

and confine my remarks to what may be deemed important, interesting and to what should be printed for the information of those interested in fish culture by the State of Wisconsin. I wish, however, to elaborate somewhat on the subject of the conservation of fish and the necessary restrictions in the taking, catching and killing of fish in our state.

On the following pages will be found full and complete statistics covering the output of our seven permanent hatcheries and three substations. These tables give a complete statement as to the output of each hatchery, varieties of fish hatched and planted, cost of operation, inventories, acreage, and value of lands, buildings and equipment.

HATCHERY IMPROVEMENTS.

Since the issue of the last report by the former Commissioners of Fisheries, the state established what may be called a "sub-station" in Tenney Park, Madison. This hatchery is operated only during the spring hatching period, and is equipped for the propagation of wall-eyed pike and pickerel.

An important improvement was made at the Bayfield Hatchery during the past year. The conduit carrying the water from Birch Run pond to the hatchery has been extended up through the pond so as to take the water from the headwater springs. The extension is of twelve-inch vitrified pipe and increases the length of the pipe line some 900 feet. By taking the water directly at the springs we hope to remedy the following trouble. In the spring when the young trout are in the hatchery troughs, the rains and melting snow cause a heavy wash into Birch Run creek and pond. These heavy spring floods are caused by the lands being cleared for cultivation in recent years. The timber and brush has been cut, the lands have been plowed and each rain causes a heavy surface wash. The soil is a red clay and the spring floods wash the soil into minute particles, carrying it into the pond in such great quantities that the water is turned a distinct red. These clay particles are carried through the conduit into the fry troughs, and the clay adheres to the gills of the little trout causing their death by thousands. We expect to overcome this clay-water by taking the water supply, as I stated above, from the head-water springs.

It is the intention of the commission to build a number of fry ponds at the head of Birch Run and in which we will hold and raise a great quantity of our spring hatch of trout, until they attain the fingerling size, such fish to be for fall planting.

The barn at the Bayfield station was destroyed by fire on the afternoon of September 22, 1916. The fire was caused by lightning. The loss of the building and contents was approximately \$1,500.00, which was covered by state insurance.

The Oshkosh Hatchery was moved from the former location in the North Shore Park to a lot the commission purchased on the river bank. The property has a 150 foot frontage on River street. The reason for the change was because in the old location the hatchery was not giving satisfactory results in the output of fry. This unsatisfactory condition was caused by the water supply which did not afford the proper quality of

water for the hatching of fish eggs. At the new location the water supply is taken by pumping direct from the river.

FISH DYING IN INLAND LAKES.

During the spring of 1916 we received more than the usual number of complaints as to large numbers of dead fish being found in our inland lakes after the ice went out. Several investigations were made, but the conditions were neither serious or alarming. For some reason the winter of 1915-1916 seems to have been a bad season for the wholesale dying of fish all over the state. As a rule it was found that the lakes in which the most dead fish were found, were lakes containing what may be termed an overpopulation of fish. Also the lakes were in some valley and the heavy snows of last winter were blown onto the ice in deep drifts. With this blanket of snow the ice was protected and the extreme cold weather did not crack and heave the ice. This prevented the water from throwing out the gases. The gases accumulated, air or oxygen could not get into the waters and the fish smothered. The dead fish were almost entirely sunfish and crappie; very few pike, pickerel or bass were found. This is not an unusual occurrence. It is not an epidemic or disease, but simply a dying off of the fish for want of air.

NECESSARY LEGISLATION.

The operation of fish hatcheries alone will not maintain our supply of fish for future generations. The work by the hatcheries must be strengthened by reasonable conservation laws, which laws must be rigidly enforced. Nature is very kind to her children—if they live in harmony and walk parallel with her laws. Permit the catching of fish during the spawning season, permit the catching of immature fish, stipulate no limit as to pounds or number of fish in possession, have penalties so low that the dynamiter and gill netter are always willing to "take a chance,"—then fully fifty per cent of the work by the hatcheries is lost before the millions of fish planted in public waters by the state have an opportunity to show results. Conservation does not mean hoarding our fish and game as a miser does his gold; it means to permit the taking, catching and killing of fish and game in such manner, at such times, and in such quantities as will conserve the supply for future years.

So that the reader may more readily understand the enormous drain upon our inland fisheries and appreciate the need of more stringent laws, I wish to state a few facts that will enable the people of our state to better understand the situation. During two weeks in June and the months of July and August, 1916, 865 boxes of game fish, each box weighing 20 pounds, were shipped from Woodruff, Oneida county, Wisconsin. A total of 17,300 pounds of pike, pickerel, black bass and muskellunge. Think of it! From one small northern station, having a population of only 329 souls, and there are hundreds of small summer resort stations just like it in northern Wisconsin from which game fish are shipped in like quantities.