

60.—DEAD FISH ON THE COAST OF RHODE ISLAND.

By HERBERT M. KNOWLES.

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

About the 1st of July hundreds of barrels of small dead fish were driven ashore about 12 miles west of Point Judith. The papers described them as small herring. Similar phenomena are reported from the coast of North Carolina. For the last three weeks immense schools of these fish have been near the shores of Point Judith. They are about three inches long and resemble small hickory shad. I have seen them so thick in the water, which was about 16 feet deep, that the fish on top had to swim on their sides, being literally forced into that position by the mass below.

The point I wish to call attention to is this, that while these fish have been round these shores some little time, no dead ones were seen until the morning after a thunder-storm, the first to occur while the fish were here. Our old fishermen believe that thunder will sometimes kill fish, but I have hitherto regarded that as one of their many superstitions. During the last two weeks I have caught over a ton of bluefish, and upon examination I find that they are not particularly fond of the bait, as their "pokes" contained squid and whiting. The thunder-storm occurred at 1 a. m. on the 8th instant, and at sunrise large quantities of the bait were dead, large windrows of them cast upon the shore for an eighth of a mile distant, and the bottom all white with them in fifteen feet of water.

I inclose clippings from two papers. The oily scum referred to in the second was not seen at Point Judith until after the dead fish, and it may be that it was caused by the decomposition of the fish

UNITED STATES LIFE-SAVING STATION,

Point Judith, R. I., July 11, 1886.

CHARLESTOWN, R. I.—An immense quantity of dead fish were swept by the tide into Charlestown reach on June 18. The fish are strangers to this locality, no one knowing what they are. They are about two inches long, and are of the herring species. The channel connecting Charlestown Pond with the sea was literally lined with them. It is estimated that there were from 200 to 400 cartloads of the fish swept in, and the beach was also lined with them. Large quantities of them have been secured by the farmers for manure. They are fast decomposing, and the stench from them is almost unbearable. Where they came from and what killed them remains a mystery. [From the Providence Journal, Providence, R. I., June 23, 1886.]

AN OILY PHENOMENON.—The people in the vicinity of Raleigh, N. C., are perplexed over a phenomenon that is observed along the southeastern coast of the State. An oily scum on the water extends for sev-

eral miles out to sea, and affects the rivers for a long distance inland, making the surface smooth and calm. Fish are dying by thousands and floating like chips on the surface of the water. It is supposed that they are poisoned by this oily scum, but whence the destroyer comes nobody knows. A suggestion that a ship loaded with oil may have foundered in the vicinity is scouted, because from Lockwood's Folly all the way to Little River the scum is found, and the coast is strewn with the dead fish all the way. In the salt water about Shallotte River and Tubb's Inlet are immense quantities of dead fish of every kind, and it is feared that there are no live fish left in Shallotte River or within 10 miles of its mouth. The water appears to have become as oil, and the wind seems to make no impression on it. [From the *Narragansett Herald*, Narragansett Pier, R. I., July 3, 1886.]

61.—FISH IN PUGET SOUND.

By J. P. HAMMOND.

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

I have been engaged in the fishing business (making oil from herring and dogfish, and salting and smoking salmon and herring) on Puget Sound for the last seventeen years, and am well acquainted with the different species of fish caught on the sound, and in the Strait of Juan de Fuca.

From 1869 to 1877 it was not an uncommon occurrence for us to catch from 200 to 300 barrels of herring in a night, but since 1877 they have been growing less in number, until now the largest night's work is about 20 barrels. This is a great falling off, and it is much the same way with all other fish on the sound. Previous to 1869 there had been a great business done in catching codfish and winter salmon on the same fishing ground where we catch herring. The cod were dried and the salmon pickled and shipped to San Francisco, but at the time of my coming (in 1869) these two varieties were almost extinct. For then, in an entire season of three and one-half months at the most, we caught 4 or 5 cod with our herring, and it is the same now. This is winter fishing, from the middle of November to the 1st of March.

If we then caught 3 or 4 barrels of salmon, that was considered a good catch, and now 30 or 40 salmon is the best we can do. We have a species of salmon averaging about 7 pounds, which come every year in September and run until October, a space of about six weeks; but they are also becoming scarce, although there is still quite a business done with them. Then there is another species called by white people the hump-back salmon, on account of their getting a large hump on the male salmon's back about the time they are ready to spawn. The Indians call them haddo salmon.

There is also the dogfish, which we catch for the oil contained in its