

## IV.—SPECIAL ARGUMENTS IN REGARD TO REGULATING THE SEA-FISHERIES BY LAW.

### ARGUMENT OF SAMUEL POWEL, ESQ., DELIVERED IN THE RHODE ISLAND LEGISLATURE.

This question of the protection of the fisheries of Rhode Island is one demanding the most careful examination.

The most important aspect is the supply and cost of valuable food supplied by fisheries.

How shall the amount be rendered most ample and how shall the cost be reduced to the lowest price?

An able committee, with great labor, patience, and care, have devoted much time to the subject. They have taken a vast deal of testimony, and, at pages 22 and 23 of their formal report, they give us this deliberate opinion upon the subject, in these words: "The opinions—depend." And again, on page 23, they say: "As was anticipated—irreconcilable."

At pages 29 and 30 the committee admit the testimony of Mr. Tallman, to the effect that forty-five years ago the menhaden-men<sup>e</sup> pulled up their nets to allow scup to pass, *lest they should cut their nets*; that ten years afterward (*i. e.*, 1835) "We sold them at ten cents a barrel, for manure."

Now, bearing in mind that the present constitution dates in 1842, this authoritatively fixes and establishes the custom of netting scup as existing seven years, say, prior to the constitution. This is a *very important point in one aspect of the case*. It is the testimony adduced by the committee, and not by me. At page 30 they further state: "Ten years after [*i. e.*, 1845] we begun—knowledge." Now, our committee met many witnesses face to face; they had witnesses representing both interests, and their secretary himself had the previous winter represented, as a sort of counsel, the appellant interest. And with all this, the best means of reaching an opinion, they have told us, (pages 21, and 22:) "The subject," &c.

Now, besides taking personal and written testimony, our committee have earnestly examined the most important documents and reports, both upon our own and upon the fisheries of foreign countries; and with perfect frankness and sincerity they show us what I must display to you in regard to the wandering fishes of the mighty ocean, to which families the scup belong. The United Kingdom (English) report (cited at our report, page 15) asserts that, notwithstanding the most careful inquiries, there was no instance where it was satisfactorily proven that various nets and weirs, "used in bays or estuaries," have "been permanently injurious to the supply of fish," while, on the other hand, it is proved that, in certain bays and estuaries, such fishing has gone on for years without permanent injury to their fisheries.

A Frenchman disputes this in some degree; still it is the deliberate opinion of the British official report. Then our committee cite a counter-report of the commissioners of inland fisheries of Massachusetts,

who criticise the above report of the British commissioners, chiefly because, to arrive at their conclusions, they (the Englishmen) adopted the very same and about the only course acted upon by our own committee. It is true the Englishmen asked 62,000 questions, while our committee did not do so extensive a wrong, for they asked, I believe, only about 5,000. The only way in which our committee departed from the English procedure was that three of them spent a day in a steamer visiting our traps. However, they have not thought this visit even worthy of mention. So we may suppose it yielded no important results in their eyes.

I understand our commissioners to quote, at page 21, from these inland Massachusetts commissioners, the following words: "On our—of menhaden." "At times— but absence."

Here allow me to remark that while our committee claim the evidence that horse-mackerel (blue-fish) do not devour large scup, it was fully proved they do devour all the young scup.—(See minority report of winter of 1870.)

Now, I might read the last two paragraphs on page 21, still quoting the last-cited authority, the inland commissioners of Massachusetts, who merely admit that it is claimed—not proved—that no amount or kind of fishing can diminish the "schooling or wandering fish of the high-sea," citing the kinds, and that it is likewise claimed—not proved—that the local bottom fishes, which are peculiar to certain limited areas near the shore, may be greatly reduced, or even practically annihilated, in certain places by improper fishing. Among these they cite the tautog, some others, and also the bass and the scup.

*Now, the scup are known to be schooling, wandering fish of the high seas, and come from the Gulf Stream and from the Florida Cape. This is their undenied history, except here, where the whole question as to scup is begged and distorted by the Massachusetts report. This point thus makes against them.*

All the evidence of our commissioners shows when and how the various runs of scup strike our coast, and that they are not local, but come in from the high seas. I ought to read our report at pp. 12, 13, and 14, to show the judgment of another Massachusetts committee. They sum up by saying, (p. 13,) "In view—legislation." And upon the next page they cite the report of the most able scientific English commission thus: "Yet that commission—be repealed."

I may dismiss the Massachusetts report by citing from p. 14, that they, among other causes accounting for the diminution of the scup, tautog, &c., in Buzzard's Bay, ascribe it, in part, to a scarcity of food, owing to the deleterious substances thrown into the water from manufacturing, which affect the clams and other species of mollusca, and also to the advent of blue-fish, who drive away nearly all other species of fish.

Captain Atwood, and I believe others, give the date of the first appearance of the scup in the waters of Buzzard's Bay at 1793, which, let me remark, was just seven years *after* the terribly severe winter of 1780, and that our scup diminished after 1856-'57.

