

## 6.—OUR OCEAN FISHES AND THE EFFECT OF LEGISLATION UPON THE FISHERIES.

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No question can arise concerning our fisheries of more importance than that relating to our ocean fisheries. Of ocean fishes that particularly interest us at this time are those that periodically visit our coast and remain in our waters during the warm weather. The taking of these fish has become an important industry, its value is far-reaching; besides those directly employed, it ramifies into almost all departments of industry and trade. It stimulates the business of the mechanic, the manufacturer, the merchant, and has become an important factor to the farmer, furnishing an essential and valuable fertilizer.

Statistics give but a partial idea of the relative value of this compared to other industries, for of this branch for every dollar represented as the product there are 100 cents added to the country's wealth; besides this there is a great unknown quantity not accounted for, taken by everybody who chooses that can get at the water.

Besides the industrial side of this question, there is one not to be ignored or overlooked. I refer to the sport or recreation derived from fishing. It amuses the child, it affords relaxation to the professional man, the merchant, the mechanic; everybody who will, may derive pleasure from it, and we hold that this should be fostered and encouraged as an essential to the health, comfort, and pleasure of the people.

The fishery is the spontaneous gift of nature to man and is without stint, as in the beginning "the waters brought forth abundantly."

In the utilization of this bounty of nature it is important that we do it wisely. It deserves and should have the most thorough investigation and the wisest counsel of the students of natural history and political economy.

The habits of the different species, their varying numbers, their absence for long periods, their sudden reappearance, their appearance in waters where never before seen, are interesting phenomena, the effects of natural laws but little understood and which baffle the most astute student. But of one thing we can be sure, that the fluctuations in numbers have ever been and ever will be a law of their existence. Nor is this strange. It would indeed be strange were it not so. Their fluctuations have been noticed all along through their history and were as marked in the past as in the present, probably more so.

In considering this subject of fluctuations it will be well to note some of them more definitely. The scup, the most numerous of all our edible fish at present, were

unknown in our waters one hundred years ago. Since that time the bluefish have been twice absent and were very rare and small at the beginning of this century; now they are large and abundant. The past season surpasses all others in the number of squeteague.

Butterfish have of late become very plentiful; they are to be seen in immense schools off the coast and they were but little known in the past. The bullseye, that were very plentiful within our memory and totally disappeared for many years, have again returned. The Spanish mackerel, that put in their appearance a few years ago, were before unknown to us and now are getting less and may again leave us altogether.

The species most diminished in our waters are the anadromous fishes that seek the fresh upper waters of our streams. Some of these have been so long absent, or their number so reduced, that we hardly realize they were once abundant here. Among these are the salmon, shad, herring, and bass.

Since these very radical changes are known to have taken place before the use of improved methods, and inasmuch as the quantity taken by them is exceedingly small compared to the known destructive agencies, the effect could not be worth considering. Yet this has been made to loom up to the greatest importance, and is made to vitally affect and involve our whole industrial fishery.

The question whether sea fishes may or may not be affected in numbers by over-fishing has been as definitely settled as it can be, by the most thorough investigations of the past, in this and foreign countries, but the conclusions arrived at fail to be recognized by the local authorities, and many of the States have enacted laws at variance with them. To justify such repressive laws, it should be made to appear that continued free fishing was working an injury to somebody or something, or destructive to the fish, and that the injury affected interests greater than itself. As it is presumed that no injury will be suggested other than the alleged reduction of the fish, we will consider that only.

That the fish are being reduced in numbers and that the reduction is caused by overfishing are the charges made against net fishing. The reply is, that fish are not being reduced; that if they were, it must be from natural causes. Statistics show that after fifty-seven years continual use of the purse net in fishing for menhaden the largest catch was made in 1884; and after fifty years continual fishing for scup the Rhode Island shipments of this fish were swelled from 12,514 barrels in 1882 to 28,955 barrels in 1892.\* The statistics of catches in European waters go to confirm our own, and show rather an increase than diminution. To this we have the added declaration of the most able investigators, both there and here.

The late Prof. Baird thought in 1871 that it was necessary, in order to preserve the scup, to restrict in some degree the catches of that fish by traps, but in 1877 he stated before the Halifax Commission:

Very much to my disgust, I must admit that the next year, even with all the abundance of these engines, the young scup came in quantities so great as to exceed anything the oldest fisherman remembered. Since then scup have been very much more abundant than when I wrote my book and report.

