The adult lobsters were not examined until 30th October, and it is very probable that the two exceptions had spawned early and had already hatched their brood. Of the other nineteen females, one died and was still carrying about half a batch, ten carried complete batches, four carried half a batch, three carried about a quarter-batch, and one carried only a few hundred well-advanced eggs, and had evidently hatched a large number of larvæ. The first larvæ were hatched on 20th November, and between that date and 27th December 33,000 lobster larvæ were hatched from lobsters that were transferred to the glass tanks. I have before pointed out the harmful effects of frequently handling the egg-bearing lobster, and also the enormous loss of eggs that takes place if kept too long in the small glass tanks (see Report 1908–9). For these two reasons the berried lobsters were not examined until somewhat later in the season than usual, and only those that carried the most advanced eggs were retained in the glass tanks, the others being returned to the ponds, the broods being allowed to hatch there and to find their way out by means of the outlet-valve, which was opened daily. It is therefore impossible to estimate the number that were actually hatched during the season. The majority of the 33,000 were liberated in the harbour as soon as they were hatched, but towards the end of the season a great many were kept in the available tanks, and were liberated in the second, third, and fourth stages. Two adult males and one female have died during the year, leaving the present stock, twenty females and fifteen males. The eggs that became detached from the lobsters whilst in the tanks were carefully siphoned out, cleaned, and placed in Macdonald jars, and by this means a large number of eggs that had been regarded as lost in previous seasons have been successfully hatched. I am unable as yet to state definitely how many of the females have spawned again this season, but the majority of them are seen to move about the ponds with the abdomen bent under, the characteristic attitude of the berried hen, and I think there is every prospect of continued success.

Lobster-rearing.—At the time of the publication of the last report, twelve lobsterlings had been reared to the age of five months, out of 3,000 that were retained in the tanks for this purpose during the 1909 season. As has already been pointed out, the great and practically the only serious obstacle to the successful rearing of young lobsters is their cannibalism. During their first to fourth stages, a period of about twenty-two days, moulting takes place about every five days, and at any time during this period acts of cannibalism can be witnessed. From this time onward casting becomes less frequent, and as a consequence these acts take place at longer intervals, but in the majority of cases the soft, newly moulted lobsterling is attacked and maimed or killed by one or more of the other occupants of the tank. Of the twelve that remained on 30th April only six survived to 7th August, and these had dwindled down to three by the time they were twelve months old, and of these two were in a very dilapidated condition, having during their various moults lost their large claws and almost all their walking-limbs. These two were eaten up by the 20th February, and the sole survivor is now seventeen months old. It is a perfect specimen in every detail, pale blue in colour, and about $2\frac{3}{4}$ in. in length from tip of rostrum to hind edge of "tail."

The rearing experiment was repeated this season, but only 500 larvæ were retained. Of these only one, five months old, remains.

These and other rearing experiments necessarily take up a lot of our time. The tanks must be cleaned out daily, refuse feed siphoned out, fresh feed supplied, &c., and with almost total failure in view from the beginning a casual observer might be tempted to term them a waste of time. Experiments that have been conducted in various marine laboratories to ascertain the rate of growth of young lobsters have proved the extreme difficulty of the problem, and no practical economic results were anticipated in the present case, but I think we have been amply compensated for the expenditure in time and labour in having, at any rate, one living specimen at eighteen months, and in being now in possession of preserved specimens of the first, second, third, and fourth swimming-stages, and of preserved cast shells representing their exact size for practically every month throughout the first eighteen months of their existence. It was never anticipated that their successful acclimatization would be brought about by rearing large numbers to marketable size under artificial conditions, and these experiments have gone to prove that the policy initiated by the Board the first season—namely, planting the young fry as soon as hatched in the waters of the harbour and the open ocean, where they are at once in their natural surroundings—is by far the better plan, and is the scheme that must be continued, and to which we must look for their permanent establishment. Various kinds of crabs, prawns, &c., have been sent to the station as lobsters, but as yet we have received no true specimens. The difficulty of their capture at their present age and small size renders it very improbable that any are likely to be found for some time to come.

Crabs.—I regret to report that the stock of crabs has decreased from five at the time of the last report to two. Both of these are females. One of them spawned a full batch of eggs in the early spring, and hatching took place between the 6th and 11th December, some 3,500,000 fry being produced and liberated. The last male died on 2nd January, 1911, and it is very doubtful if either of these two females will spawn this season. Many of the crabs have died from accidents: two, it will be remembered, were destroyed by an octopus, two others became caught in the valve-screen during the night, and one was injured through climbing out of one of the boxes. No attempt has been made at any time to rear these extremely small larvæ, and some 20,000,000 have been liberated to date, a large proportion being planted off shore. I would strongly recommend that another shipment of these be made as soon as possible, as I do not think that the slightest doubt need be entertained of their early establishment.

Local Fishes.—Every facility has been again placed at our disposal by Mr. F. J. Sullivan, owner of the trawlers "Express" and "Napier," for the study of the habits of local fishes and for the collection of the eggs of local flatfishes. No charge is made for meals, pumping, fish-feed,