Now as to the variableness of many species of sea fishes, Dr. Storer, in his History of the Fishes of Massachusetts, which includes the waters of our bay, gives the following facts, written in 1853: "In August, 1846—quite small." Page 45, Storer says: "Dr. Yale—blue-fish came," and more to the same effect, on same page. On 23d of June, 1847, a squeteague, &c.; page 53, Storer says: "Captain Atwood has seen," &c. Page 73 speaks of the great abundance of sword-fish at Martha's Vineyard, which eat shoals of mackerel and menhaden, &c.

[Quotations are made from Storer at pp. 277, 422, 334, 339, 365, 226, 231, 82, 83, 265, and 269.]

So much for Storer. Star-fish and oysters are notoriously bad friends. An old fisherman of Newport, and I believe he is far from being alone in his views, often said the steamboats seriously injured the fishing. Now, without claiming undue weight for all these restraining or repressive causes, they should have due and that a very great weight when we form our opinions. Every one of these facts has a direct bearing upon the intricate question before us.

There is a sound principle of philosophy to be applied to questions of science, and most especially in the department of natural history. It is, not to mistake a succession of phenomena or a coincidence for cause and effect.

Now, in the reptilian family, low down in the scale of creation, where we find the fishes, the variety of circumstances which attend their existence is very great, and very curious; so that the most learned men have been unable to indulge with any safety in dealing with analogies. The circumstances which mark the habits of each species vary with one another in a most extraordinary way. Thus the United States commission, in running the Texas boundary line, found fresh-water fishes which produced their young alive. Other fishes are curious, and especially, I believe, the salmon family, which appears in both fresh and salt water; and this is the family which most especially has been proved to return to its native waters. It has no relation whatever to the migratory fishes of the sea, which range the coast from the Mexican Gulf to the waters of Massachusetts Bay—few of them pass that cold point, Cape Cod.

The food of fishes has a vast deal to do with their presence. We know very little about their food. Can any one tell me what is the food of the rich and valuable shad, and that of most of its relatives in the herring family? The food of nearly all fishes, as far as we know, is of an animal nature, and in its turn requires food; and any failure of this secondary supply of the *food of the food* will entail the absence of the fishes which consume the first kind of provender.

Fishes are liable to disease, to parasites. All the perch in the ponds about South Kingston have little black specks in their scales. [Other parasites were referred to.] [Certain enemies named.] I do not wander further into this intricate field. It is enough to *show how many grounds there are for the conflict of testimony so decidedly announced. It has convinced me that there is no sufficient ground, and especially taken in the whole broad spirit of our report, to pass a measure so fraught with the direst ruin to many of our citizens.* \* \* \* \*

#### STATISTICS.

J. M. K. Southwick, from Albro's market, November 2, 1870. (All hook and line.) George Crabb, (alone,) 439 pounds tautog, one day. Mr. Brown, (with man and boy, 3,) 718 pounds tautog, one day. Benjamin Nason and father, (2,) 600 pounds tautog and cod, one day. Samuel Young and Lawrence, (2,) 800 pounds tautog, two days, (not from the books.)

Cary's market, same date, November 2, 1870. Hook and line only. John Heable, (1,) 193 pounds tautog, one day. Mr. Osman and man, (2,) 126 pounds tautog, 97 of cod, one day. Champlin & Huddy, (2,) 260 pounds tautog, 330 of cod, one day. Wm. Champlin and Young, (2,) 388 fish of various sorts, one day.

## ARGUMENT OF J. M. K. SOUTHWICK.

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NEWPORT, RHODE ISLAND, *October, 1871.*

DEAR SIR: It is with diffidence that I, in compliance with your request, attempt to prepare for you this paper on the fish question; for, as my resources of information have been limited, I cannot claim thoroughness, either in reading or personal observation. Therefore I fear I shall, like too many others who have written upon this subject, give too much of theory without practice; and to escape the study of cause and effect, *jump* at the first plausible theory for the solution of an important question.

That my conclusions are mainly right I can only hope; but I feel assured that your very thorough investigation will establish what is right, and expose and reject what is wrong. If it aids you in settling any point of fact, or helps you to arrive at a philosophical truth, I shall feel repaid.

As much of it was written during a local controversy in this State, it will contain much that may not be of general interest; but, as you said "Don't stop," I give you all as I have written it, hoping that you may be enabled to glean something from it.

### THE DIMINUTION OF FISH APPARENT, NOT REAL.

In former times, before the facilities of transportation in ice became the means of supplying the great markets and the interior country with the products of the waters, fish was an article of food only to the few living along the coast, and a small amount sufficed for the demand. Any extra catch, at this time, overstocked the market and caused a glut that gave the appearance of the great abundance that has been attributed to those times.

### LOW PRICES.

In consequence of the limited market the prices were very low, and the fisherman never realized pay adequate for his toil, notwithstanding he saved to himself (or to the consumer) the large profits that now go to the marketmen, by daily taking his catch in a barrow to some prominent corner or to the houses of consumers for disposal.

### HARD TIMES.

In that day, by dint of lobstering, piloting, and acting as city watchman winter nights, the fisherman who was very industrious and very prudent, managed to make both ends meet; but where one was so very fortunate it was only by working early and late, and using the utmost economy.