To this the reply comes that statistics are not a true indication of the fisheries; that increased facilities have made it possible to catch even in increased numbers. We reply that if this is good logic for a year or two, how is it when applied to the

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\* Most of these fish were scup, and the increase probably wholly scup.

business continued for a long series of years, as with the herring fishery of the North Sea, the scup fishery of Rhode Island, and the menhaden fishery of our Atlantic coast? How long can this increase of fish manifest itself before the arrival of the time predicted when they will be totally exterminated?

Then we are treated to the following argument, from a memorial sent from the towns bordering on Buzzards Bay:

The natural result of seining, even in the open sea, is extinction. The same senseless rapacity of man which has exterminated our buffalo, which has destroyed the whale fishery, which is aiming to ruin the fur-seal fishery of Alaska, and which will, if unchecked by legislation, kill all Massachusetts game in a few years, has found even the apparently inexhaustible fertility of the ocean unable to resist the assaults of netting.

The fallacy of this reasoning is too apparent. It is possible to exterminate one form of life and not equally so another.

The mammals generate by a slow process of one at a time, while the fish propagate by thousands and millions; their spawn is estimated from 10,000 to 9,000,000. It may be that these mammals may be brought to the verge of extermination, but it does not follow that the rats and mice, the flies, or the mosquitoes may. We wish they could, and now were, but we fear they never will be. And we are quite as sure the fish of the sea will never be exterminated until the Ruler of the Universe puts his hand upon them through some one of the natural agencies at his command.

The confidence manifested in the ability of the fishermen to exterminate the fish would justify a contract with them for the extermination of the pests that annoy us. Since "by the application of means to an end by men, that end is sure to come as a sequence," according to the reasoning of these men, the children of to-day may congratulate themselves that when they are old enough to take their noon nap they will hear no buzzing of flies or mosquitoes nor be bitten or stung by these pests of our lives. The poor horses will also escape these torments—think of it ye members of a society with a long name!

In view of the evidence gathered by past investigation and the estimates of the destruction of fish by different agencies, the insects present much better illustration of the effect of fishing by man upon the fish than do the mammals so often referred to. The number of fish in the sea is as far beyond our estimation as the insects and can be no more influenced by legislative acts. Most, if not all of them, have at times been absent within the last or present century before the use of new appliances that are considered destructive; hence the changes were from causes independent of the acts of man, and natural causes; besides we have the best of authority for saying that the powers of man are inadequate.

In the consideration of a subject it becomes essential to know the experience of the past, what has already been learned concerning it. It would be the extreme of conceited egotism to ignore the past and attempt to evolve from our own narrow experience alone conclusions upon a subject like that of our fisheries. We therefore look to the record of past investigations; we find there has been much patient labor and careful thought bestowed upon this subject. We should pause long and look carefully before accepting conclusions adverse to those arrived at after such thorough research and investigation.

We can not, therefore, treat this subject fairly without quoting freely from the reports of the past, even though they are familiar to all. The English commissioners,

James Caird, Thomas Henry Huxley, and George Shaw Lefevre, as able and competent men as could be found in any country, gave three years to this subject, asked and received answers to 61,831 questions, and visited all the important fishing ports. From their report in 1866 we find the following:

*Report of fish that were forwarded over four British roads.*

	Tons.
1856.....	11, 714
1857.....	15, 156
1858.....	21, 615
1859.....	27, 660
1860.....	27, 668
1861.....	33, 337
1862.....	36, 869
1863.....	37, 833
1864.....	40, 337

*Returns of twelve roads for three years.*

1862.....	99, 724
1863.....	108, 721
1864.....	122, 381

The figures clearly show an increase continued for these years named, without a break, every succeeding year showing an increase over the preceding one. Of the Scottish herring we have as follows:

	Barrels.
For 5 years ending 1844.....	3, 039, 000
1849.....	3, 110, 000
1854.....	2, 983, 000
1859.....	3, 026, 000
1864.....	3, 372, 000

On the eastern coast of Scotland and England herring just ready to spawn have been captured in great and steadily increasing quantities every year for centuries, and yet the number of herrings is as great if not greater than ever.

The supply of any kind of fish should be permanently diminished by this great and constant destruction of the breeding fish or the young fry; and yet nothing is more certain than that in many cases this apparent necessity does not exist. In fact, the argument to which we refer owes its apparent force to the fact that it overlooks one of the most important conditions of the question. It is assumed that any destruction of fry effected by man bears a large ratio to the destruction resulting from other causes, an assumption which in several cases is certainly and is most probably altogether erroneous.

