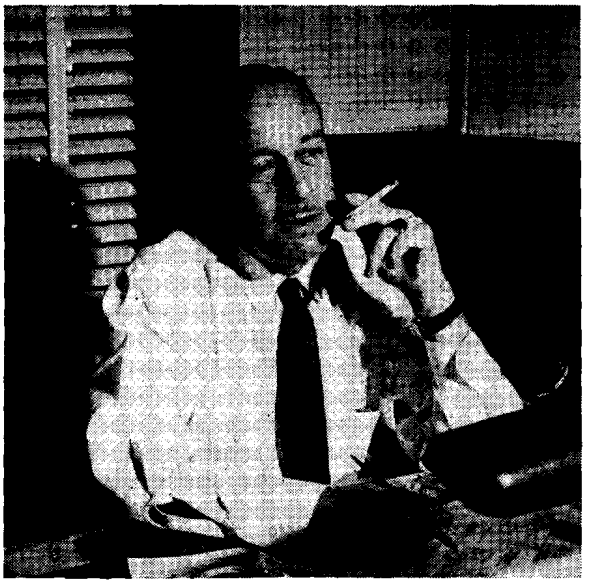
A History of the Connecticut River and Its Fisheries

by

Douglas D. Moss

CONNECTICUT BOARD OF FISHERIES
AND GAME



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ABOUT THE AUTHOR AND THE ARTICLE

As an aquatic biologist in the early 1940's, Douglas Moss was assigned the task of studying various phases of the life history and biology of the Connecticut River shad population which necessitated a rather comprehensive review of the scientific literature. During this phase of his work, he repeatedly came upon fascinating articles and records relating to the history of the Connecticut River fisheries; many of these documents more historical than scientific in nature. He became enthusiastic about the compilation of historical facts relating to the early fisheries to the point where it became somewhat of a labor of love. By 1946, he had thoroughly exhausted all of the reference materials available to him and then fortunately decided to record some of these facts in manuscript form. However, the resulting article was never published.

It has been said that Connecticut people rediscover the Connecticut River every twenty years, and it may be that we are now in one of those periods of increasing awareness of this beautiful body of water. In recent years, great sums of money have been spent to control its rampaging flood waters in the upper tributaries and many municipalities and industries are making efforts to abate the load of pollution going into the river. Possibly these two factors combined are having a stimulating effect upon the fish population of the river, for certainly changes are apparent to those who are familiar with these resources. With the installation of a successful fishway over the dam at Holyoke, shad are now migrating upstream to ancient spawning grounds denied them for 106 years, and the Connecticut River shad run seems to be secure for the future. Of great interest has been the increased appearance of wandering Atlantic Salmon in the river and some of these have even gone through the Holyoke fishway. The great northern pike seems to be increasing in abundance and average size; white and channel catfish are now common in the river; schools of white perch and even school stripers are finding their way upstream to the Enfield Dam; resident species such as yellow perch, largemouth bass, bullheads, seem to be on the increase. The increased abundance and variety of fish has led to increased fisherman interest in the river. This, in turn, has brought about popular discussion of these matters and inquiries of the department as to why fish seem to be abundant, and where they can fish. Thus, it seems that a manuscript of this sort should be made available because it answers many of the questions which are being raised.

The author's first professional job, after being graduated from Cornell University in 1935, was as a wildlife biologist with the U. S. Resettlement Administration. He then began eighteen years of varied service with the Connecticut Board of Fisheries and Game which, unfortunately, ended recently with his retirement from the department due to physical disability. His first assignment with the Board was as a deputy warden; from this, he advanced to the position of aquatic biologist, and ultimately was appointed chief of the Fisheries Division. He served in this capacity from 1954 to 1960. We are all grateful to Doug for having the foresight to prepare this manuscript which, with minor editing by the staff of the Board of Fisheries and Game, is presented with some pride.