### AVERAGE CATCH.

The fish most caught were cod, haddock, tautog, bass, and mackerel. They would usually get from one hundred to one hundred and fifty pounds, but sometimes failed to catch so much, and then they would complain that "fish were not so plenty as they used to be."

We are told that, sixty years ago, the above complaint was chronic among fishermen, but not of so virulent a type as at the present day, as there were *then* no trappers to charge with being the cause; but *now* there is a competition with them in the waters and markets, where those who will not use improved methods are outdone.

Yet we believe that, where the fisherman really applies himself to his business, he does as well as at any former time, though we would by no means convey the impression that hook and line ever *was* or ever *will be* a profitable way to catch fish.

#### WHY LESS ARE CAUGHT IN SOME LOCALITIES.

1. Because they are made wild by steamboats, vessels, and an infinite number of small craft, and by being fished for by everybody, and in every way.

2. The fish whose numbers have most diminished in those localities are of the less belligerent kind, while their enemies among fish have increased and driven from their favorite grounds.

3. The failure, or partial failure, of crops of sea-vegetation and small animal life that, according to natural laws, will vary from one year to another, and the great amount of filth that must accumulate on some at least of the feeding and spawning-grounds, may cause a permanent failure in such localities.

4. The impurity of the water that so affects the oyster as to destroy its value for food, as in Taunton River and at other points.

5. The destruction of muscles by the occasional storms that drive the shells up on our shores in windrows two or three feet thick.

#### OTHER CAUSES OF DIMINUTION.

1. Their destruction at sea from natural enemies there.

2. Convulsions of nature.

3. Distempers.

4. Being chilled by the excessive cold of some of our winters, as in 1856-'57, when tautog were driven ashore in large quantities.

5. The enormous destruction of the spawn and young by natural enemies, that may increase or diminish unobserved and unknown. These enemies may be of their own kind when food is scarce.

From all these causes, may we not find the answer to the question, "What has become of our food-fishes?"

It may be objected that most of these causes are natural ones, that may have operated at other times as well as at present. We answer, they *have* so operated; and perhaps the fluctuations of fish were more remarkable for the half century previous than for the one just passed, and to what, we ask, can it be attributed? Certainly not to fishing.

#### WHAT FISH HAVE DIMINISHED, WHAT INCREASED, AND WHAT NEITHER WITHIN FIFTY YEARS.

We have stated that there was an apparent, when there was not a real or general diminution. We believe this to be true of bass, and also of tautog. While the indications are that scup have really diminished, the bull's-eye have entirely disappeared.

The horse-mackerel, squeteague, butter-fish, and Spanish-mackerel have increased very much, and are fish that were scarcely caught at one time, but are now numerous, in spite of the means used to catch them.

But before we proceed to examine in detail the different fish peculiar to our waters, we will say that their numbers fluctuate in such irregular manner—a season of scarcity often followed by a season of unusual plenty—and their entire disappearance from certain localities for a series of years, to re-appear again, are phenomena that upset our best theories, and make past figures of little account for the future estimate of numbers, as, for instance, in the course of five, ten, or thirty years, there may be an apparent gradual diminution from one year to another, preceded by a year of abundance. We here submit some facts that lead to the conclusion that bass and tautog are about as plenty as ever.

1. Fifty years ago a shore-seine was used in bassing two weeks; but the men engaged did not get enough to pay for their food while so engaged. A failure to catch, in that time, was not rare.

2. At this writing, July 28, 1871, a boat is in the harbor with 9,000 pounds of bass, the result of one haul with a shore-seine, for which they will probably realize \$900. One day this month, one man, Mr. H. G., caught with hook and line 1,000 pounds of bass in two hours!

3. Ten years ago, fishermen caught from 100 to 150 pounds of tautog in a day's fishing.

4. There were sold on the 3d day of November, 1870, at two of our markets, as the day's catch of fifteen men, 2,800 pounds of tautog, besides cod-fish caught by the same, amounting to 600 pounds, being an average of over 226 pounds to each man.

The fishes of our waters may be classified—1. As local and bottom fish, being those that remain in the bay the year round. Of such are the cod-fish, haddock, tautog, flat-fish, and eel. 2. The migratory fish, that visit our waters and remain with us but a part of the year, such as the bass, horse-mackerel, squeteague, sea-bass, scup, herring, Spanish-mackerel, butter-fish, and mackerel.

#### THE COD-FISH.

The cod-fish are very generally distributed, during the cold weather, in the lower waters of the bay, and, on the approach of warm weather, work off into deeper water outside the bay, and are then less generally caught, but may be taken at all seasons the year round. They are taken by hook and line, troll-line, not otherwise to any extent. They live on shell and other small fish.

I hear of tautog being taken from them that would weigh a pound. I am told by many fishermen that they are as plenty—some think more so—as ever; while some of our local fishermen think they are not so plenty as thirty years ago.

The haddock, the colleague of the cod, are caught with them.

#### BASS.

This fish has been generally abundant in our waters, but during the last, as in the present century, there have been seasons of scarcity. They first appear in our waters early in May, going eastward. They are caught in traps in May, to some extent, but are of small size, say from one to four pounds in weight. They are caught in July with hook and line and shore-seines, but are of larger growth, say from ten to forty pounds weight. They frequent the bay much less than formerly, but are caught quite plenty at more remote, or less disturbed places, as at the Vineyard Islands, where they appear as abundant as ever they were.

