

oysters for star-fish, dog-whelks, &c., instead of for human beings. The only course to utilize the beds thoroughly will be to lease them as I have stated; the purchaser of the lease having a right to hold a piece of the land opposite his sea-bottom during the term of his oyster lease.

29. *Artificial Cultivation, Basin of Arcachon.*—In France the artificial beds or parcs are of various sizes. One of a M. Mechin, 30 yards in length by 25 yards in width, yielded in two years 50,000 oysters. From the Basin of Arcachon, in 1871-72, 10,022,740 oysters were exported off 1,458 acres of parcs; and in 1875-76, 7,413 acres yielded 196,885,450 oysters. Mr. W. E. Hall, who at the request of the London Board of Trade went over to France to inquire into the reasons of French oyster fisheries being so much better than the English, states that the oyster parcs, as a rule, are under $2\frac{1}{2}$ acres in size, which he considers as too small to pay. For artificial cultivation the natural features and advantages of Port Adventure cannot be surpassed; but as this interesting branch of the subject is beyond the limits of this report, I will reserve it for a future occasion.

30. *Proposed Alterations in the Oyster Fisheries Acts:—*

- (1.) Elasticity in regard to close time, and other provisions.
- (2.) The establishment of a gauge-ring.
- (3.) The appointment of Inspectors of Oyster Fisheries.
- (4.) Provision giving power to make by-laws or regulations under the Act.

(1.) *Suggestions for amending Oyster Fisheries Act.*—All legislation for regulating the conduct of any scientific enterprise should be elastic, so that the regulations may be altered and adjusted to suit the particular necessities of a locality, or a phase of circumstances previously unknown, as experience develops them; any cast-iron rule leads either to positive injury to the industry intended to be fostered, or necessitates a constant change in the Act. Science is ever progressive. The man of to-day blatantly exclaims Eureka; the man of to-morrow blandly explains his predecessor to have been a fool. Mr. W. E. Hall, already alluded to, in his report to the London Board of Trade, writing of the superiority of the oyster fisheries in the Basin of Arcachon over other French fisheries, states that though the orders of the *Réglement* of 1853 have been generally obeyed in all the French oyster fisheries, "no other fishery exists in which the latent powers of the *Réglement* have been applied so consistently or over so long a time as at Arcachon; no other has been so minutely supervised, and in no other have the regulations been so carefully adjusted to the supposed requirements of the beds from year to year." In fact, the superior success of this industry in this particular basin rests on the elasticity of the regulations. As an example of the inadequacy of the provisions of the New Zealand Act to meet the requirements of the position, the 6th clause of "The Oyster Fisheries Act, 1866," fixes the close season, during which the oyster is supposed to be spatting, to be the months of November, December, January, February, and March for both islands. This close season cannot possibly suit the warm climate of the North Island as well as the colder one of Stewart Island. All experience shows that warmth has a marked effect on the spatting of the oyster. In England it has been found impossible to fix any particular months, the difference in the temperature of the water on the two coasts necessitating an alteration in the time. For the Thames, Mr. F. Pennell advises a close time during July, August, and September, stating "each oyster fishery requires its own laws, and should be worked according to its local requirements." Mr. H. G. Austin recommends for Milford Haven the months of June, July, and August to be closed, while he states that upon the west coast of Ireland they breed all the year round, and that in Luce Bay his company had a fair spat one year in November. In reply to the question, "I suppose in advocating a close time you would advocate a different close time at different places?" Mr. Austin answers, "Undoubtedly; one close time would not do for all." Mr. Hart recommends a close time for ordinary oysters from the end of April to the 1st of September, but for deep-sea oysters the close time to be extended to the 1st October. Mr. Burt advises May, June, July, and August as close months, but states that the oysters in shallow water throw off spat sooner than the deep-sea oyster, owing to the greater warmth of the water. Mr. Farrer, the permanent Secretary to the Board of Trade, is of opinion, "If you have a close time it must be done *locally* and not generally, and *must vary* according to the *locality*. I would leave the question of close time entirely to the local authorities." Ireland again requires different treatment, and so on. The Select Parliamentary Committee of 1876, to which I have referred, after recommending a close time for oyster fisheries, adds, "A power should, therefore, in the opinion of your Committee, be intrusted to the Board of Trade, after inquiry, to shorten, vary, or determine this close season in any particular case." In fact, even as regards Stewart Island, the stereotyped close season of the Act of 1866 is, I think, a mistake. The oyster-dredgers are unanimous in the opinion that a close season should begin in October, instead of November, as at present; and should end in the middle of February or beginning of March, instead of at the end of that month. The data on which they found their opinion as regards the first point is the simple fact that nearly all the oysters, amounting to thousands, dredged during October, and sent up to Dunedin last year, were found on arrival to be unfit for use, owing to their being full of spat; in fact, the oysters were in that condition which I have described in section 9 of this report as "brewing spat." As regards opening the season earlier, I may state that on the 20th of February I dredged on the deep-sea oyster bed lying off Halfmoon Bay, the one which is now used by the dredgers, and out of fifteen dozen I examined I could not find one with spat in, the oysters being in splendid condition. I would therefore recommend the close season to be altered as follows: To be closed from the 1st October to the end of February, instead of as at present from November to the end of March, so far as Stewart Island is concerned. I would recommend, therefore, an alteration in the Oyster Fisheries Act, which, while providing that there should be a close season for oyster-dredging, leaves the particular time and locality in which it is to come into operation to the discretion of the Government.

(2.) *Gauge-ring.*—I would recommend the establishment by Act of a size-measure for oysters, known in England as a "gauge-ring," leaving the exact gauge for each locality to be fixed by Proclamation by His Excellency the Governor, according to the information received by the Government. In the evidence before the Parliamentary Committee of 1876, Mr. Buckland is of opinion that