

APPENDIX TO EVIDENCE TAKEN.

In making inquiries on the subject, the following points were kept in view : What experience have you had? Are the fish scarcer than formerly? Do they vary in different seasons and years? At what time are the fish in full roe? When do they first show roe or milt? Does the date vary in different years? Does the date vary in different places? Where do the fish spawn? Where are young fish first seen? About what date? What are the sizes at the different seasons? Are small fish ever seen with large ones? What nets are used? What is the size of mesh and kind of twine? What is the size of the net? Do the fish make runs or schools? At what seasons? Are they seen going to sea in shoals? Do they enter the harbour in shoals? When are fish in best condition? When do you get (or give) the highest price? When are they out of condition? Are they ever caught at that time? Does the condition depend on spawning? or does it vary with the temperature? Are the fish best in the harbour or the sea? Are there fish in the closed lagoons? Of what quality are they? Is offal from canneries thrown into the harbour? Does it drive away mullet and attract dog-fish? What natural enemies destroy mullet? Have shags increased of late years? What other fish are caught in the harbour? How are they taken? Are tidal nets ever set on the banks? What is your opinion about a close season? For how many months? For which months of the year? Should it be restricted, or apply to the whole harbour?

Wellington, 5th November, 1895.

JAMES HECTOR.

 A P P E N D I X .

ABSTRACT OF CORRESPONDENCE RE MULLET PRIOR TO THIS INVESTIGATION.

Whangarei, 11th June, 1885.

THE fish is full of spawn in the months of December and January. At that season it enters the rivers and over the mangrove flats, no doubt to deposit its spawn, as myriads of the young mullet are seen in the rivers the following season. The fish at that season (December and January) are small and lean, also flabby and insipid in taste, the same as the salmon is in its spawning season, which I mentioned as being similar in my former letter. This time of year the mullet is caught in deep water, when it is in prime condition.

JOHN MUNRO.

Wellington, 18th September, 1885.

The information I possess regarding the kanae agrees with the statement that some spawn in December-January. Towards the end of summer—that is, during March to May—they enter all the large inlets and rivers in the north, and as far south as Porirua and occasionally Wellington Harbour. They are then full of partly-grown roe, and in prime condition, and are supposed to seek fresh water for the purpose of spawning, the well-developed fish returning to the sea on the approach of spring. The young fish hatch out from January to March, and then swarm up the rivers in some cases, and remain for about two years in brackish waters and estuaries until they are adult. As the mullet, like other kinds of fish, is only valuable as food when the roe is growing, to prohibit fishing for a long time before spawning would only put a stop to taking the harvest. The information I have tends to prove that during the months of November to January is the schooling season for the kanae, when the fish congregate in the estuaries and bays preparatory to going out to sea, before the full development of the ovaries. I agree with Mr. Munro in that they are at this time of the year lean and unfit for food; but I do not agree with his statement that they are at that season full of spawn, as it is after the spawning is over that the kanae, like the salmon, becomes insipid, flabby, and unfit for food. On the coast of Australia there are three species of mullet, each having different habits, chiefly as regards the relative proportion of the year they spend in fresh- and sea-water, and it is quite possible that our kanae, which is a fourth species, has some variations in its habits in different localities. Thus, they were certainly caught in Wellington and Porirua Harbours this year in unusual numbers and in prime condition, and full of roe, in the months of May and June. I strongly urge that before the issue of further regulations an effort should be made to get exact information not only respecting the locality of this but also of other species of food-fishes.

JAMES HECTOR.

Whangarei, 27th May, 1886.

You also state that it is alleged by some that they are in the finest condition when full of roe, &c. I beg leave to contradict that allegation. I have it, besides, on the authority of intelligent persons who follow the fishing, that they cease catching them when they are in that state, as the fish are then almost unfit for food. Such an allegation shows entire ignorance of the nature of fish, and would be set forth by persons who caught them as long as they could sell them without considering their quality.

JOHN MUNRO.

Wellington, 10th August, 1886.

The information contained in these papers point to the urgent necessity that exists for declaring a close season for mullet. J. Masefield, fish-preserved, Kaipara, considers the close season should be from the middle of November till the end of March. J. Gardner, fish-preserved, of same place, recommends from middle of November to middle of February. J. Munro, coast-waiter at Whangarei, who has had extensive experience in fisheries, recommends from December until February inclusive. He observes that the mullet in May and June are in the finest condition, being then in deep water; come into shallow water in December to spawn; full of spawn in December and January, then enter the rivers to spawn on the mangrove flats. The harbourmaster at Kaipara says spawn appears in the fish about the beginning of December, spawning over by end of January. During this period fish in good condition, moving about in large shoals. After spawning fish get into low condition, and very little good again until the beginning of March. Recommends close season from 1st December till end of February. Not fit for canning until at least the beginning of March. Dr. Hector says mullet, like other kinds of fish, is only valuable when in roe; to prohibit fishing before spawning would only put a stop to taking the harvest; real cause of mullet getting scarce is the disturbance of the schools during the actual time of spawning. December and January is the schooling season, when the fish congregate in sea estuaries and bays preparatory to going to sea; they are at this time lean and unfit for food. Mr. Pearce, who was the first to commence fish-tinning in New Zealand, says mullet caught in the summer season will not keep preserved in tins, and is at that season unfit for food.

WILLIAM SEED.