We are told that now, August 21, they are schooling up, and will very soon be, if they are not already, going west, taking the same route by which they came, but, perhaps, a little farther from shore. They are very shy when alarmed, and are made wild by fishing, steamboats, and small craft that swarm in our waters; and from that cause, are kept from the bay. They go very fast when migrating. A very great increase in their numbers might cause an increase in these waters, on old fishing-grounds, but from causes above named I cannot think that their increase can again cause them to come into the bay as formerly.

The most successful fishing for them that I know of is done at the Vineyard Islands, by small craft, fitted with ice, shore-seines, and experienced men. These rarely fail to make a good catch.

We know of the following catches this season by two boats, most of them the result of one haul with the shore-seine; 500 pounds; 3,500 pounds; 3,000 pounds; 9,000 pounds; 3,000 pounds; 2,000 pounds; also with hook and line in our waters, 1,000 pounds in two hours' fishing.

I know of a locality near Tappahannock on the Rappahannock River, where there is very good fishing for them; have caught them there in *January* with troll-lines, but they are most abundant in February. In February, 1867, I saw 6,000 pounds that had been caught there at one haul. There was one fish among them that weighed 80 pounds, the largest I ever saw. The smallest of this lot would probably weigh 10 pounds.

#### THE TAUTOG.

This fish winters near the mouth of the bay, comes into the bay in the spring—in March or April—remains until November or December, and then returns to deeper waters.

They are caught in May in traps, still later in heart-seines, but more generally by hook and line. They feed on rocky bottoms where seining is impracticable; are caught, sometimes as late as Christmas, in the bay in some deep holes where *some* may winter, but most of them go outside and feed on the ledges until very late, and remain there nearly all the winter.

In February, 1857, after a very cold spell, there were large numbers of tautog driven ashore at Black Island and many other places, chilled, doubtless, by the excessive cold, and from this event many fishermen date a *diminution*.

#### HORSE-MACKEREL (SNAPPERS, BLUE-FISH) AND SQUETEAGUE, OR WEAK-FISH.

These fish have similar habits, come and go about the same time, and are very destructive to smaller fish. They disappeared from our waters about the first of this century, and returned again thirty-five or forty years ago, and are now generally very plenty; but the present season they have been less so in the bay, though as plenty as usual outside, and I hear they are abundant on the coast of New Jersey.

Although *scup* came some twenty days earlier this season than for a number of years, *these* fish were about as much *later* than usual. They are not much caught now, but what are caught, are generally full of the *small scup* that are so numerous in our waters this year.

The horse-mackerel and squeteague are, perhaps, the bulk of the fish that are caught in heart-seines and gill-nets. When numerous they are very destructive to most kinds of smaller fish, driving them off

when they do not destroy them, and following up schools of them to prey upon them.

#### SCUP OR PORGY.

That these fish first appeared in these waters the latter part of the last century, seems confirmed by all our traditions of them. The first caught being exhibited as a new and unrecognized wonder of the deep, leads us to infer that if ever before they had been here it was too long before that to be remembered by the men of that day. At least they have left us no tradition of their presence here before that time.

It appears that they came here in small numbers, but, favored by certain conditions, they multiplied until they became the most numerous of all our edible fish. If we study the conditions under which they then increased, we may arrive at a correct solution of the question of the cause of the present increase. Here we fail to obtain information that is wholly satisfactory; but it is certain that about the time scup first appeared, horse-mackerel (blue-fish) and squeteague disappeared; and during their absence scup increased to their greatest number; but at the increase of the former they again decreased. Therefore we conclude that the increase of the one is in proportion to the decrease of the other, and also contingent upon the same.

The present season gives us a new phenomenon, corroborative of this inference, the appearance of small-fry of scup in myriads directly after the great run of scup; first, outside, three or four weeks later at the lower waters in the bay; and the late appearance and small number of horse-mackerel. These latter seem to have chosen another field for their operations, and allowed these small scup to escape the destruction that has so commonly been their fate.

In former years scup migrated to our coast about the middle of April, and then appeared to be plentiful all over the bay. For ten years to the present time they have not favored us with their presence until nearly a month later, and then they came in less numbers, and were scattering in the bay. What connection there is in their late coming and apparent consequent small numbers does not appear; but fishermen have a theory that the time and number depend much on the weather, warm southerly winds being most favorable. How far the adverse weather may have operated to keep them back in their migrations to our coast, until the horse-mackerel and squeteague have marshaled their hosts and cut them off, we know not.

#### TRAPS VS. SCUP.

It is said that traps destroy this fish while seeking an entrance to the bay to deposit their spawn; and this is insisted upon, notwithstanding the traps catch only one way, *i. e.*, when the fish are going out. But if this is true, and the trappers by some legerdemain turn their heads down stream and capture them, what can be said about the spawn, when, as at the present season, precocious little fellows, two or three months old, come paddling their own canoe directly after their fathers and mothers, and fill our waters with their young life? It certainly seems to settle the question conclusively that we do not depend upon the product of our own waters for supplies. And is it not a little singular that objections should be made to the capture of fish while in spawn, when the legislative authorities, in one of the most enlightened States of the Union, passed a law to prevent their being sold at any other time than when in spawn, as being then, and only then, fit for food?



