

PART I.—HISTORICAL.

THE following is a continuation of my preliminary report upon the effects of polluted waters on fish life. The work was first begun at the Dominion Biological Station, St. Andrews, N.B., in 1900, and has been continued since then at the biological laboratory of Queen's University, Kingston, and along the saw dust beds of the Bonnechere River in the county of Renfrew, Ontario.

The investigation was begun at the suggestion of Professor Prince, the fish commissioner for the Dominion of Canada, and has been carried on largely through the encouragement which he has given from season to season.

The question, "Is sawdust injurious to fish life?" has been before the Canadian public for over forty years. The *Fishery Act* of 1858 for the two Canadas provided that fish ways should be erected upon dams that obstructed the passage of anadromous fish to their spawning grounds in the shallow head waters of rivers; and it forbade also throwing lime, chemicals, and other poisonous material into such rivers. It did not mention sawdust or mill rubbish, but it provided for the making of regulations by the executive, and in the exercise of this power we find that on May 16th, 1860, a by-law was passed making it illegal to throw "slabs, edgings, and mill rubbish into any river or stream which may have been leased or reserved by the Crown for propagation, or where fish ways have been erected."

This by-law was embodied in the amended Act of 1865, the clause relating to sawdust reading as follows:—

"Lime, chemical substances, or drugs, poisonous matter (liquid or solid), dead or decaying fish, or any other deleterious substance shall not be thrown into, or allowed to pass into, be left, or remain in any water frequented by any of the kinds of fish mentioned in this Act, and sawdust and mill rubbish shall not be drifted or thrown into any stream frequented by salmon, trout, pickerel, or bass under a penalty not exceeding a hundred dollars."

Immediately after confederation the Act was further amended, and a very important proviso was attached to the foregoing clause, viz:—