealand, with a fire hazard in all respects much more intense than that of Britain, cannot afford to incur risks and losses of this magnitude, and the State Forest Service feels that the British report quoted furnishes strong evidence in support of its present distasteful policy of total exclusion of the public from planted areas. It is but fair to add a grateful acknowledgment of the manner in which the body of the public observe the restrictions laid upon them in this matter as individuals ; the protests and criticisms being voiced mainly by organizations and societies.

### 3. FIRE DISTRICTS.

Two new fire districts (one private and one State forest) were constituted during the year, and both were in Wellington Conservancy. The private district embraced the well-known Flock House property and comprised an area of 10,700 acres ; the area of State forest included in the other new district was 227,250 acres.

The system of burning under permit, combined with the vigilant fire patrol of all exotic forests during the dry months, has been entirely responsible for the great reduction in the number of serious forest fires in recent years.

Settlers generally throughout the Dominion now realize the great danger which might arise from unauthorized burning and co-operate very well with forest officers by obtaining permits and by burning only when weather conditions are favourable. It can safely be averred that thanks to the forest fire legislation the reckless and indiscriminate burning so prevalent two or three decades ago is now a thing of the past.

### 4. ANIMAL DESTRUCTION.

The destruction of harmful animals in State forests was continued and resulted in a recorded kill of 44,157.

This total included 43,056 rabbits and hares and 978 deer. Other animals destroyed were sixteen wild horses on Kaingaroa Plains, and 103 pigs, twenty-four in Nelson Region and seventy-nine in Southland.

The total kill was somewhat lower than last year, due to the fact that the war against the rabbit pest in previous years is now bearing fruit in the reduced numbers to be found in the plantations. A plague of mice at Golden Downs (Nelson Conservancy) caused some damage to the newly-sown seed in the nursery last spring.

### 5. FOREST PARASITE BIOLOGY.

In the field no further symptoms of an alarming nature developed. On the contrary, it is satisfactory to be able to report that one or two phenomena which had been carefully watched rather abated and confirmed the original opinion that they were not of permanent significance. Reference has already been made to the absence of infection by *Phomopsis strobil*, a satisfactory condition partly due to the non-incidence of late spring and summer frosts, and partly to the measures which were taken over a period of years to replace *P. radiata* by immune species on certain sites. In the insect world, similarly, careful observations showed no recurrence of the epidemic of *Hybernia indocilis* larvæ on pines, and feeding and starvation tests by the Forest Entomologist proved that the larvæ could not feed on an unmixed diet of pine foliage. As the pines, therefore, closed canopy and crushed out the original host-plant (*Discaria toumatou*) the moth population was slowly starved and reduced to insignificant proportions.

Field recoveries were made during the summer at Hammer of *Rhyssa*, the parasite liberated to reduce the wood wasp (*Sirex*) population—a satisfactory result, proving at least a measure of parasite establishment.

During the year the Forest Entomologist was removed from Nelson, where he had for several years been housed and assisted by the Cawthron Institute, and was attached to the staff of the Head Office of the Forest Service. The Forest Mycologist similarly was located with the staff of the Wellington Conservancy instead of with the Plant Research Bureau, which was reorganized and transferred to other stations. Both officers are for this year co-operating on a programme of investigation of insect and fungal parasites of building timbers.