Scup, as an article of food, were little prized until, by the aid of traps, ice, and steamboats, fish were utilized as such over a large area of country; and the immense demand thus created required a vast amount to satisfy it, and has operated to build up this branch of industry to its present magnitude.

#### OVER-FISHING.

That every fish caught makes one less in the water is true, but if that one, if left, would destroy ten others, then the catching of that one saves the other ten. This may not apply to scup as to more destructive kinds, as horse-mackerel, squeteague, sharks, dog-fish, porpoises, &c.; but in some measure it may apply to scup, for aught we know.

It is known that herring destroy their own spawn, and we believe that all others would in a case of scarcity of food.

The small horse-mackerel are often the little bait upon which many fish feed, and we very much doubt whether their own fathers and mothers would stop to discriminate between their own and the young of another.

That it is possible to so diminish their numbers by fishing that those remaining cannot repair the loss, independent of the vicissitudes of ordinary fish-life, we cannot believe. They are scattered over so much ground that all the devices of man can never reduce their number, without some great auxiliary aid from nature more destructive than anything man can devise, although it may be, when natural conditions are such that they must diminish, from year to year, as some species have, to the point of extermination—then it may be that fishing may hasten; but, as has been said by others, “Under favorable conditions, no amount or kind of fishing can ever make any material diminution of the fish of the sea: 1, because of the small proportion of the whole number that can be caught by any means possible, scattered as they are over so great an area; 2, because of their vast reproductive powers, requiring but a small number to keep the stock good; 3, because the same means that are used to catch food-fishes are equally destructive to other fish, their enemies, the destruction of one of which saves numbers that would otherwise be destroyed.

#### IMPURITIES.

That the great amount of impurities that are emptied into the waters of this bay from the sewerage of cities, the *débris* of manufactories, and the accumulation of filth from various sources; the ashes of steamers and other substances thrown into the water, while it may not be unfavorable to some kinds, it seems impossible that it should not affect others that inhabit the pure waters of the ocean for a large part of the year.

We know it is said that the impurity either rises on the top or settles to the bottom, and that between these two extremes the water is pure. In some degree we think this true, and to the measure of its truth we ascribe the presence of what we have of the sea-fish in the upper waters of the bay.

Fish, coming to our coasts in schools, swim near the surface. May they not be diverted another way where they come in contact with impurities; or would they find a clear streak of pure water, and follow it to the source of impurity to investigate causes?

Instances are not wanting where the total disappearance of certain fish has been traced to this cause, as the desertion of the river Thames by the salmon; yet the white-bait continue to thrive there in spite of

all the filth. So may the cat-fish and the eels thrive in the mud of our rivers, but the bass and tautog never can.

But the impure water is not the only nor the greatest evil of filth emptied into the bay. The great deposits that settle from it and cover the bottom, where the tide is insufficient to carry it off, by its accumulation must destroy much of the small animal and vegetable life that would otherwise furnish food and shelter to the fish. The effect of the impurity in the water is very observable in the oysters of Taunton River, which have become so impregnated with copper, since the introduction of the works near the river, as to destroy their value for food. Similar results have been noticed from gas refuse.

#### FREEDOM OF FISHING.

At the Creation, "God said, Let the waters bring forth abundantly the moving creatures that have life, and every living creature that moveth, which the waters brought forth abundantly; and God saw that it was good."

After the creation of mankind, male and female, the first great boon conferred upon them by their Maker was dominion over the fish of the sea. So it appears that man's dominion over the fish of the sea does not date with the charter of Charles II and his Rhode Island Colony, but is contemporaneous with the creation of the world; since which time man has continued to exercise it without limit or restriction, as inclination or interest dictated.

That he first exercised it by the use of that most suggestive and simple appliance, the hook and line, of which we have a very early account, is evident; but the increased population causing an increased demand, soon suggested to the progressive spirit of man a better way, and 2,500 years ago the Sacred Historian says: "As fishes of the sea that have no ruler over them, they take up all of them with the angle, they catch in their net and gather them in their drag, because by them their portion is fat and meat plenteous." Thus defining God's first boon as an unrestricted use of the fisheries, that were without a ruler, and showing an appreciation of the means used and the great good resulting from their use: and then exclaimed the good prophet, "Shall they therefore empty their net that brings fatness and plenty?" Not only was an advance made in fishing, but they also made sluiceways and ponds for fish.

In Christ's time nets were much used, and a sort of net that was cast from the ship's side, and thence taken back into the ship like the purse-nets of our day. The shore-seines then used must have been large ones, for it was not considered that 200 cubits (300 feet) was far from land. "They were not far from land, but, as it were, 200 cubits, dragging their net with fishes." "Simon Peter went up and drew the net to land full of great fishes, an hundred and fifty and three." It was thus that they exercised dominion over the fish of the sea, and *sometimes* made great catches, but often "toiled all night and caught nothing." A fluctuating fortune, common to fishermen of all ages.

