

and some other places where it is known for a certainty that this species of fish has been in the habit of spawning naturally, and is generally caught for marketable purposes, there is no doubt but the Department would be able to show greater results in the increase of these fish. It is unwise to have the young fry distributed in small quantities at such long distances from the hatchery, and in so many different localities. It would be more advantageous to plant them otherwise, which might be thus: Lake Ontario to receive the fry for distribution from the hatchery in the coming spring, and some other important water could be stocked another year, and so on. These large deposits would then be more beneficial than the small supplies given to so many waters as heretofore. This is an important question for consideration, and the Department should take some active steps to have the plan now suggested carried into effect.

Water Supply.

The water supply at this hatchery is not as pure as it should be. Owing to various reasons the stream upon which the breeding establishment is erected has of late years become very much changed in its nature. At one time the water was pure, cold and limpid, but latterly, especially during the hot weather, it is warm, foul, and too unhealthy for the rearing of the higher orders of fish, which are hatched in this establishment. This unfitness, however, does not prevent the hatching of the better kinds of fish during the winter months, but it *does* very materially interfere with keeping the fry on hand afterwards and during the hot weather, as the water becomes so warm as to kill the fry.

It is a well known fact that, as a country becomes cultivated and cleared of its forests, and has manufacturing establishments erected upon its streams, the water in that section becomes unsuitable for the rearing of the salmonidæ family. The ploughed lands and the modern system of drainage carries decayed vegetable matter into the water. Barnyard drainage, also, runs into the streams; and manufactories, with their poisonous dyes and other deleterious substances, completely pollute the water. The forests, also, with their shade trees, which were at one time standing on the banks of the rivers and brooks, gave cool shelter to the water. All these have now disappeared, and the extreme heat of the sun's rays has the effect of making the water excessively warm in the summer. To overcome this annually increasing difficulty an *artesian well* should be sunk here in order to have the hatchery at all seasons supplied with water of a good character. The cost of having this well bored would be trifling when compared with the many benefits to be derived from its usefulness. In this case the difficulties from spring freshets, which bring down great quantities of poisonous sedimentary matter upon the eggs, causing suffocation to the delicate fry, trouble to the employees of the hatchery, and expense to the Department, would be largely overcome; and, above all, the ponds now connected with the establishment could be used in the growth of young fish; whereas, in their present state, they are becoming almost useless. The foul creek water running through the ponds in the summer months causes weeds and filth of every description to grow so fast that it takes constant attention and considerable expense to keep them looking even respectable.

The grounds connected with this fishery are very picturesque in summer. They are visited by hundreds of people during the hot weather, and admired very much. If an artesian well were sunk to supply the ponds and hatchery with pure, fresh water, it would be a benefit in every way. Enquiries have been made in several localities where the artesian wells are in use, and it is found that they can be sunk with little expense, especially in this section of the country, where spring land abounds, and no obstructions are to be found in the way of rocks. It is to be hoped that the Department may consider it advisable to have this project carried into effect during the coming summer.

I have the honour to be, Sir,

Your obedient servant,

C. WILMOT,

Officer-in-Charge, Newcastle Fish Hatchery.