

A vast amount of time is being devoted to the study of the lobster, both from a scientific and practical standpoint, in America, Great Britain, and Europe, where the lobster is indigenous. The necessity for this has arisen owing to a diminishing supply, and attempts are being made in several countries to increase the supply by artificial propagation. We are in receipt of a report of some 300 pages on "The Natural History of the American Lobster," by Professor H. Herrick, Ph.D., Sc.D., in which he refers at considerable length to some of the observations made in our report of 1908-9. Professor Herrick, and, in fact, most of the workers in Europe, appear to be quite certain that the American and English lobster spawns only once in two years. Professor Herrick also says in his report, "It is interesting to notice that, while the seasons are reversed in the Southern Hemisphere, the local range of temperature in New Zealand is similar to that at bottom of Vineyard Sound, Massachusetts." The temperature of the water, owing to the effects of the Gulf Stream, around the English coast does not go so low as that of our ponds during the winter, and with the above facts before us it is particularly gratifying to find that in almost all cases spawning has taken place annually, eleven out of fifteen in 1911, nineteen out of twenty-one in 1910, and twenty-three out of twenty-three in 1909 having produced eggs. Many of the females are now seen in the characteristic attitude of the berried hen, and, although we do not usually handle them at this season, one was lifted out on the occasion of Mr. Allport's visit on the 24th April, and found to have a full, healthy bunch of eggs.

*Crabs.*—The stock of English crabs remains the same—only two—both of which are females. One of these spawned in the spring, and the larvæ were hatched between the 14th and 19th December, 1911. The brood was a small one—about one-third the usual size—and the number of larvæ would probably not exceed one million. It was not expected that either would spawn this season, as no cast had been detected, and the last male had died on the 2nd January, 1911.

*Local Fishes.*—The thanks of the Board are again due to Mr. F. J. Sullivan and to the crew of the s.s. "Express" for their kind assistance in granting every facility for collecting the eggs of the flat fishes during the spawning season, and for the opportunity to examine the stomach-contents, ovaries, &c., of all fishes taken by the trawlers throughout the year. The first sole-eggs were collected on the 1st July, 1911, and between this date and the 30th August 4,067,000 eggs of the sole, brill, and turbot were collected. The spawning season of the flat fishes appears to be well defined, the dates between which collections were made during 1910 being the 21st July to the 21st August. Ripe eggs of the turbot (*Ammotretis nudipinnis*), witch (*Caulopsetta scapha*), and kelp-fish (*Cordilodax pullus*) have been secured for the first time, and drawings have been made of the eggs and larvæ during their early development. A stock of fifty-five of the latter, the kelp-fish, has been placed in the wharf-pond for breeding purposes. Considerable progress has been made with the preparation of a volume in which all previous station records are being placed in tabulated form. Tables have also been drawn out showing the number of larvæ of all descriptions which have been liberated each year. Other tables give particulars of the nature and size of the eggs, spawning season, locality, &c., of all fishes and crustacea whose early life-history we have been able to study. The best available plate of each fish has been pasted in the volume, and, where our knowledge permits, drawings of the eggs and larvæ have been added. One or more tabulated pages have been allowed for monthly notes on stomach-contents, ovaries, locality where taken, &c., of each species. The volume greatly facilitates the recording of present and future observations, and presents all past notes in a readily available form. The library has been more than doubled by the temporary addition of a large portion of Mr. G. M. Thomson's private collection of zoological works. Annual reports of the Scotch Fishery Board, the Marine Biological Station at Fort Erin, and a large number of pamphlets have come to hand during the year.

*General.*—Two rooms, a scullery, wash-house, and cellar have been added to the assistant's cottage. The ground has been laid out in paths and lawn, and a substantial breakwind built on the south-west side. The subdivision of the No. 1 pond was completed by the end of June, all the metal and sand for which was conveyed by the station launch. By this means and by employing no outside labour for the cottage alterations and very little for the ponds, a great saving was effected. The rear of the new walls has been soiled and planted in grass and small shrubs. Accommodation is now provided for a more varied and extensive stock of local or introduced fishes. The old wooden tanks have been removed and replaced by three concrete and angle-iron ones, with glass on four sides. They are similar in construction to the other three, and are eminently suitable for the tiny larvæ with which we have to deal. The new 4-horse-power Standard engine in the launch has now been in use for fifteen months, and has given no trouble whatever; in fact, we have not yet found it necessary to use a spanner on it. The launch and boat have been regularly scrubbed and painted, and are in first-class order.

The report of the experiment carried out in the spring of 1911 by Dr. Williamson in regard to the retardation of the development of herring-ova has just come to hand, and, in view of the possibility of an attempt being made this season to transport the eggs to this country, I would like to give a brief outline of the results of this experiment. Dr. Williamson does not state the exact number of eggs with which he commenced his experiments, but as two of the plates contained respectively 2,600 and 2,800, and each box contained four glass plates, we must presume that each box contained about 10,000 eggs. Dr. Williamson gives a plan of an apparatus suitable for the transport of the ova to New Zealand, and this plan shows six boxes; but as in his report he refers to the "box" containing the ova, I think we may safely consider that he started his experiment with about 10,000 eggs on the glass plates. The temperature of the water was gradually reduced from 43° Fahr. until by the twelfth day it was down to 36° Fahr., from which time until the 52nd day it remained fairly uniform between 34.5° and 36° Fahr. The total number of larvæ hatched was 1,499, between the 39th and 51st days. By far the greater number of these were hatched previous to the 48th day, which is, I think, the minimum time necessary for our purpose. Only sixty-seven larvæ were hatched after the 48th day, and only