Those fishermen of Gallilee were countenanced and encouraged by Christ, and were of the first from whom he chose his Apostles. We hear nothing of hook and line at this time, but can hardly hope to make our hook-and-line friends believe it was because that method had become obsolete; but certainly we do not find them mentioned by the Sacred Historian after other methods were mentioned.

It then appears that in other ages improvements were made in fish-

ing as in other industries, and that they then had the means of catching them in quantity, and that hook and line were not the prime means for catching fish.

Coming down to the early days of our colonial existence, we find that the Indians used weirs and nets in fishing, and fish was to them an important staple food; and it became so to the early settlers also, they using weirs, shore-seines, and gill-nets to catch them.

So important was this interest at the time the charter was granted by Charles II, that a special provision was made in it, securing this right, (*e. g.:*) "That it should not in any manner hinder any of our loving subjects whatsoever from using and exercising the trade of fishing upon the coasts of New England, in America. But that they and every or any of them shall have full power and liberty to continue and use the trade of fishing upon the said coasts in any of the seas thereunto belonging, or in arms of the seas, or salt-waters, rivers, and creeks, where they have been accustomed to fish, and to build and set upon the waste lands belonging to said colony and plantations, such wharfs, stages, and work-houses as shall be necessary for the salting, drying, and keeping their fish to be taken upon the coast."

Living under this charter our grandfathers and fathers continued to exercise this inherent natural right with as much freedom as they used the air to breathe and move in, choosing their implements and using them without limit or restriction. And under a constitution that continues to us the same guarantees, we have so increased this productive industry as to make it second to none in a large section of the State.

("The people shall continue to enjoy and freely exercise all the rights of fishery, and the privilege of the shore, to which they have been heretofore entitled under the charter and usages of this State."—Article 1, section 17.)

We do not doubt that our heart-seine is an improvement on the weirs of former times, and that our purse-nets are in advance of those used by the Apostles is likely; perhaps, too, the fish-hook of to-day has a different bend, a sharpness of point, or a larger barb than those in use when man first exercised "dominion over the fish of the sea, that had no ruler over them," but were free to all. And *freedom* did not mean restriction, as it has been defined by the committee on fisheries, where they, alluding to the clause in our constitution containing the charter-rights, say that, "constitutional scruples may make it necessary to restrict fishermen in Rhode Island."

This, then, the most ancient of man's rights, conferred upon him at his creation by his Maker, continued to be exercised and enjoyed by him without interruption for nearly 6,000 years, confirmed to him by the laws of the State, approved and justified by the best informed of this and other countries, who have most thoroughly investigated its merits, is in these latter days brought to trial for its continued existence, and the liberty-loving little State of Rhode Island is asked to lead the van in the crusade against it.

#### OPPOSITION.

About fifteen years ago many of the most enterprising of the fishermen, better to facilitate and render more successful their business, adopted the method of catching fish known as "trapping," which, as a natural consequence of their better success, provoked the opposition of such of the fishermen as lacked the necessary enterprise or energy to adopt the measures, without which they could not compete in the mar-

kets and waters. Re-enforced by occasional and sporting fishermen, they succeeded in creating a prejudice against this method of fishing, such as has been arraigned against every labor-saving machine adopted by other industries with the same result, until parties of wealthy young men, seeking relief from *ennui* or the cares of business, and thoroughly furnished with the most approved tackle, turn fishermen for a time; but, disappointed in consequence of not catching fish, are easily persuaded that it is because traps have destroyed them; then, without taking the trouble to investigate the matter, an effort is made to unite every element of aggrieved (or imagined to be aggrieved) interest against the net-fishermen, with a determination to exterminate their, the only admitted profitable method of fishing.

By dint of great efforts and one-sided statements by canvassers, they enrolled the names of a long list of petitioners.

That very many well-meaning persons signed the petition, we doubt not; and that some advocated it from a sense of public good, we believe; for the fish question, when first brought to issue before the people of this State, so long as the facts remained obscure, did have some show of fairness to those content to know simply that traps had increased and the price of fish increased, while the catch of fish with hook and line, in some localities, had decreased. While this constituted the whole bulk of the information made available to the mass of the people, and was enforced and made to appear plausible by the eloquent rhetoric of scholastic lore—that the first was the cause, the latter the effect—it is not surprising that many were influenced by it.

But while they are discussing the means of restoring the fish to our waters, the fish themselves re-appear and upset all prognostications of their extinction by human means, and establish the fact that they, like insects, in the lapse of years, fluctuate in numbers, though left to themselves. First, one species, favored by certain conditions, multiply and increase to a number limited only by the amount of food produced, and the ordinary vicissitudes of fish life, until some deadly distemper, a convulsion of nature, the destruction of their normal food, an increase of natural enemies, or the invasion of their grounds by new enemies which take their place and multiply until some of the above-named, or other causes, produce the same effect upon their numbers, and they in turn give place to the former or other species.

Such changes are constantly going on under the inexorable laws of nature, that produce a like effect upon vegetation, sometimes by visible, sometimes by invisible causes; and man can no more change the result by legislation than he can limit the drops of rain that shall fall upon the earth.

