

**16.—REPORT OF THE WORK IN AN OYSTER INVESTIGATION
WITH THE STEAMER LOOKOUT.**

By EUGENE G. BLACKFORD.

I have the honor to submit the following report of the work in the oyster investigation with the steamer Lookout, which you so kindly placed at the disposal of the New York State Oyster Investigation Commission :

During the thirteen days from September 12 to September 24, inclusive, that the steamer Lookout was at my disposal for the purpose of rendering assistance in our State oyster investigation ten trips were made with her to various points in the immediate vicinity of the city of New York, and along the north shore of Long Island as far east as Northport Harbor. The trips, which were very satisfactory in their general results, were made in the following order: City Island, Perth Amboy and the south end of Staten Island, Cold Spring Harbor, Hempstead Harbor, Little Neck Bay, Manhasset or Cow Bay, Execution Lighthouse Rock, Port Chester and Rye Beach, Northport Harbor, Princess Bay, and Spuyten Duyvel Creek.

During each trip one or more dredgings were made upon both the planted and natural beds of the vicinity, and specimens of the oysters of the beds were selected and preserved from each haul of the dredge. Notes were made as to the general condition of the beds, as shown by the proportion of oysters and shells taken at the different hauls, and the presence or absence of the various enemies of the oyster; also all information, which could be gained in so short a time in regard to the general working of the beds and the industry in that particular locality.

September 13.—The first trip was made to City Island, which lies northeast of the city near the entrance into the sound. Capt. Joshua Leviness was taken on board as pilot. He owns about 150 acres of oyster territory near the island, and was the first person to set stakes for oyster-planting in the East River. Originally all the land under water about the island was natural oyster ground, but at present most of it has been taken up and staked off for "plants." Before the staking off took place much of the territory had become exhausted from overworking by the oystermen, and some of the land has been ruined by the dumping of garbage. The first dredge was made upon Captain Leviness' planted ground. The dredge was down one minute, and came up with 198 oysters and a few mussels, clams, and scallops. There were not many shells and only a few drills. The second dredging was made on a natural bed, and resulted in 16 small oysters and quite a number of shells. The planted oysters were of good size and fine flavor. There was no set of young oysters on either the planted or the native

oysters, but the captain stated that the set was generally good. The water is from 2 to 12 fathoms over the beds, and dredges are used in working the beds. The dredges on the north shore of the island are limited to 30 pounds in weight, and probably the greater number of them are without teeth on the drag-bar. In the shallow water along the shores and in the coves tongs are used in taking the oysters from the bottom. The principal enemies of the oyster in this locality are the drills, *Urosalpinx cinerea*, but now and then the beds are troubled with starfish. The seed for the planted ground is taken either from the native beds or brought from Connecticut.

September 15.—At Perth Amboy Mr. John Sofield was taken on as pilot, and the vessel was put to work among the planted beds to the south of Staten Island, in the mouth of Raritan Bay. The beds here, as indeed in all this neighborhood, in either New York or New Jersey waters, are very numerous and very small, in many cases hardly more than the size of the vessel. They are as a rule well cared for and furnish fine oysters. There were no natural beds in this neighborhood. The seed for the planted beds comes from Newark Bay and some from New Haven, Conn. The first and second dredges were made on the pilot's grounds and resulted in 33 and 74 oysters, respectively. The oysters were of good size, with very little refuse material. The third dredge was made upon the ground of Mr. William Sofield. The dredge was down two minutes and brought up 341 oysters. The oysters were in fine condition and very few drills were seen. The beds are well cared for and protected.

September 16.—Cold Spring Harbor. After visiting the State hatchery, located at the head of the harbor, where some experiments in the artificial hatching of oysters were being carried on, Mr. Charles Walters was taken aboard as pilot and dredges were made on his planted ground and on a strip of natural bed along the eastern side of the harbor. The wind was quite strong, and it was accordingly rather difficult to manipulate the vessel to the best advantage for either the natural or planted beds, hence the results were not as good as they ought to have been. The central part of the harbor and up quite close to the shores the bottom is of rather deep mud, so that most of the planted grounds are close to the shores, and the only strip of natural ground of any extent is along the east shore in about 8 feet of water and inside of the planted beds. The oysters on the planted beds grow quite rapidly and are of very fine flavor. The first dredge on the natural bed resulted in 17 oysters and a good many shells and some drills. The second dredge on the pilot's planted bed resulted in 26 oysters of good size and very few shells. There are a good many drills and whelks in the harbor, and some years the star-fish comes in great numbers, but not often. The seed is brought from the sound beds or from Connecticut. In some parts of the harbor the set this season is very fine.

