

2.—ADDRESS OF THE CHAIRMAN OF THE GENERAL COMMITTEE ON THE WORLD'S FISHERIES CONGRESS.

By MARSHALL McDONALD,

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As the representative of the general committee intrusted by the president of the World's Congress Auxiliary with the organization and conduct of this Fisheries Congress, it becomes my pleasant duty—personally it is my grateful privilege—to extend to you, in behalf of the committee, a cordial welcome and to invite the representatives of foreign nations who may be here present and the State commissioners who are charged with the administration of State fishery interests to active and earnest participation in the discussion of the various questions, which will have forcible and skillful presentation in the papers to be read at the different sessions of the Congress. A like cordial invitation is extended to all who, by reason of their immediate and personal relations, their experience, or their knowledge of fishery matters, are interested in the objects for which this Congress convened.

The program of the proceedings which you have before you will indicate clearly the range and scope of the deliberations of the Congress, as well as the diversity and complexity of the various problems which necessarily arise in seeking a rational and fruitful administration of fishery interests.

By reference to the list of papers contained in the program you will find that no important question relating to the fisheries has been ignored or neglected.

The administration of the fisheries, the methods and the influence of methods on production, the relations of the fisheries to science and to economics, their conservation and regeneration by artificial methods, and their present status and conditions, all have careful and deliberate presentation from different standpoints.

These different addresses, and the discussion growing out of them, will, I trust, be fruitful in bringing about a consensus of opinion in reference to the important questions relating to the administration of the fisheries, and in reference to which there should be concurrence of views and concert of action to secure the results we are all striving for.

I am disposed to think that in this country we have relied too exclusively upon artificial propagation as a sole and adequate means for the maintenance of our fisheries. The artificial impregnation and hatching of fish ova and the planting of fry have been conducted on a stupendous scale. We have been disposed to measure results by quantity rather than by quality, to estimate our triumphs by volume rather than by potentiality. We have paid too little attention to the necessary conditions to be fulfilled in order to give the largest return for a given expenditure of effort and money.

The argument that underlies and justifies fish-cultural methods, and which has built up and liberally sustained our State and National Commissions, is that the percentage of survival under artificial methods is so largely increased that by hatching

but a small proportion of the total egg supply in any given field we may equal or surpass the results from natural reproduction in the same area, even when nature's methods are not contravened and rendered abortive by the methods of the fisheries.

Our methods in this respect are the methods of the farmer. From an acre of ground he harvests 20 or 30, or, under the best conditions, 40 bushels of wheat. He sets aside 1 bushel for seed, and the rest he may safely exchange for the necessities, the comforts, or the conveniences of life. This 1 bushel, sown under proper conditions of tilth and fertility (either natural or supplied), is a sufficient guaranty of the future harvest.

It is the same in our fish-cultural operations. By our methods we give to a small percentage of fish ova the potentiality of the entire reproduction under unrestrained natural conditions.

In the same measure, therefore, as we enlarge the means for artificial propagation may we ease or release our restraints upon the commercial fisheries and permit a larger catch without apprehending a deterioration of our fishery resources.

We must not, however, be unmindful of the fact that the prosecution of the fisheries, without reasonable and necessary restraints, is sure in the end to make adequate reproduction by artificial methods impracticable by obstructing or shutting off the sources of egg supply. Protection, therefore, and reasonable regulations as to the times and methods of fisheries is just as essential for the maintenance of our fisheries as is the largest measure of artificial propagation. The two are intimately and essentially related and interdependent; each implies the other; both must concur and have equal consideration in devising a rational and fruitful administration of our fishery interests.

We should, I think, keep always in view that the object of public fish-culture is to assure the utmost utilization of the resources of our waters and to permit the largest production that can be accomplished without deterioration or impoverishment. We should insist upon whatever measures of protection or regulation may be found necessary to accomplish this end. On the other hand, we should be careful not to embarrass or harass the enterprises of our hardy and adventurous fishermen by restraints that are not clearly necessary to accomplish the end in view.

The general topic for this, the opening session of our Congress, relates to the administration of the fisheries, to the measures of protection and regulation that are necessary to increase or maintain the supply and to prevent deterioration. You will have presented to you the well-considered conclusions of men well qualified by experience and prominence to command your thoughtful consideration. Permit me to express the hope that our deliberations will bring about a consensus of opinion which will find expression hereafter in a code of fishery regulations which will be not only effective, but generally acceptable.

The gentleman who will preside over the sessions of the Congress devoted to the administration of the fisheries is well known to you personally or by reputation. He has been influentially and progressively identified with fish-cultural advances ever since the economics of the water have attracted public attention and interest. He is to-day at the head of the oyster commission of the State from which he comes, and is at once the author and administrator of the policy of the State in reference to its oyster-grounds. This policy has in ten years increased fourfold the oyster production of Connecticut waters.