To account for all the causes that produce the effect is much beyond the grasps of finite minds; its roots are deeper than they can penetrate. It is comprehended, in all the relations of cause and effect, only by the Allwise Ruler of the universe.

We can only theorize and speculate about the hidden, unsolved mysteries of nature, that show man's weakness, and point the limit of his attainments.

The following communications may serve to illustrate what I have said:

Captain TIMOTHY GAVITT, of Westerly :

Has known bass caught in June that weighed from one-half to one pound; that were put in a pond, and, when taken out in October, weighed six pounds.

A boy living with him caught, by wading in, a tautog weighing five pounds, at the mouth of a little brook two miles above the fishing-ground at Pawcatuck River. It was a female fish, very full and very far developed spawn; he thinks the spawn would weigh one pound. He also states that the light-house keeper at Watch Hill, Mr. Pendleton, (not the present keeper,) lost a bob fishing for bass that was taken next day with the fish on Long Island. It was identified and returned to him. Bass return west in August and September, by the same route they came, but wider off shore.

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Statement of JOB TEW, aged seventy-six :

Ten years ago saw the heads of scup in the water and along shore, and considered it as an indication of the presence of horse-mackerel, as there were no other fish in water at the time that would do it, it being too early in the season for sharks.

In 1810 bass were scarce.

Fishermen used to complain sixty years ago that fish were not as plenty as they used to be. Have known bass to be very plenty in a particular location, and never appear there again in numbers, without apparent cause for the change.

Think fish generally as plenty as ever. Always did vary one year with another.

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BENJAMIN DUNWELL'S statement :

Has fished thirty years with hook and line. Two hundred and fifty pounds tautog used to be considered extremely good fishing. Often did not catch enough to eat during the month of August. My day's catch is about the same now as it used to be, both in tautog and codfish.

The seasons vary, but average about the same; do not observe any reduction of fish; go further when fishing for tautog; think that owing to the destruction of them, by being chilled in 1857, since which they have not been so plenty in the bay.

Scup used to be plenty in the bay, but horse-mackerel have driven them off. There are a great many more half-way fishermen now than formerly, and they do not follow it up so well.

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EDWIN BROWN'S statement :

Early in May, 1866, saw at Gardner's Bay very small fry of scup and sea-bass, just large enough to distinguish their species.

Fished at Seconnet in 1857; sea-bass were very plenty then. Since that time they have very much decreased, but have again become very numerous, and the last season were as plenty as at any time since I first fished at Seconnet. Caught more tautog the present than any previous year.

## PELEG HUDDY'S statement:

Has been a hook-and-line fisherman thirty-five years. Sea-bass were very scattering, when first fished; were told that they were very plenty before that time. About ten years ago they became very plenty, since which they are not so abundant.

Mackerel were more plenty in August, 1870, than ever knew them to be before. Fish generally are quite as plenty as ever, except at certain localities in the bay. While some kinds have decreased, others have increased. Don't believe nets or traps materially affect their number.

## Statement of NATHAN KING:

Is now, and always has been, a hook-and-line fisherman; thinks fish, generally, as plenty as ever, but are driven off shore by the steamers; thinks they are the chief cause of scarcity in the bay; has watched them darting from a boat, and thinks that steamers must have great effect in driving or scaring them from the waters.

About twelve years ago, knew of a boat that went to Point Judith for tautog; fished some, without success, at the usual fishing-grounds, then hauled up killick, and worked along slowly—watching all the time for fish; came to a clear spot on the bottom and saw them; carefully dropped anchor, and in a very short time had a good fare of very nice, large tautog. Repeated the same several days, with good success.

When the sun is very hot, tautog leave the clear spots for shelter in the weeds and rocks. Mr. King thinks the fish are very much harassed all along the shore by fishermen; but when they are found in a quiet spot, can be caught quite as well as ever they could. He remembers hearing the complaint, "that fish were not so plenty as they used to be," when he first went fishing; but fishermen forget the poor fares, and remember well the good ones. The nearest places are so much more fished, is a reason for catching less at those places, if there were nothing else to disturb the fish.

Lobsters are quite as plenty as ever; that is to say, that the same number of pots catch as many pounds as thirty years ago.

NEWPORT, *September, 1871.*

## HENRY MERRITT'S statement:

Have been engaged in hook-and-line fishing twenty years—principally for tautog; used to catch from thirty to three hundred pounds. The latter was an extra good catch. We considered one hundred and fifty pounds a good day's fishing. The seasons varied somewhat, but cannot tell just which seasons they were most plenty; but think they were more scarce the season after so many were chilled in the winter and driven ashore. They were very scarce two years ago, but very plenty last year; never saw them more so than then.

Caught three hundred pounds tautog several days running, and sometimes two hundred pounds cod-fish on the same day. Fished from Beaver Tail to Point Judith. Thinks the average catch equals former years at same places. Have caught tautog as late as Christmas on the ledges. Have seen scup very plenty on the ledges almost every year, but more last year. Should say there were three times the number fishing now that there were twenty years ago.

Scup are very plenty in the bay at present; have been since June.