A HISTORY OF THE CONNECTICUT RIVER AND ITS FISHERIES

EARLY HISTORY

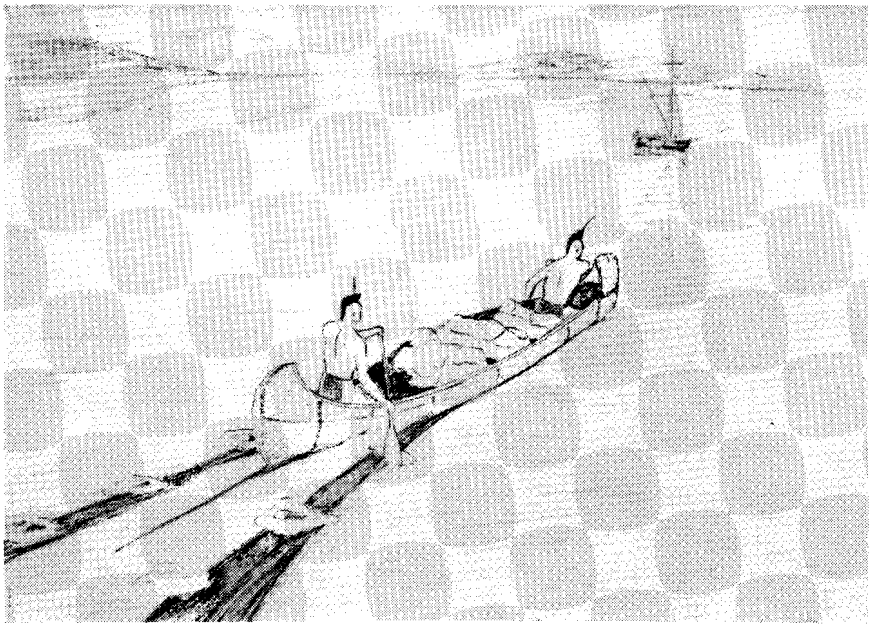
It is a matter of interesting record that the history of the Connecticut River is filled with accounts of conflict by divergent interests in the exploitation of this body of water. A resumé from old histories of the Connecticut Valley is enlightening and causes us to realize that many problems of today are not without precedent.

The Connecticut River was first discovered and partially explored by the Dutch navigator, Adriaen Block. Block's Dutch ship, laden with fur, burned in the fall of 1613 in Manhattan harbor. From a camp on Manhattan Island, Block and his ship's crew cut timber and built a new vessel during the winter of 1613-1614. During the spring of 1614, Block sailed his new vessel northeasterly along the New York and Connecticut shoreline until he reached the mouth of the "Great River." The Indian name of this water was Quinni-tuk-qut or Quoneh-ta-cut, meaning "Long Tidal River."

Block found few natives from the Sound to Middletown, but at the present site of Middletown there was a large Indian village. More Indians were seen at the site of Hartford and their stockaded villages were found at South Windsor between the Podunk and the Scantic Rivers. Here he went ashore for a parlay. He learned that these were the "Indians who plant maize." He was told of another nation of savages living "within the land", probably along the upper river tributaries and the headwater lakes of the Connecticut. These Indians navigated the river in birchbark canoes, bringing down rich peltry for trade. Thus the river was long used as a highway of transport and commerce before it was discovered by white men.

Block continued his exploration. He named the territory from Virginia to Canada the "New Netherlands" and claimed it for the Dutch. A rude palisaded trading post was established at the site of Hartford, but no other effort at colonization was made. The English colonies learned of the existence of the river from the Dutch at Manhattan in 1627. English occupation occurred through infiltration and over the protests of the Dutch from 1633 through 1636. By 1636 there were six settlements on the river. They included one each at Saybrook, Wethersfield, Windsor and Springfield, and two at Hartford, one of which was the Dutch fort. The settlements contained about a thousand people. In 1639 Windsor, Hartford and Wethersfield seceded from the Bay Colony and established the first genuine American democracy.

Early Americans, both natives and colonists, derived great value from the river as a highway because of the natural resources of the Connecticut River valley. Settlements on the river banks flourished because crops prospered in the rich valley lands and barter for the peltry brought by the Indians furnished profit for the purchase of implements and other necessities of life. (It is interesting to note that one of the most important shipments to the struggling English settlements on the river occurred in the spring of 1638 when a fleet of 50 Indian canoes piled high with corn from the Indian village at the site of Deerfield, Massachusetts, came floating down to the lower river towns to save the white neighbors from starvation.)