We agree with the Royal Commissioners of 1862 in regarding the act enforcing close time on the west coast of Scotland as incapable of any justification, and as having been cruelly injurious to the interest of a large number of fishermen (LXXX).

Up to 1857 the Dutch fisheries were burdened with many restrictions intended for their protection and encouragement. The period within which herring could be fished was limited. The places of fishing, the times, the nets, and the tackle were all under regulations. But the fishery languished and declined, and it was determined by the legislature to try the effect of another system. A law was passed in 1857 abolishing all restrictions, regulations, and enactments as to close time, trawls, nets, and lines; every one was left free to fish the sea in any mode and at any time he deemed most advantageous, while a fishery commission was established to collect the statistics of the various fisheries and report annually. The result has been a steady and continuous improvement. The last report of the commission shows greater anxiety to find new markets in foreign countries for the fish than about the prospects of an abundant catch. A return is given of the number of vessels employed in the herring fishery at Scheveningen and their annual catch which rises from 24,969,000 in 1858 to 33,535,000 in 1864. The export of cured herring from all parts of the country had risen from 30,919,271 stuks in 1858 to 42,698,000 in 1864.

## CONCLUSIONS.

The total supply of fish obtained upon the coasts of the United Kingdom has not diminished of late years, but has increased, and it admits of further augmentation to an extent the limits of which are not indicated by any evidence we have been able to obtain (CVI).

## RECOMMENDATIONS.

In consonance with the conclusions enumerated above we humbly submit the following recommendations to Your Majesty:

We advise that all acts of Parliament which profess to regulate or restrict the modes of fishing pursued in the open sea be repealed and that unrestricted freedom of fishing be permitted hereafter.

The following is from a lecture by H. W. Duff, member of Parliament:

Is there any ground for the statement we sometimes hear that the sea is being overfished? I believe investigation will prove that there is no cause for alarm. I believe it can be proved that our constant fishing has had no appreciable effect in diminishing the number of fish in the sea.

Did time and space permit we would be glad to quote more from the late Prof. Baird of the destruction of fish by bluefish and of the increase of scup, notwithstanding the great increase of engines of destruction. Also from our present Commissioner showing that there has been no diminution of the menhaden.

Of ocean fishes peculiar to our locality none have a more important place than the menhaden. Although not classed among our edible fish, they contribute the means to supply many tables with edible fish and other edibles as well. Their great commercial value is in the oil taken from them and the fertilizing quality of the residue after extracting the oil. This product has, by the aid of improved methods, built up a large and important industry where none before existed; and it appears that none would take its place were it destroyed.

The menhaden is one of the wandering ocean fishes that visit all parts of our Atlantic coast and often show great abundance at one point and scarcity at another, massing at certain points in a way that is phenomenal; but we have not learned that at any time they were entirely absent from our coast during a season. That such may have occurred is very probable, as they were never considered a very desirable edible fish, and very few fish sufficed for all the wants of early times, when no means existed of preserving and the slow methods of transporting practically narrowed the market to a very restricted limit near the coast.

Their use for manure—and later, oil and manure—led to the development of the purse net, first from boats, then small sloops and schooners, and finally steamers, and in the last there has been a great advance over the first. The year 1890 was the culminating point in the history of this fishery in Rhode Island. Later years unfavorable fluctuations of numbers in our waters or restrictive measures by some of the States caused a small catch that if continued would soon destroy permanently the business. It becomes a very serious question to those who have large investments in this industry whether their property can be utilized again in this business, or must be sacrificed.

This particular fishery differs from all others, inasmuch as the fish differ in their habits and the business can not well be confined to the narrow limits of one State. No State could profitably conduct the business wholly within its limits, owing to the capricious movements of the fish.

As no diminution occurred before, and no increase appears since the passage of the restrictive laws, we fail to see any benefit to those States from the adoption of such measures, but a loss to the industries of these States to the measure of their respective interest in the business.

There seems to be a popular idea that legislation is a remedy for all the evils relating to the fisheries, when in truth it is as impotent to effect the purpose desired as an edict of Pharaoh against the pests of Egypt would have been. Repression or restriction is asked for, until we have been led to think that fishing was no longer looked upon as a legitimate or proper occupation. Nor have they stopped at legislative restriction of the fisheries in public waters, but have restricted the sale of the product of one's own toil upon his own private domain.