**P. SOUTHWICK'S statement:**

Is seventy-six years of age. When about twenty years old, went several times to the Vineyard Islands, with a seine, to fish for bass; sometimes staid two weeks, but never with success; did not realize enough to pay expenses, and often not enough to pay for food consumed while so engaged.

The fishermen used to say fish were less plenty than formerly, as long ago as I can recollect.

Mr. T. STEVENS, one of our oldest hook-and-line fishermen, says that he, with two others, went to Martha's Vineyard to fish for tautog about thirty-five years ago; would get from one thousand to three thousand pounds in a week's fishing. Went east because they could do better than at home.

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NEWPORT, August 12, 1871.

WILLIAM SISSON, of Westerly, commented fishing fourteen years ago; fished all the time since, except from 1861 to 1865, from June to October. Used shore-seine; fished from Long Island to Cape Cod with it. Find bass first appear on western part of fishing-grounds; later, further east. The first that come are smaller. Have not failed to catch good fares any year that I have been fishing, but never caught more than at the present season. The spawn is well developed in most of the bass now; saw last week small bass, smallest four inches long, at Waquoit.

Horse-mackerel are not so plenty the present season, but have been very much more plenty the last few years than when I first fished; think three to one.

Bass feed on the bottom, on small fish, worms, and roots; swim near the surface, sometimes very fast, so that it would take a smart sail-boat to keep up; catch them best on the flood-tide.

Both bass and horse-mackerel attack birds. Have seen small quantity of spawn of bass in seine. They go together to spawning-grounds in the rivers. Have seen scup cut by horse-mackerel, and have taken from them the tail-end of scup that I think would weigh half a pound. I think them very destructive to all kinds of smaller fish, more so than anything I know of.

Fish are just as plenty as ever, but more wild, and keep more off shore, owing to traps and other fishing for them. Bass will take hook any time.

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STATEMENT TAKEN FROM MY BOOKS OF THE FISHERY AT PINE TREE.

In 1866, up to May 11, caught \$2 25 worth of fish. On the 11th caught 168 barrels of scup, at \$2 per barrel.

In 1867, up to May 14, caught \$10 worth of scup. On the 14th caught 76 barrels, at \$2 a barrel.

In 1868 fished from May 1 to 23. Total sales of all kinds of fish, \$86 72.

In 1869, May 6, catch, 2 scup; 10th, catch, 1 barrel; 13th, caught 32 barrels, at \$3 a barrel.

In 1870, May 2, catch, 11 scup; 8th, 6 barrels; on the 15th, 60 barrels, at \$2 per barrel.

This fishery had been fished about seven years before I fished it in 1866; and I am told that large bodies of scup were taken as early as

April 20; that 200 barrels have been taken at Seconnet as early as the 15th of April.

J. M. K. SOUTHWICK.

The fish question might be summed up thus:

Fish have diminished in certain localities. It is charged that the diminution is in consequence of trapping. Is the charge sustained? If so, then we may stop here. But if only met by the query, what else can be the cause? we might ask by what maxim of law are trappers adjudged guilty without proof, and compelled to seek relief by fixing the guilt? But answer: If no other cause could be given, then it may not be traps; for who can explain the working of the mysterious laws of change written all over the universe? Yet numerous and sufficient causes have been assigned to account for all the real or apparent diminution, besides the fact shown the present season, that an increase of fish is possible without a reduction of traps; that scup, like the herring of England, may increase in spite of the enormous and increasing fishing.

It is proposed to stop trapping three years as an experiment—a sort of sedative to popular clamor. And then what? The business would be destroyed for all time, for none would venture capital in material once rendered valueless, and liable to be again, at the caprice of experimenting legislatures.

As well charge the ice-merchants with short crops of ice, because of large ones gathered in former years, and suspending their business on their failure to demonstrate that it was from other causes.

To stop trapping two days and three nights in the week. Although the scup-traps are down about twenty-five days, the great bulk of the fish are taken within ten days. Now, if allowed to fish but five days of the ten, as may then happen, there would be no chance left the fishermen at this, the most important trap-fishing in Rhode Island.

The effect would not be so detrimental to the heart-seines, although discouraging to those not now very successful. I believe any restriction of the scup-traps, beyond that from Saturday night to Monday morning, would amount to prohibition.

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## THE FOOD-FISHES OF THE NEW ENGLAND COAST.

BY GEORGE H. PALMER, OF NEW BEDFORD, MASSACHUSETTS.

Within a period of about twenty years, four of the best food-fishes of the New England coast, of different *genera*, different habits, and feeding to a certain extent on different food, have been observed to become, year after year, less in numbers and smaller in size.

These four fishes are—

The striped bass, *Labrax lineatus*, (*Roccus lineatus*, Gill); sea-bass, *Centropristis nigricans*, (*C. atrarius*, Gill); tautog or black-fish, *Tautoga Americana*, (*T. onitis*, Gill); scup, *Pagrus argyrops*, (*Stenotomus argyrops*, Gill).

For several years this fact attracted but little attention, and called for no special investigation.

At length, however, the subject began to excite the alarm of the fishermen who depended upon fishing for their entire or partial support, and grew to be a subject of very general complaint.

Of these fishes there is no evidence that they have not always been