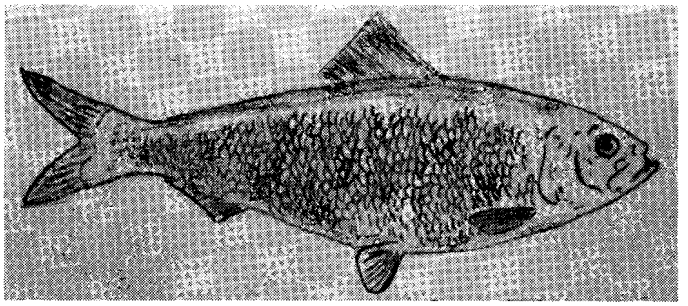
The trading of furs from the Connecticut valley was big business in the olden days. Major Pynchon sometimes sent out in a single shipload as much as one thousand pounds sterling worth of beaver and otter skins. Hartford became an important shipping center from 1666 through 1680, utilizing mostly ships built at that point from native timber. Trade was carried on between that port and Boston, Newfoundland, New York, Delaware, Barbados and Jamaica. As to the importance of the river for transportation, it is probably sufficient to note that great rivalry existed between the river ports of Connecticut and the seaports of Massachusetts until about 1850 when river traffic declined as the result of railroads built in the upper river valley. Before that date, through canals and locks, raft travel was possible to Barnet, Vermont, 220 miles above Hartford.

THE STATUS OF SHAD

The available historical works covering the period from 1614 to about 1850 contained very little information on early fishery resources of the Connecticut River. One of the best sources of information found was in "Judd's History of Hadley, Massachusetts" from which exerpts are quoted as follows:

"When the English established themselves on the banks of the Connecticut there was in the river and tributary streams, in the proper seasons, a great abundance of shad, salmon, striped bass and other fish, such as the Indians had long used for food. The shad, which were very numerous, were despised and rejected by a large portion of the English for

near one hundred years in the old towns of Connecticut, and for about seventy-five years in those Hampshire towns above the falls. It was discreditable for one who had a competency to eat shad, and it was disreputable to be destitute of salt pork, and the eating of shad implies a deficiency of pork. . . . The first purchase of shad found in any account book in those towns was made by Joseph Hawley of Northampton in 1733; he gave for thirty shad, 1 penny each, which was not the equal to half a penny in lawful money. Ebenezer Hunt gave 1½ pence for shad in 1736, 2 pence for 'good fat shad' in 1737, and 2 and 3 pence in 1742 and 1743. Ebenezer Hunt bought bass, suckers, pickerel and common eels. No trout are mentioned. He says of shad in 1743, '. . . shad are very good whether one has pork or not.' These prices were all less than a penny in lawful money."



AMERICAN SHAD *(Alosa sapidissima)*

From Field's "History of Middlesex, Connecticut," 1819, Judd quotes:

"Shad eating became reputable thirty years before the revolution. Shad were caught plentifully in many places in Connecticut before 1760, and were sold at 1 penny and 1½ pence each some years later. They were carried away on horses. Some thousands of barrels of shad were put up in Connecticut for troops from 1778 to 1781. Shad never ascended Bellows Falls at Walpole, nor could they ascend the falls of Chicopee River. Salmon passed up both. . . .

"Salmon were used but were seldom noticed in records in the seventeenth century. Salmon nets began to appear before 1700, and some salmon were salted in casks by families before and after 1700. They were seldom sold, and the price in Hartford in 1700 was less than 1 penny per pound. Fish were so plenty in the Connecticut and its branches that laws were not necesssary to regulate fishing for a long time . . . The first dam at South Hadley, about 1795, impeded salmon, and the dam at Montague was a much greater obstruction and salmon soon ceased to ascend the river. Few were caught after 1800."

DEFINING "ABUNDANCE"

It may be pertinent at this point to interrupt Mr. Judd to point out that although the old timers report "innumerable" and "great abundance of" fishes in the river in the old days, there is at this time no measure by which we can judge that abundance. Although there seemed an abundance for all by older standards of need, that supply might not hold up, nor seem as plentiful under present demands. The following quotation may at least give us pause for thought in that direction:

"The late Elihu Warner remembered when *forty* salmon were caught in a day near the lower end of the street, about 1773, the largest of which weighed between 30 and 40 pounds. (Mr. Pierce and six others owned a seine in Hadley in 1766. The whole income of the seine for the fish season was £22, 17 s., and the expenses were £14, 12 s. 10 d., leaving for gain £8, 4 s. 2 d. Shad were then 1 penny each.)

"In South Hadley there was a noted fishing place near the mouth of Stony Brook and another above Bachelor's Brook against Cook's Hill. Many salmon were taken at those places; 24 are said to have been caught at one haul near Stony Brook, weighing 6-8 to 40 pounds . . .

"The falls of rivers were great fishing places in New England for Indians and English. The falls at South Hadley, called Patucket by the Indians, were one of the most favorable places on the Connecticut for taking fish."

Twenty-four salmon taken by net at one of the more favorable places on the river seems to indicate that salmon were much less numerous than most of us generally supposed them to be in those days. This may be compared to the catch of shad. We note that a record haul of a seine below the falls at Hadley was between 3,300 and 3,500 and must have taken place sometime between 1775 and 1800.

