

14.—NOTES ON THE COD GILL-NET FISHERIES OF GLOUCESTER, MASS., 1884-'85.

By S. J. MARTIN.

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

The first cod gill-nets were set September 30, but no cod have yet been caught in them. Yesterday a boat with five nets caught 50 large pollock. Gill-net fishing will be carried on to a much greater extent this year than last.

GLOUCESTER, MASS., *October 5, 1884.*

The ten boats that are fishing with cod gill-nets catch mostly large pollock. These fish average $23\frac{1}{2}$ pounds as they come from the water. I have seen a lot of 6,000 pounds landed, which averaged 24 pounds to the fish. One pollock was landed which weighed $37\frac{1}{2}$ pounds. The average weight of pollock caught on hand lines is 13 pounds.

In seven days and with twenty-four nets, the schooner Dixie landed 135,000 pounds of pollock and 5,000 pounds of large cod. Her nets are 50 fathoms long and 2 fathoms deep. With sixteen nets of the same size, the schooner Hector took 26,000 pounds of pollock and 1,000 pounds of large cod last week.

This afternoon the whole ten vessels that are using nets were in with their decks full of large pollock and large codfish. They landed 140,000 pounds of pollock and 5,000 pounds of cod. Pollock sold to-day at 50 cents a 100 pounds. It is being dressed and gotten ready to ship to Boston, Monday morning. The large pollock make very nice steak, and are considered better for frying than cod.

The hand-liners all catch small fish, and they are quite angry toward the gill-netters. In some instances they have anchored on top of the gill-nets, injuring them. The people gather along the wharves to see the large pollock unloaded from gill-net vessels and the small pollock unloaded from hand-line vessels, and think it a great curiosity. There have been 3 puffers caught in the cod gill-nets.

GLOUCESTER, MASS., *October 26, 1884.*

The amount of fish caught in gill-nets and landed here during the past week is as follows: 915,000 pounds of pollock and 67,000 pounds of large cod.

Considering the number of boats, nets, and men engaged in fishing, the catch yesterday exceeds anything on record. Thirteen small vessels, fishing with cod gill-nets, landed last night and this morning 250,000 pounds of pollock and 20,000 pounds of large cod. These fish

were caught in seventy-six nets, 50 fathoms long and $2\frac{1}{2}$ fathoms deep, and were fished by 95 men. Some of the boats left some of the nets, not being able to take all the fish that were in them. When the schooner Hector came to its nets, three of them were found on the top of the water, the buoyancy of the pollock being so great as to part the anchor lines and cause the nets to come to the surface. There were 8,000 pounds of fish taken out of three small nets, while one small boat with six nets landed 12,000 pounds.

The pollock-catchers who use hand lines have hauled up, not being able to catch any fish.

The twine now used in the manufacture of cod gill-nets is not fit to use in catching pollock; the nets should be made of salmon twine. A large fleet will use the cod gill-net this winter, and some vessels of 80 tons burden are getting ready to set them. Codfish have begun to come on the rocks. They are large, and are mostly females, a number of which are full of ripe spawn. The pollock are large, averaging $23\frac{1}{2}$ pounds in weight, and are half male and half female. Pollock sold to-day at 40 cents, and codfish at \$1.10 per 100 pounds.

GLOUCESTER, MASS., *November 2, 1884.*

The cod gill-net fishery is assuming large proportions. There are thirty-five vessels now engaged in it, eight of which are now in Ipswich Bay and the remainder off Half-way Rock, in Boston Bay. A vessel of seventy-five tons usually carries 40 nets. The cod are not very plenty. Last week vessels fishing with nets landed at Gloucester 97,000 pounds of cod and 322,000 pounds of pollock; at Rockport, 48,000 pounds of cod and 15,000 pounds of pollock; at Lynn, 70,000 pounds of cod and 32,000 pounds of pollock. Some of the fishermen with hand lines are catching large cod from the schools in Boston Bay, using squid for bait. Boats with two men catch 1,000 pounds per day.

GLOUCESTER, MASS., *November 16, 1884.*

All the vessels that were sent to the Grand Banks for cod are home and hauled up. There are a few still fishing on George's. There are fifty-two vessels now fishing with gill-nets, and they catch a large quantity of cod and pollock.

GLOUCESTER, MASS., *November 19, 1884.*

SUMMARY FOR NOVEMBER.—During the month there were caught in cod gill-nets 883,000 pounds of cod and 1,057,000 pounds of pollock. There were landed at Rockport 293,000 pounds of cod and 105,000 pounds of pollock. There were landed at Lynn 268,000 pounds of cod and 80,000 pounds of pollock. Codfish sold at $2\frac{1}{2}$ cents a pound.

GLOUCESTER, MASS., *December 2, 1884.*

Vessels using the cod gill-nets have found fish scarce the past week. December 7th as high as 10,000 pounds were taken, while on the next day only 500 pounds were taken in the same gang of nets. Since last Monday, boats with twenty-five nets have been catching from 300

to 800 pounds each. The boats that went out to their nets this morning caught from 6,000 to 8,000 pounds each, while the night before the same nets in the same place only caught from 300 to 500 pounds.

GLOUCESTER, MASS., December 14, 1884.

15.—THE PENOBSCOT AND SCHOODIC SALMON WORK OF 1884-'85.

By CHAS. G. ATKINS.

[From a letter to Prof. S. F. Baird.]

The eggs taken this year at the Penobscot station will count nearly 1,900,000. This is about 600,000 less than last year, though we had a larger number of fish. The explanation is found in two circumstances: First, that the fish were much smaller than last year; second, that there was a larger proportion of males. I think we can count on having 1,750,000 eggs to ship. Your pro rata share will be about 1,050,000. Maine will have 500,000; Massachusetts 200,000. It would be well to have, at any rate, a partial assignment made very soon. We had warmer weather than usual in November, and the eggs are more forward in development. I think Mr. Mather would be glad to receive some early.

At Grand Lake stream we secured about 1,727,000 eggs. A loss of 10 per cent. will leave 1,554,000, and the 25 per cent. reserve (388,500) will reduce the number available for shipment to 1,165,500. A pro rata division, on the basis of 1,150,000, will give to—

United States ($\frac{1}{2}$)	598, 000
Maine ($\frac{5}{25}$)	230, 000
Massachusetts ($\frac{1}{5}$)	184, 000
New Hampshire ($\frac{2}{25}$)	138, 000
	1, 150, 000

These eggs are now in our coldest water, and will not be ready for shipment before late in February. I would like to find whether the serious losses that have attended shipments to the South and West cannot be avoided by keeping the eggs in lake water during the entire time of their development at Grand Lake stream, instead of exposing them for a few weeks to spring water as we have heretofore practiced, with a view to hastening their development.

The fish at Grand Lake stream have been plentier than last year, and the augmentation in size continues. The females taken this year averaged 3 pounds and 15.7 ounces in weight, the males 4 pounds and .1 ounce. In 1875, the males averaged 1.6 pounds, and the females 1.9 pounds. There has been a corresponding appreciation in fecundity, the yield being 753 eggs per female in 1875, and 2,228 eggs per female in 1884, a gain of nearly 200 per cent.

BUCKSPORT, ME., December 12, 1884.