scarcity of water in some of these streams during the drought of summer, and from the removal of the timber from their banks, and the drying up of the many cool springs that formerly existed, and the exposure of the waters to the sun's rays throughout their entire length, they become superheated to such an extent that neither young nor old salmon can live in them.

This last statement I know to be correct from experiments instituted to test the question; a young salmon, or salmon fry cannot live in water above 75 degrees, in temperature, and at that temperature only, while a rapid current is running, death ensuing almost immediately the current is stopped. Apply the information derived from this experiment to many of our rivers, we find that during the heat of summer the water gradually dries up and recedes into shallow pools, through which no perceptible current passes, into these pools the young fry collect, the waters are probably exposed day after day to the direct rays of a broiling sun, become superheated and death ensues to all young salmon found in it. Where a river runs for a great portion of its length through a wild unbroken country, its banks being covered with timber, and where the drainage of the adjacent country is gradual, its waters never become overheated or dried up to such an extent; in such rivers, and only those, should young salmon be placed. Another great cause of the death of the young fry is this gradual drying up of the steams, leaving the fry dry upon the gravel or sand. In the bed of a river are found innumerable little basins or minute pools formed by the collection of sand between adjacent small rocks and large pebbles, in this little basin the young fry rest, watching for food, and as the water in the river diminishes, these basins become uncovered and eventually dry out by leakage or evaporation, leaving any young fish that may have been in them to become parched up by the sun. This is no stretch of imagination, but has been actually observed by myself and others in the Sackville River near this hatchery, and the same can be seen on any stream where the waters become dried up to such an extent. The suggestion prompted by the above statement of facts which have come under my observation, and which I beg liberty to offer, is that the number of rivers in which the fry be placed in future, be limited to those offering the most favourable opportunities for their growth and development. This course might give rise to dissatisfaction on the part of fishermen residing near the estuaries of rivers considered unsuitable, but if so, I am satisfied it is the only true and wise course to pursue, and in the end will cause fish-breeding to be recognized as a most important element in our coast fisheries of the future.

Hoping you will pardon the above digression from the text before me, and my indulging in details to such extent; but I am anxious to show some of the many obstacles to be met with in our attempt to replenish our fisheries. These small matters are entirely overlooked by those who condemn fish breeding, and who think it is time some return should be received for the money expended.

As I have no knowledge of the Ristigouche River, I will not attempt to show causes for the decrease there, further than to say, that in a river as large as the Ristigouche, with its immense tributaries and extensive estuary, the increase of salmon cannot be so readily observed as in smaller rivers, and it is very doubtful whether correct returns are given by the fishermen, who on that river appear to be greatly opposed to the work. As for the Newcastle Hatchery in Ontario, I have to say that while I was connected with that establishment a very marked increase in the salmon entering "Wilmot's Creek in the fall of the year was observed, and it has been a matter of surprise to me that the lake fishing has not correspondingly increased. I am inclined to think that an increase has really taken place, but that the salmon do not now approach the shores as early in the season as formerly, owing to the country surrounding Lake Ontario having become stripped of nearly all its timber and the gradual drying up of the streams entering it. The waters of these streams must now attain a higher degree of temperature than formerly. This would have the effect of keeping the salmon out in deep water during the heat of summer, which is the fishing season, and they would not approach the shores until late in the fall when impelled to do so by the desire to deposit their ova.