The fourth report of the Commissioners of Fisheries of the State of Connecticut for 1870 informs us:

"We find salmon were plenty until about 1798, when a dam, sixteen feet high, and extending quite across the river, was built, just below the mouth of Miller's River, about one hundred miles from the mouth of the Connecticut . . . The fish ascended the river as far as the dam and the first year were taken there in great numbers, while vainly trying to find passage upstream. The following year they were still plenty, and then they began rapidly to decrease in numbers, and at the end of four years they had nearly all disappeared, and have never since been seen."

Timothy Dwight in 1812 says of the Connecticut, "Since salmon left this river, it is frequented by great numbers of the striped bass." From this and other references to bass we might suspect that stripers were always visitors to the river, but were present in even smaller numbers than the salmon until the salmon had disappeared.

During a somewhat exhaustive search of old records, the writer failed to find any reference to the abundance or scarcity of pondfish such as perch, pickerel or bullheads. This may be due to lack of proper regard for these species because of a fully adequate supply of what was termed as the "river fishes," salmon, shad, striped bass and alewives, or it may have been that there were never great numbers of pondfishes present in the Connecticut. However, this lack of reference in the old literature leaves no measure for comparison with the present pondfish population.

STOCKING EFFORTS

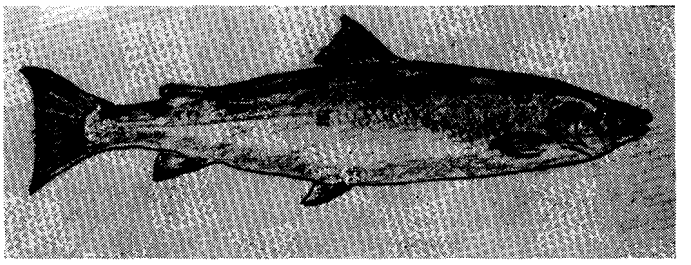
By 1870 there was considerable interest displayed in the fishery resources of the fresh waters in the New England states. Seth Green had been commissioned to hatch shad and in 1868 had released what he had estimated to be about 40,000,000 shad fry in the Connecticut River. In the winter of 1867-68, Dr. Livingston Stone had procured and hatched over twenty thousand salmon eggs in New Hampshire. The Holyoke Water Power Company started a fishway over that dam in 1870. Legislation was passed for protection of fish both in inland waters and in and near the mouths of tidal rivers. It was in 1870 that a law was passed requiring that any dam then existent or thereafter built on the Quinebaug, Shetucket, Farmington or the Housatonic below New Milford must be supplied with a suitable fishway provided by the owner.

Shad were still running the Housatonic River in 1870, but in small numbers and a law was passed giving shad in that river increased protection.

In 1871, the Fish Commissioners were directed by the General Assembly to proceed to Windsor Locks and ascertain if there was high mortality at the locks of young shad descending the canal. After careful observation, the Commissioners "became convinced that the fish did not die there, but eventually found their way out and down the stream." This finding has been substantiated by biologists on many studies or observations in the years following.

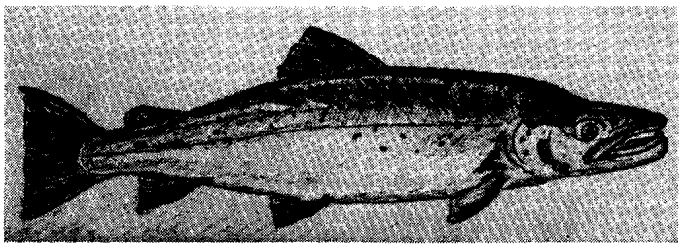
ATTEMPTS TO RESTORE ATLANTIC SALMON

In about 1870, the Fish Commissioners were active in plans for restoration of Atlantic salmon to the Connecticut and other former salmon streams of the state. A cooperative pact was formulated between Maine, Massachusetts and Connecticut whereby these New England states shared costs and labor in taking and hatching salmon eggs from Maine rivers. Fingerlings from these operations were stocked in various rivers of the three states, but principally in the Connecticut River after installation of a fishway over the Holyoke Dam in 1873. During 1874, 1,359,000 salmon fingerlings were introduced into the Connecticut and its tributaries by the New England states. From that year through 1876, 800,000 more salmon fingerlings were stocked.