As has been suggested to the Commissioners, if they go too far they will find that the people will have no further use for such masters. No doubt something like this led the governor of New York in a recent message to say of commissioners of fisheries:

Their efforts should be directed mainly, however, to increasing the supply of food-fish. Merely as conservators of sportsmen's interests their official existence and powers would scarcely be justified by the tax-paying public. The scope of their responsibility and the measure of their opportunity are much wider than is prescribed by any such narrow field.

In the fresh-water ponds and streams the fish are very much restricted in their movements, and it is doubtless possible to destroy the fishing in them by reckless use of means that would be ineffective in the ocean. It appears that very many of those interested in fishes got their experience in the fresh-water fishery, and there learned the necessity of repressing reckless methods that were working the rapid destruction in the streams and ponds of fish in a manner both cruel and wanton. It is not strange that with such early experience they are often led to apply the same measures to our free ocean fisheries and sometimes overlook the interests and magnify the evils of the industrial sea fisheries. To have any just appreciation of this subject one should be in touch with the fisheries and those engaged in them.

The investigator, not too much biased, soon learns to distrust the knowledge he began with and felt so confident of; and after years of patient research and earnest study he is not a little chagrined when he sums up his knowledge to find how little he knows or rather how much he does not know. We deem it an evidence of progress in the investigator when he has learned how little he knows. We have met those who knew it all to begin with, but never found such to advance a step. Such men will not stop to reason or abide the demonstration of facts; they are content to condemn all who differ, and, like the old lady, think it strange all such are always in the wrong.

We are aware of the place they will assign us. We are also aware that we may be taking the least popular side of the question, but it is a satisfaction to us that when we undertook the duties of fish commissioner we were pledged to no particular measures or men, and we trust we shall always be found giving our best services to the duties devolving upon us, but never forgetting that we are also citizens and are ready to become private citizens as soon as the public good can be better served. But while holding the position we will endeavor at least to be candid and impartial in the discussion of all questions, suppressing no facts nor exaggerating any statement to advance one side or the other of a controversy.

The question whether sea or ocean fish may or may not be affected by overfishing has been settled as definitely as it possibly can be by the ablest and most thorough investigation. And to sustain the position assumed against menhaden fishing it becomes necessary to change the classification of these fish from ocean fish to anadromous fish. We supposed all had too much confidence in the thoroughness of the late Prof. Baird to believe his conclusions were without warrant, and before accepting conclusions at variance with his it is but fair to give some new data.

It is certain that the great mass of menhaden never penetrate far beyond tide water; that some few sometimes get separated from the main body and cast their spawn when ripe wherever they happen to be, seems possible, and under favorable conditions a fair show of fish may thus be produced. This would prove no rule, but an exception. It seems self-evident that if this, the most numerous of all our fishes, came in masses into any of our waters to cast their spawn, they would be observed. While we would avoid being dogmatic about anything concerning fishes not fully demonstrated, we think it safe to say (in the light of all present knowledge) that they are ocean spawners and ocean fish, as much as any other fish that visit our waters, and we should feel it idle to contest the point, were it not that two great States have enacted laws based upon the opposite theory.

Would it not be well before we attempt too much control of the fisheries of the ocean to learn more of them—at least, to know that we are not making matters worse, and until then leave it to the allwise Ruler of the Universe, who has been their only ruler for six thousand years?

#### THE EFFECT OF LEGISLATION UPON THE SEA FISHERIES.

There has been much of it both in this and in foreign countries. Either the laws have operated to protect the fisheries and benefit the people or to harass the fishermen and crush out the industry. Which? If any good or salutary effect has been produced by it, it ought to be manifest by this time. We challenge its friends to point to one instance where restrictive laws over the sea fisheries have benefited the fisheries or caused the increase of numbers of any one fish. If it can not be shown to do the one, it may fairly be charged with doing the other.

The effect has been shown to cripple and injure the Dutch and the English fishermen, and to work "cruel hardship upon their fishermen." Does it do less here in America? Will their fish and fisheries thrive and flourish only under freedom, and ours under all manner of restrictive laws? Is their experience of no value? Have we learned more than they? Are only we wise? "Will wisdom die with us?" Shall America adopt the oppressive measures that they cast off, and under which their fisheries languished?

The wisdom or statesmanship that leads to the suppression of an industry giving employment to a large class of our people may well be questioned. But when it occurs at a time when other industries are depressed it must add to the class of idlers whose numbers are already too large and be fraught with evils that endanger the morals and menace the peace of society.