11 H.—22.

Scientific Researches.—During the year the Department's comprehensive programme of scientific researches into mortality amongst bullies, thread-worm, and other problems pertaining to the conservation of trout in the Taupo district was inaugurated.

Analysis of Waters.—An analysis of the chemical and gaseous contents of the waters of different parts of the lake and of all important streams was made to establish a basis for further studies of fish and other aquatic fauna inhabiting the waters, and it is anticipated that the knowledge so gained will be of value in future researches.

Tagging.—The tagging of trout with a view to gaining more definite knowledge of their habits with regard to feeding, spawning, migration, &c., and to their age, growth, condition, &c., was undertaken and will be continued for some years. A total of 533 fish were tagged, and already much valuable data is being gained from fish already retaken, although the full value of this work will not be appreciable for several years, when it is expected that a great deal of exceedingly valuable knowledge will thus be gained. Considerable publicity has been given to this work, with a view to enlisting the co-operation of all anglers, and results so far obtained are gratifying in this respect. The following are particulars of a number of tagged fish retaken:—

Tag No.	Species.	Date tagged.	Date retaken.	Locality tagged.	Locality retaken.	Length when tagged.	Length when retaken.	Weight when tagged.	Weight when retaken.
1,024 36 483 3 30 145 1,023 456 482	R.F. R.F. R.M. R.M. R.M. R.M. R.M.	3/9/28 28/6/28 20/9/28 14/6/28 23/6/28 7/8/28 3/9/28 6/9/28 20/9/28	1/11/28 18/11/28 19/11/28 9/1/29 10/2/29 24/12/28 31/12/28 /11/28	Hatchery stream Hatchery stream Whitikau Hatchery stream Hatchery stream Waiotaka Hatchery stream Hatchery stream Whitikau	Delta Motuopa Puhawa Tokaanu Wharf Waitahanui outlet Delta Waikererau Mine Point Whitikau	In. $25$ $25\frac{1}{2}$ $26$ $16$ $25$ $20\frac{1}{2}$ $22$ $22\frac{1}{2}$ $22$	In. 25 26 27 273 21 22	lb. oz. 6 8 5 0 8 8 11 4 5 0 4 0 4 4 6 0 5 0	lb. oz. 7 0 6 4 8 14 7 0 2 8

R.F., rainbow female trout; R.M., rainbow male trout.

Conservation Operations.—Restocking: With a view to maintaining the supplies of trout in both the Taupo and Rotorua districts, introducing the progeny of the better-quality Taupo fish into Rotorua, and introducing outside stock into Taupo waters, the following restocking operations were conducted:—

Taupo district.—194,000 fry hatched from Taupo ova and 177,000 from Lake Hawea ova was liberated, and 140,000 Taupo ova was "planted" in the Taupo district. Rotorua district.—1,190,000 fry reared from Taupo ova was liberated and 30,000 Taupo ova "planted" in the Rotorua district. These operations in this district were the commencement of an extensive restocking programme.

Culling: During the winter, as the trout were migrating up-stream to spawn, large numbers were trapped in the various rivers flowing into Lake Taupo, and those showing signs of deterioration owing to age, disease, deformity, poor constitution, &c., were killed. Although the operations were rendered very difficult on account of floods, considerable success was achieved and much valuable knowledge was obtained. Between nine thousand and ten thousand fish were handled during these operations and of these approximately 4 per cent. were killed.

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Destruction of shags: In continuation of the previously existing policy of the Department, a royalty of 2s. 6d. per head for shags shot in the Taupo and Rotorua districts was paid, and a total of 938 shags' heads were thus paid for. In addition, the Department's Rangers in the Taupo district were supplied with ammunition, and they took every opportunity of destroying these birds, it being estimated that they accounted for over two hundred

estimated that they accounted for over two hundred.

Taupo Harbour Control.—Licenses: The police constables stationed at Taupo and Tokaanu acted on behalf of the Department as Licensing Officers under the Taupo Harbour Regulations, 1926, and a total of nine launches were licensed to ply for hire. The number of row-boats available for hire increased during the year, and a large number are now licensed. Licenses were also issued to all master boatmen and watermen operating on the lake.

Wharves and slipway: Repairs and maintenance were carried out to the wharves at Taupo and Tokaanu. A landing-stage for row-boats was erected at the Taupo Landing Reserve. A slip-way at Taupo for the use of launches when undergoing repairs, annual overhaul, and inspection was constructed, and will be available to launch-owners on payment of a fee.

Buoys, life-buoys, lights, &c.: Buoys were moored to mark the approach to the Taupo Wharf from the lake and the outer end of a reef at Whakaipo Bay. Life-buoys and fire-buckets were provided on the wharves. A light was provided at the Taupo Wharf, and arrangements made to have it lighted and hoisted every night.

Smoking Trout.—The previously existing arrangement was continued whereby trout were smoked for anglers at a flat rate of 10s. per dozen by two persons—one at Taupo and one at Tokaanu.

General.—The Department is making every endeavour to develop the Taupo fisheries not with the object of making it a money-making concern, but in the interests of anglers and others visiting the locality, and also in the interests of local residents, it being realized that the Taupo district is part of the heritage of the people of the Dominion and should be preserved to them in perpetuity. From reports received the provision made for access to fishing-waters, new tracks, places for camping, &c., have been much appreciated, and as far as the fishing is concerned the results so far received indicate that a larger number of people, both anglers and others, have visited the district than in the past, and there is every prospect of the season being one of the best experienced for many years, the trout having come into prime condition much earlier than in the past.