FEMALE ATLANTIC SALMON *(Salmo salar salar)*

Salmon smolts were seen in the Farmington River and some were caught in 1874 and 1875. Three or more salmon were caught from the Connecticut in 1876 and about a dozen taken in 1877. Parr, (young salmon), in the latter year were seen commonly. In 1878 salmon began to enter the river about the last of April and were caught from the mouth of the river to Holyoke Dam. Reports of about one hundred taken reached the Commissioners before the 11th of May. About 500 Connecticut salmon were traced by the Connecticut Commissioners through sales at the Fulton Market in New York during 1878. Observers at Holyoke watched salmon try to mount the dam. The large fishway that had been installed was not utilized either by salmon or shad. It was criticized as emptying too far downstream and being supplied with too little water. No salmon were caught or observed above the Holyoke Dam.



MALE ATLANTIC SALMON
Male Atlantic Salmon. Note humped back and elongated, hooked lower jaw which contrasts to the female.

It seems somewhat tragic that such an Herculean effort on the part of the fish conservationists of the 1870's should have been crowned with failure; that this attempt to restore salmon should fail by the very narrow margin of misplacement of a fishway. However, the facts seem to indicate that this was so.

EFFECTS OF POLLUTION

In the Eighteenth Report of Fish Commisssioners of the State of Connecticut, 1884, there appears the first major reference to the concern of Connecticut conservationists about the possible effects of pollution. It is there noted that perch had always been abundant but were giving way to less desirable fish. Striped bass at half a pound were common twenty years previous, and ten pounders occasionally were caught. The report blames the scarcity of desirable fish to pollution in the main river and its tributaries. The report closes this section as follows: "As long as the river receives so much poison from factories and so much sewage from cities it is probable that the supply of fish will remain small in quantity and poor in quality."

Since the attempts at restoration of salmon from 1870 to 1880 conservation officials have concentrated time, study and expenditures on shad production, shad being the important fishery resource of the river. Hundreds of millions of shad fry were hatched and planted before 1895, but declines in the shad catch in spite of these operations led the Commissioners of that time to doubt the value of hatching shad eggs and releasing the helpless larvae indiscriminately in areas of the river which might prove to be dangerous habitat. The Report of the Commissioners of Inland Fisheries of Connecticut for 1894 makes this statement:

". . . but the great difficulty that has presented itself appears in planting the fry in waters that will insure their growth and safety and their return to their native element. In the judgment of your Commissioners the most serious obstacle in the propagation is the increased pollution of the streams in which the fry are placed, but the young fish will be somewhat protected hereafter by placing them in retaining ponds made for the purpose until their growth will insure them, when liberated, to care for themselves, against the devouring army of other fish that are ready to make food of them."

FURTHER CONCERN ABOUT SHAD

From 1885 through 1892 eighteen million shad fry were stocked in the Housatonic River and smaller numbers in the Thames. Most of these fry were hatched from eggs of the Housatonic run of shad. In spite of these operations in artificial propagation and stocking, the shad runs of the Thames and Housatonic became extinct during or shortly after 1898.

Because of doubts of the effectiveness of stocking fry, the Connecticut Fish Commissioners in 1895 laid out a small system of rearing ponds at Joshuatown, Lyme. Several million fry per year were stocked in these ponds and retained until October when they were drawn into the Connecticut River. The retaining ponds supposedly protected the young fish until fall when they were considered large enough to no longer need protection. Several years after these operations started, shad became more numerous and the increase was attributed to the added protection of the retaining ponds. Whatever the cause of that increase may have been, stocking a retaining pond and later releasing fingerlings did not have a similar outcome on the Housatonic. A pond known as Pecks' Pond was leased by the state and stocked with fry to be released as fingerlings in the Housatonic but after four years' operation, this procedure was reluctantly halted. It had failed to bring back the run to that river. A recapitulation of the rearing operation shows that from 1896 through 1910, 57,029,000 shad fry were placed in the Joshuatown rearing ponds, and from 1899 through 1904, 11,500,000 shad fry were placed in Pecks' Pond for the Housatonic. There is only passing reference to possible mortality in these ponds; one notes that the mortality must be low because very few dead fish were found. It would seem that this assumption would be correct only under the most ideal conditions.

THE ALEWIFE FISHERY

The alewife fishery in the Connecticut appears to come into prominence periodically. There is no indication of the reason for this cyclic behavior. It may indicate scarcity and abundance of this species, an increased demand for alewives specifically or an increased demand for cheap food. A perusal of catch records and value of catches from 1892 to 1916 does not indicate an extreme fluctuation in total yearly catch or value. That the total abundance of such a species should vary but little in that span of years seems to violate the rules of nature. Thus, it would seem that either these records derive from unreliable reports or that the fishery was underfished with only enough of its production being taken each year to supply the demand for that year. Commercial fishing for alewives on the Connecticut was discontinued about the time of the United States' entrance into World War I.