September 17.—Hempstead Harbor. This harbor has much more hard

bottom and consequently more natural oyster beds than Cold Spring Harbor. There is also a good deal of planted ground, but so far as we could judge the planted ground was not of very much account and very poorly cared for. Mr. J. K. Mott and Mr. David Meissner were taken on board at Sea Cliff as pilots. The first four dredgings were made on natural beds, but the bottom was too hard for the dredges which we had on board, so that a very large haul was not made either time.

First dredge: Down five minutes; result, 32 oysters, 20 mussels, and a good many shells.

Second dredge: Down three minutes; result, 60 oysters, 8 mussels, many shells, 3 spider-crabs.

Third dredge: Down two minutes; result, 46 oysters, 33 mussels, many shells, 2 spiders.

Fourth dredge: Down three minutes; result, 29 oysters, 5 mussels, many shells.

In the last three dredges there were a few "set" seen and some drills.

Fifth dredge: Planted ground; down one and a half minutes; result, 2 oysters, any quantity of shells, and 3 star-fish.

Sixth dredge: planted ground; down three minutes; result 3 oysters, 21 star-fish and many shells. In both of these last dredges there were also a good many drills. The seed of the planted beds comes either from the sound or the harbor natural beds.

The oysters as a rule were of fair size and good flavor. The dredges used in the bay are mostly what are known as "scrapes," or without teeth, as the teeth slip over the oysters on hard bottom instead of picking them up.

September 18.—Little Neck Bay. This bay was found to be very shallow and muddy. No natural beds could be found, and there were only a few plots of planted ground along the eastern shore near Great Neck. The seed for these planted beds comes from the Sound beds. The oysters on these beds were of fair size and there was some "set." The growth of the oysters here, as indeed all along the north shore of the island, is quite fast. No dredgings were made.

September 19.—Manhasset, or Cow Bay. Mr. John Van Pelt, of Port Washington, Long Island, was taken on here as pilot, and under his direction four dredgings were made, one on planted and three on natural beds.

First dredge on planted ground resulted in bringing up 152 oysters, 144 mussels, 4 clams, and 1 sea-spider.

Second dredge: Natural bed, 32 oysters.

Third dredge: Natural bed, 26 oysters, 1 horseshoe crab.

Fourth dredge: Natural bed, 25 oysters.

The upper part of the bay is very much troubled with drills. No star-fish of any account have been seen in the bay this season. The difference in the number of oysters taken in this bay on the first and the subsequent dredges, as well as in Hempstead Bay, is accounted for

by the kind of dredges used. The dredges on board the Lookout were large and with good-sized teeth, well suited for work on mud bottoms such as are found mostly in connection with the planted beds, but for the natural beds a "scrape" is required in order to gather up many oysters.

The oysters in this bay were all very large and of exceedingly fine flavor, perhaps the finest yet tested.

September 20.—Execution Light-house Rock. This is a patch of natural oyster ground of several acres in extent, and located in water from 8 to 12 fathoms in depth. Four dredgings were made from the steamer, the first two bringing up full complements of oysters, and the second two bringing up mostly mud and shells. The oysters as a rule were large, but set very ragged, similar to the Raccoon oysters of the South, and of very poor flavor, being quite thin and watery.

Probably later in the season they would be of better flavor, as the oysters on this rock spawn later than on any other bed in this part of the sound.

First dredge: 253 oysters, shells, some set.

Second dredge: 87 oysters, shells, some set.

Third dredge: 35 oysters, mud, shells.

Fourth dredge: 23 oysters, mud, shells.

A few drills were noticed among these oysters.

September 22.—Port Chester and Rye Beach. In the immediate neighborhood of Port Chester and in New York waters only planted beds were found, and these did not appear to be very prolific, and such oysters as were taken were quite small.

First dredge: 5 oysters, shells, few drills.

Second dredge: 4 oysters, shells, few drills.

Along Rye Beach there was quite a strip of natural ground, but all the oysters were very small, as they are culled over constantly during the season for seed for the planted beds. The small oysters were quite numerous, however, although, on account of their size, no great number could be taken at any one haul. Most of the oysters were about the size of a silver quarter or a half dollar. They bring 75 cents a bushels as seed, and are sold to New York and Connecticut oystermen.

First dredge: 50 oysters, some shells, crabs.

Second dredge: 75 oysters, some shells, crabs.

Third dredge: 60 oysters, some shells, crabs.

The dredges used here are small scrapes of from 15 to 20 pounds in weight. A good many drills were found among these oysters. The crabs taken were small and of the stone-crab species.

September 23.—Northport Harbor. It was expected that a good deal of natural ground could be found in this harbor, but soon after we began work we were led to infer from the statement of Mr. William Thompson, who was taken on board as pilot, that there were no natural grounds, until the outer harbor was reached, and we did not learn

differently until it was too late to go to the natural grounds. Seven dredgings were made on planted bottom. The first three on land planted by Mr. Thompson and the last four on ground planted by Mr. S. H. Lowndes.

