

Netting operations were carried on during this period at such times and places as would not interfere with sportsmen, and the catches were limited to the numbers deemed desirable to be taken from the lakes for thinning-out purposes.

The success attending the marketing of fresh and smoked trout led to the presentation of several requests for permission to be granted to residents of Taupo to sell fish, but all were declined, it being considered that the granting of such permission would lead to an undue depletion of the fish in the lake, thus defeating the real object of the Department's operations—namely, the improvement of the fishing.

During the season considerable quantities of fish were sent to the officers and men at the Trentham Camp and to the Maori Expeditionary Force at Avondale.

(3.) *Procuring Fresh Food-supplies.*

Continuing the work of last year, shrimps to the number of 342,000 caught in the Waikato River at Mercer have been liberated in Lake Rotorua at places where they have a fair chance to multiply.

(4.) *Study of the Worm Parasite in Trout.*

It was alleged a short time ago that cooking did not kill the parasite, and to settle doubts on this matter Dr. Wohlmann, Government Balneologist, of Rotorua, was asked to make some practical experiments. He reported as follows:—

“Department of Tourist and Health Resorts,
“Rotorua, 30th January, 1915.

“As requested, I have experimented as under with the effects of cooking on these parasites, and find that with ordinary cooking they are killed. I am not sufficiently acquainted with their life-habits and their mode of reproduction to be in a position to state positively that there is no danger whatever in their presence in cooked food, as I do not know whether they may have eggs which may be peculiarly resistant to heat, but such a contingency is so exceedingly improbable that I have dismissed it from further consideration. There is one point worthy of note in Experiment II, as it may explain the belief that the parasites are not killed by cooking: on removing the dead parasites from the body of the fish they curled up to a certain extent as if they were alive. This was due to shrinkage of their elastic bodies on removal from the tissues supporting them.

“*Experiment I.*—Two large parasites were placed in a test-tube, boiling water poured in, and the tube kept at the boil for thirty seconds. At the end of that period both were dead, and no signs of life were discernible after being kept for twenty-four hours in normal salt solution.

“*Experiment II.*—A ‘slab’ trout of about 1 lb. weight was cut open, and the digestive tract found full of living parasites. The carcase was bound up securely in string, and boiled for twenty minutes by the Sanatorium cook in the ordinary way as for the table. The fish appeared cooked to the ordinary degree, and, on opening, the parasites were dead.

“*Experiment III.*—A similar fish was opened, and the digestive tract found full of living parasites. The carcase was tied up in paper to prevent escape of contents, and fried in the usual way. The parasites were found to be killed.

“In none of the fish examined by me were parasites found in the muscular tissues. This was perhaps unfortunate, in view of the completeness of the experiments, as it might be said that worms in such a situation would be more protected from the effects of boiling water, but by wrapping up the parasites in the carcase of the fish I protected them in my experiments as far as possible, and I have no hesitation in saying that all worms are killed by ordinary cooking.

“ARTHUR S. WOHLMANN,
“Government Balneologist.”

Owing to the war it has not been possible so far to spare a Biological officer to proceed to the various points on the sea-coast where there are no trout, to ascertain if shags on the coast are infested with the parasite.

The experimental ponds established at Rotorua have been maintained during the past year.

The following report of the work done during the year has been furnished by the Director of the Live-stock and Meat Division of the Agricultural Department who is in charge of the experiments:—

“I regret that owing to the outbreak of war, which necessitated a number of the veterinary officers of the Department leaving New Zealand with the Expeditionary Forces, and that consequently a great amount of work had to be thrown upon those remaining, as well as upon myself, it has been found impossible to make the progress with this special work which I would have liked. As you are aware, since Mr. Kerrigan, Veterinary Inspector, left Rotorua I have largely carried out the work myself, with the assistance of Mr. Collins, Veterinarian, of Hamilton, but I have been kept closely tied to headquarters, while Mr. Collins's duties have been greatly increased.

“The experiments undertaken with trout and toi-toi in the ponds adjacent to the Rotorua Sanatorium have been in progress for several months, and, so far, have given absolutely negative results. In the one case where healthy trout from outside were placed in the pond and fed with toi-toi from the lake no indication of ill health has been shown by the trout; on the other hand, those toi-toi which have been examined after being secured from the lake have in every case proved to be free from infection by the parasitic worm which is responsible for the trout trouble; hence our experience on this point has been rather disconcerting, seeing that the experiment was undertaken in the hope that affected toi-toi would be found, and that the trout in the pond would become infected in turn through feeding upon them. In the other case where a number of small fish were obtained from the Waikato River, at Mercer, and were placed in a pond over which two shags were caged, none of these small fish have been