It was profitably resumed in 1948 when two canneries reported receiving from Connecticut a total of a little more than a million pounds of alewives. This is believed to be practically the entire catch from Connecticut. It seems odd that from 1903 through 1916 the reported catch of the fishermen of the river seldom dropped appreciably below three-quarters of a million pounds or rose over one and one-quarter millions pounds and that, after a lapse of thirty years when little or no alewife fishing occurred, this figure of one million pounds should be reported from accurate cannery records.

LATER EVENTS

The taking and sale of pondfish such as yellow and white perch, pickerel, sunfish, suckers and carp had not been restricted and a fishery of very modest proportions was derived from the Connecticut River on these species until 1923. In that year legislation was passed which gave to the State Board of Fisheries and Game discretionary power to regulate commercial fishing in the inland district. Under this authority game and panfishes of the Connecticut River were placed on the protected list and could only be taken by hook and line. Commercial fishing for carp and suckers has always been allowed but with minor restrictions. During the second World War restrictions were removed on the taking of game and pondfish, but were re-enacted after the close of the war. The value of this fishery has generally been a very small fraction of the value of the shad fishery.

During the years of 1922 and 1923 the shad harvest reached a new low. In 1922 only 13,821 shad were caught and in 1923 only 13,350 were taken. The legislature during the session of 1923 appropriated funds and directed the Board to inaugurate a biological survey of the Connecticut River with special emphasis on those biological factors which might be effective in limiting the production of shad.

The State Board called in a group of leading biologists and the investigation was begun in 1924. The complete report of the findings of this group was published.* The records of pollution, spawning areas, bottom foods and plankton and other valuable information found in this publication remain as a standard by which we may judge progress or deterioration of the river as a habitat for fish life.

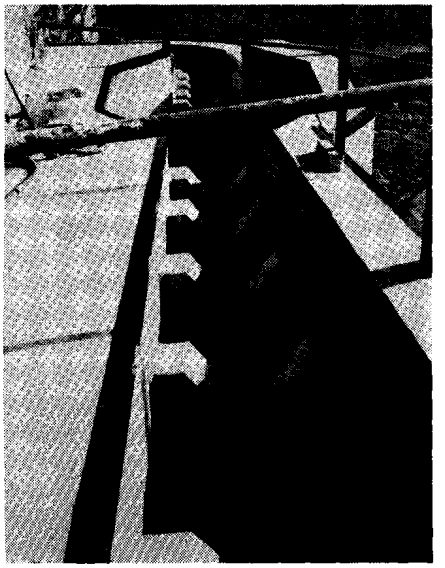
TAKING STOCK

It is probably desirable to bring this history of the Connecticut up-to-date; to note the changes that have taken place during the past three centuries. In summation, we observe that the Connecticut was important in the early development of New England as a highway of transportation. In this role it made possible the rapid exploitation of the natural resources of the lands drained by it and its tributaries. Railroads and highways have reduced the shipping on the river to a few barges of oil a day and part of the coal used by the Hartford Electric Power Plant. Its waters are used several

*A Report of Investigations Concerning Shad in the Rivers of Connecticut, Mitchell and Staff, Hartford, 1925.