First dredge: 12 feet water, 39 oysters, 3 whelks, shells.

Second dredge: 12 feet water, 45 oysters, 3 sea spiders, shells.

Third dredge: 12 feet water, 40 oysters, shells.

Fourth dredge (oysters five years old): 461 oysters, 4 spiders.

Fifth dredge (oysters three years old): 180 oysters.

Sixth dredge (oysters three years old): 130 oysters.

Seventh dredge (oysters three years old): 221 oysters.

On the oysters taken in the first haul a few "set" were found but not on the rest. Drills were found in considerable number. The harbor appears to be pretty well adapted to the growth of oysters, as most of those taken were large and of fine flavor. A good deal of the seed for the planted beds comes from Connecticut, although some is obtained from the Sound and from the natural beds of the harbor. These latter are found to occupy a goodly share of the bottom in the northeast part of the harbor. So far this season the star-fish have not been troublesome. A source of considerable controversy in the neighborhood of this harbor is the freedom with which outsiders can come into the harbor and stake out claims to the detriment of the native residents. It is claimed that a good many people from Connecticut come over to Northport, rent a house during the oyster season, work the natural and planted beds for all they are worth, and then live in Connecticut during the rest of the year. The people of Northport are very desirous that laws should be established to prevent this. It is indeed a very general complaint along the north side of the island that Connecticut oystermen can come into New York State waters and gather oysters, but that New York oystermen are deprived by the laws of Connecticut from returning the compliment. They consider this as unjust to the people of the State.

September 24.—Princess Bay. Most of the ground in the neighborhood of this bay was originally natural oyster ground, but it has now been mostly surrendered and staked out for purposes of planting, and it represents perhaps the largest area of staked claims anywhere in the neighborhood of New York.

The Lookout in steaming through the water in this region seemed as if literally going through a sea of stakes. Mr. Wesley Marshall was taken on board from his oystersmack, the Joseph Francis, as pilot, and four dredgings were made on the natural beds outside the staked limits, but the bottom was found to be very muddy, and in the first three dredgings only mud and shells were taken. In the fourth dredging two oysters were obtained, showing very clearly that the natural ground in these waters was of very little value except for clams, which are found quite plentifully in certain localities. The next two dredgings were made on Mr. Marshall's planted ground.

Fifth dredge (two minutes): 170 oysters, three years old; some shells.

Sixth dredge (two minutes): 445 oysters, two years old.

The planted beds in this bay are, as a rule, in good condition and not much troubled with enemies, although some drills are found and the drumfish now and then poaches among these preserves; whelks are also found to some extent. Flavor and condition of oysters good, although rather salt.

Spuyten Duyvel Creek. Years ago the Hudson furnished oysters for quite a distance from its mouth above present city limits, but not a great many are found at the present time. Four dredgings were made in about 4 fathoms of water. From two of the hauls 14 oysters were obtained and a good many shells. From the other two only shells were secured. The oysters were all quite small. These dredgings were made above the railroad bridge. A dredging in the mud south of the creek brought up a large number of small soft-shelled clams. The beds in this neighborhood present the appearance of being worked to their destruction.

Most of the natural beds examined during the trips made with the steamer show unmistakable signs of unscrupulous working and little care for the preservation of the beds. They are littered with rubbish of every kind, particularly with old and slimy shells, and appear in too many cases to be the general dumping ground for all sort of garbage from passing vessels. They need a thorough clearing and careful supervision afterwards in order to make them yield what they are capable of doing.

NEW YORK, N. Y., *October 18, 1884.*

17.—NOTES ON THE FISHERIES OF GLOUCESTER, MASS.

By S. J. MARTIN.

[From letters to Prof. S. F. Baird.]

MONTHLY SUMMARY.—The receipts of fish at Gloucester during the month of September, were as follows: From George's Bank, 3,126,000 pounds salt cod, 24,250 pounds fresh halibut; from Grand Bank, 3,225,000 pounds salt cod, 795,000 pounds fresh halibut, 40,200 pounds salt halibut; from Cape shore (Nova Scotia), 810,000 pounds salt cod; from Flemish Cap, 190,000 pounds salt cod, 17,000 pounds salt halibut; from Western Bank, 180,000 pounds salt cod, 1,000 pounds salt halibut; from Iceland (three vessels), 454,000 pounds salt halibut, 200 barrels halibut fins; from Greenland (five vessels), 348,000 pounds salt halibut, 140 barrels fins; from the mackerel fishery, 71,408 barrels salt mackerel from American shore; 6,244 barrels salt mackerel from Bay of Saint Lawrence; from the shore fishery, 373,000 pounds salt cod, hake, pollock, &c.; from the sword-fish fishery, 373 sword-fish weighing, 116,396 pounds