

Monthly Reports on the Fishing in the Neighbourhood of Plymouth.

By

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III.

THE four charts produced in this number, showing as nearly as possible the positions of the various fishing boats in the neighbourhood of Plymouth, are a continuation of the series of charts already introduced in Nos. 3 and 4 of vol. ii. They represent the conditions found during last September, October, November, and December, and complete the year's observations.

September.—The Plymouth area is in this chart shown to be densely covered with fishing craft.

A great line of *mackerel boats* is noticeable stretching along to the east side of the Eddystone. This refers, however, only to the latter part of the month, being most noticeable on the 26th day. The mackerel fishing of the early part of the month was carried on twenty to thirty miles south of the Eddystone, and is therefore not indicated. The small patch of mackerel boats shown five or six miles south of the Eddystone occurred on the 18th night. It is the first indication of the breaking up of the large massed shoals, which is shown more clearly in October and November.

The *whiting boats* were very much scattered throughout the month and difficult to follow.

The *long lining* or bolter fishing shown, took place only in the early part of the month, that shown south of the Eddystone during the first week, that all round the Eddystone on the 12th day. The boats then went along the coast of Cornwall, and at the end of the month were fishing off the Lizard.

October.—The *mackerel fishing* during October was carried on, for the most part, fifteen, twenty, and by some boats thirty miles south of the Eddystone. Towards the end of the month, however, instead of travelling out of all reach as was feared, some shoals struck inshore again. The fishing round the Eddystone shown in the chart for this

month occurred on the 25th night. The *trawling* shown to the south of the Eddystone on the "home ground" occurred on the 10th day. A curious patch of *crabbers* is noticeable two to three miles south of the Mewstone.

November.—The *mackerel* marked in last chart are now shown to have been joined by other shoals. Fishing continued a few miles south of Eddystone during most of the month, but on the 19th the position shown just south of the Mewstone was discovered.

On the 5th the *trawlers* worked over the same ground as the mackerel men, and considerable damage to the drift-nets resulted.

A little long lining, which occurred in the early part of the month, is noticeable inside of the Eddystone, the boats having returned from the west. Towards the end of the month, however, the takes being poor, the lines were transferred to Bolt Head.

Only six *crabbing boats* were at work during this month.

December.—It will be noticed that the *mackerel* have now disappeared from the inshore waters. The boats followed them to the eastward, however, as they receded. On the 10th good takes were obtained twenty miles off Salcombe, and also off Start Point.

In coming to the end of the inshore mackerel fishing for another year, it may be well to glance for a moment at the paper I published in a previous number of this Journal on *The Mackerel Fishing of 1889-90* (vol. ii, No. 1, p. 4). In looking first at the whole season the same general systematic movements can be observed, viz. the appearance of the shoals away off-shore to the eastward of Plymouth, the gradual travelling westward and approach to the shore, the appearance of very large shoals during the height of summer, followed by their division into smaller shoals, which gradually recede during the autumn in the direction from which they came.

That considerable variation takes place as to the exact time when mackerel are found in a definite locality is, of course, to be expected. The causes which influence the natural instinct of the fishes are, no doubt, many. Unfavorable climatic conditions or powerful artificial influences, such as target practice seawards or torpedo and mine firing, may have a direct action on the movements of the fish themselves, or may affect their food so as to cause a similar result.

A continued low or high temperature may retard or accelerate the breeding season, and hence the coming of the fish.

With regard to the fishing seasons of the two years under comparison there seems to be a slight difference in time. In July, 1890, the mackerel began to come close inshore, and during the month of August were taken in considerable quantities in Plymouth Sound. On the 1st of September we read, p. 13, "Mackerel going off into open water. Shoals breaking up."

In July and August of last year (1892), on the other hand, the shoals did not approach the shore, but rather appeared to be leaving the land, so that many fishermen considered the fishing over for the season and took in their drift-nets. In September, however, the usual condition asserted itself, and although the shoals never actually entered Plymouth Sound, yet they were found going through the same general movements in September, October, and November as characterised the fish in August and September of 1890.

To make suggestions as to the causes which produced this result would, in the present state of our knowledge, be mere idle speculation. I desire simply to point out that while the movements of these shoaling fish can be relied upon with tolerable accuracy, one season may be found to be as much as two or three months behind or in advance of another.

With regard to fish which do not move in shoals, it is well-nigh impossible to draw up certain courses, which may be relied upon as indicating their probable movements at any particular period of the year.

The present system of tabulating as nearly as possible the average positions of the boats during each month of the year was commenced by me in January of 1892. By continuing the process during the first few months of this year, it has been possible to compare the conditions found during these months and the early months of last year.

This comparison shows that in studying the movements of the fishes which do not form themselves into shoals, an extreme amount of variation may be present. So much does this appear to be the case that, without observations from a great number of years, it will be impossible to arrive at an accurate mean condition. I do not think it likely, therefore, that a comparison of charts for certain months in different years will be found of any benefit in trying to arrive at a knowledge of the probable movements of fish which do not shoal. At the same time it seems to me to be advisable that, in all localities where target practice seawards is carried on, or where other operations which interfere with fishing may be engaged in, information should continually be collected, so that at any date the positions of the fishing boats, and more specially the small line and crab and lobster boats, could be reported.

In support of this view I gave evidence before the Commission appointed to inquire into Target Practice Seawards, and am pleased to be able to state that in the official return of this Commission, published a short time ago, the suggestion has been advocated, and one of my charts issued as an example.

It seems also possible that a great additional benefit would be obtained, not only to the fishermen but to those firing, if when the

order for practice either from a fort or a gunboat was given, some signal or official notice was displayed in the fishing quarter of the adjoining port or fishing village or villages.







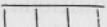
It seems certain that if some notification of this kind were given, fewer fishing boats would be found to interrupt operations by appearing in the line of fire.

With reference to the collection of particulars as to the positions of the boats, the method adopted has been first of all to form a committee of fishermen representing the various branches of the industry, viz. trawlers, drift-net men, &c., and to obtain regular information from them as to where they themselves and the majority of their neighbours were working. Latterly, the collection of this information has been augmented by the efforts of Roach, the fisherman of the Association.

The great advantages to be derived from telegraphic communication with isolated lighthouses and lightships, so ably advocated by a prominent member of the Marine Biological Association, comes most forcibly into view in this connection. Not only could the indications of the movements of shoals of fish be communicated to the fishermen, but the positions of the fishing boats at work on the grounds within a radius of many miles could most readily be ascertained, and communicated to officers of either service controlling gunnery practice in the locality.

The key to the symbols used in the charts is again repeated. In the last numbers the symbol used to represent long-lining was omitted by mistake. Comparatively few boats are now engaged in this industry at Plymouth. The symbol will be found below.

Key to Symbols used in Monthly Fishery Charts.

| | | |
|---|---|------------------------------|
|  | = | position of herring boats. |
|  | = | „ of mackerel boats. |
|  | = | „ of pilchard boats. |
|  | = | „ of trawlers. |
|  | = | „ of whiting boats. |
|  | = | „ of crab and lobster boats. |
|  | = | „ of long line fishing. |