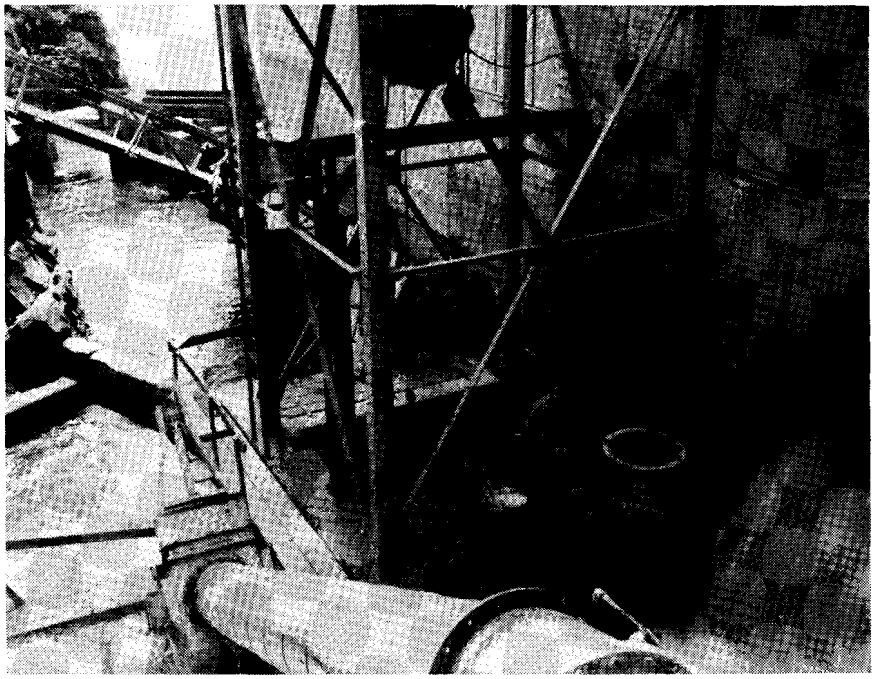
times through power plants north of Connecticut for the production of electrical power and the Windssor Locks Canal Company sells some of its water for power and related purposes to manufacturing plants at Windsor Locks, Connecticut. A large quantity of water is drawn from the river by Pratt and Whitney's Willgoos Turbine Laboratory located on the river bank in East Hartford and by the Hartford Electric Light Company plant on the river just south of the Charter Oak Bridge in Hartford, mainly for cooling purposes.

There have been a few recent events which give some indication of the growing realization of the importance of the aesthetic and recreational aspects of this water resource. U. S. Fish and Wildlife Service Fishery Biologists in cooperation with the Connecticut and Massachusetts fish and game departments have conducted extensive studies to determine the life history and population dynamics of the Connecticut River shad population. This investigational program was successful and is paying off in the intelligent management of this renewable and exploitable natural resource. The cooperation of the Holyoke Power Company in the matter of devising and installing a successful elevator type of fishway or lift has permitted the passage of as many as 15,000 adult shad. This permits utilization of an additional 34 miles of river as a spawning and nursery area for young shad. This addi-



Looking down into the original (non-functioning) fishway at the Holyoke Dam.

tional number of spawners and their subsequent production of hundreds of thousands of young should certainly make an appreciable contribution to the total run of shad.



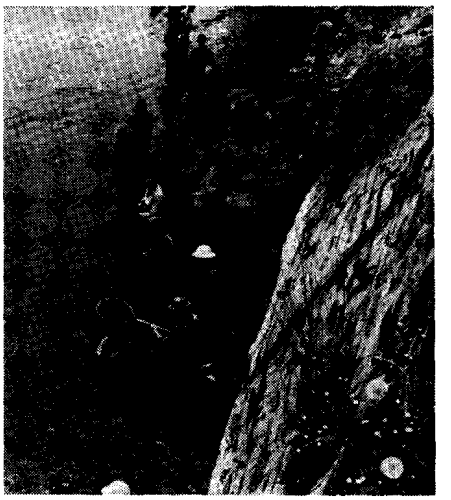
Elevator-type shad lift installed by the Holyoke Power Company.

A WILDLIFE VICTORY

Another and even more significant recent event regarding the Connecticut River shad population is the recent announcement from the Federal Power Commission: the withdrawal by Electric Power, Incorporated, a wholly owned subsidiary of the Connecticut Light and Power Company, of their application to construct a dam across the Connecticut River at Windsor Locks.

When plans for construction of the dam were first revealed, considerable consternation was felt by many people. Professional fishery biologists, both state and federal, announced a conservative estimate that the shad fishery in the river would be reduced by at least 50 per cent. Actually most of these men held the personal opinion that, regardless of the provision of a fishway in the dam, the shad run in the river would be totally destroyed within a few years. In all likelihood, the objections raised by commercial, recreational and conservation interests were a factor in the decision to abandon the project.

This move represents an important victory for wildlife — especially so coming during this period of time when man so frequently sacrifices his precious natural resosurces in the name of progress.



Sport fishing for shad at the Enfield Dam in Suffield

UNTAPPED RESOURCE

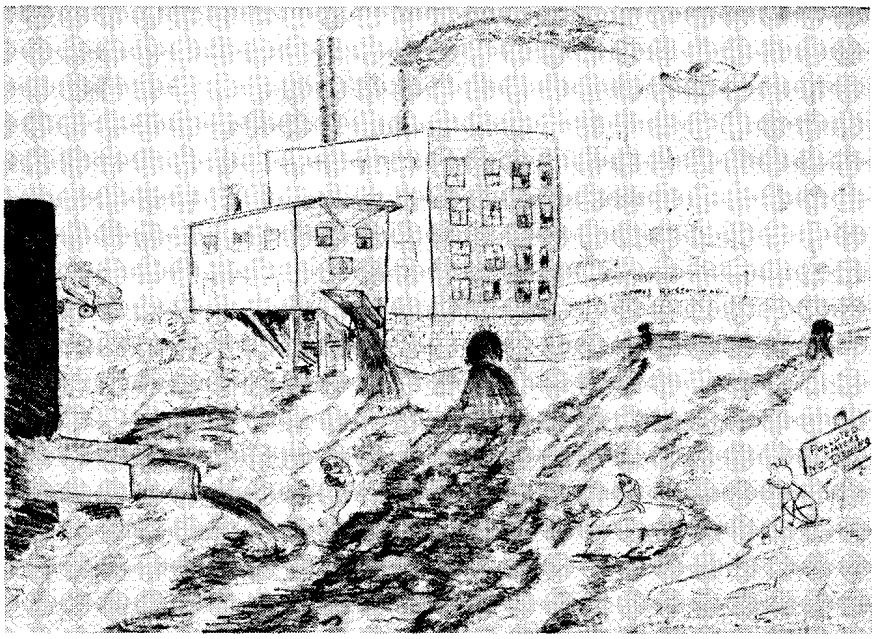
With the exception of the shad fishery, the Connecticut is a veritable untapped sport fishery resource. Biologists of the Board of Fisheries and Game are aware of the harvestable populations of such popular species as yellow perch, bullhead, white and channel catfish, largemouth bass, pickerel, white perch and great northern pike in the river and its shallow, productive coves. It is not readily understood why, in this heavily populated state where inland fishing opportunity and elbowroom are at a premium, there has not been heavier usage of the river and its coves by fishermen. It would seem logical that the main coves of the river, such as Wright's Cove in Portland. Hamburg Cove, Salmon River Cove, Keeney Cove and Wethersfield Cove, would enjoy greater popularity because of their prodigious fish fauna and lake-like environment. Yellow perch, bullheads, other panfish and coarse fish such as carp and suckers have been taken from the river and its coves in commercial quantities for years.

A few anglers have taken trophy-sized great northerns from the river for 20 years or more, but it is only during the past few that this fishery has shown signs of expansion. Large pike, up to 12 pounds, are now being taken from Portland to Windsor Locks and we believe only a few of the "hot spots" have actually been located.

It may be possible that many sportsmen associate the river with gross pollution and uncleanliness and feel it unlikely to consider sport fishing in such an environment—further, that fish from the river are unfit as food. While it is true that the Connecticut is polluted to some extent, it should be pointed out that its volume and dilution factor are great and that shad, one of the most intolerant species with respect to poor water quality, are again prospering in the great river.

POLLUTION DECREASING

It is probably very unrealistic to hope that the Connecticut River will ever return to its original state of cleanliness and purity — the encroachment



Connecticut's pollution control program will, we hope, put an end to this usage of the river.

and impact of civilization is simply too great. It is felt, however, that a tremendous amount of improvement can be accomplished. There appears to be a new awareness of the abuses and the record of regression to which our beautiful river has been subjected. This consciousness is being demonstrated by a gradual improvement in water quality. Our Water Resources Commission makes the encouraging observation:

"Over the past several years, considerable pollution control work has been accomplished in the Connecticut River watershed, resulting in the improvement of the quality of the river. This improvement is probably best shown by comparing the results of three dissolved oxygen sampling programs carried out in the years 1914, 1929 and 1953. In each program, samples were collected at several stations between Hartford and Bodkins Rock, Portland. The average per cent saturation for dissolved oxygen for each series was: 1914—26%; 1929—43%; 1953—65%. There appears to be no doubt that conditions are even better today (note: per cent saturation of dissolved oxygen is often employed as a criterion for indicating water purity.)

"During the past 15 years, 10 communities in the watershed within Connecticut have either constructed new sewage treatment plants or made major alterations or additions to existing plants. Also, 21 industries in the watershed within Connecticut have constructed and placed into operation waste treatment facilities within the past 15 years.

"The pollution regulating agencies of Vermont, New Hampshire, Massachusetts and Connecticut are actively working with several municipalities and industries toward the elimination or control of pollution problems. There is every indication that the quality of the Connecticut River will improve steadily year by year."

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