

## OYSTER CULTURE AND FISHERIES.

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The object of this paper is to attract attention to the important subject of oyster farming, as well as to induce thoughtfulness in the minds of the public on the subject of fisheries in general. The excellent natural position of Tasmania as regards climate, its numerous small ports and rivers, the fact of its being an island and a large proportion of its inhabitants likely to become maritime; all these circumstances tend to the conclusion that Tasmania will in the future largely not only consume fish itself, but supply the Australian markets with that most wholesome of food. At the present time we see very little indication of this; not only do we not fish ourselves to any extent worth speaking of, but we permit our neighbours, the Victorians, to do as they like with our fisheries, apparently ignorant of the fact that a precedent is being established, and that there may be difficulties hereafter concerning boundaries such as have confronted the people of Canada and the United States, or of France and England. At present it would certainly remind us of that well-known fable, "The dog in the manger," if we prohibited other colonists from fishing in our water, but the law requires to be explicit, and the imposition of a small tax would preserve existing rights. I am informed that a very fine fish bank exists at a distance of about 30 miles in a south-easterly direction from Cape Pillar, and I am willing to believe that this is only one of many. I feel confident that there are many oyster beds undiscovered; but who would care to waste time in finding a bed, when all the time, trouble, and energy would avail the toiler nothing. If there is one sentiment more grafted in human nature than another, it is the determination not to waste our labour for the benefit of other people; when we do, it is either by accident or we have miscalculated results.

Before proceeding, I beg it to be understood that I claim no originality or special knowledge in being bold enough to discuss the subject of fisheries, and more particularly the oyster fisheries. Others have been before me, and I am only contributing my iota, but I consider it an important one, which should be dealt with by the Legislature. It was my intention, in company with several other gentlemen, to endeavour to revivify one of the now despoiled oyster beds, but as a preliminary made myself acquainted with the protection the law afforded. To my astonishment I discovered that no tenure of an existing "scalp" could be obtained,

though the Government would afford every facility to those who were desirous of making hazardous experiments in uncongenial places. This paper will therefore endeavour to place the Society, and through it the general public, in possession of a few facts in connection with fisheries, but more particularly the oyster fisheries. Most of my information has been taken from *Chambers' Information for the People*, the author of which has done more to cheapen, popularise, and disseminate knowledge than any other man in the world.

#### 1ST. ON THE DESTRUCTION OF OYSTER BEDS.

Exactly as the constant demand for oysters in England has had the effect of impoverishing many of the natural "scalps" (beds), so the demand in Australia (principally Melbourne) has had the effect of impoverishing many of the natural scalps in Tasmania. Any one who has lately visited England will know from experience that the price of oysters in the retail shops is 3s. or 3s. 6d. per dozen, to which amount the price has risen in consequence of the scarcity of the article: the breeding stock on many of the beds having been parted with to satisfy the natural greed of the individual, supplies fell short, and prices rose. In England, Ireland, and France the natural scalps have nearly all been destroyed; the exceptions are those owned by private individuals.

In Tasmania, whenever an oyster bed lies within a municipality, it is under the control of the Municipal Council instead of the Central Government; though why this anomaly should exist it is hard to say. "Municipal Councils may make bye-laws not repugnant to law." *Sic*. But though an oyster bed may belong to a municipality, the law is strict as to the terms on which a scalp may be destroyed. If a man is sufficiently energetic, or is fearful of others depriving him of what he considers his property, he may perform the office for 10s.: under other conditions, the exterminating process may be prolonged for a year or two, and the local or central Government may profit by another 10s. or 20s. One section of the Oyster Fisheries Act says—"Oyster brood, spat, cultch, and small oysters to be returned to place whence taken within six hours, under a penalty not exceeding £10." Can anybody believe that such a law is obeyed? No doubt the oysters are thrown somewhere—but where? And what interest can people possibly have under the existing law in preserving oysters for the public? For 10s. they may remove every oyster from a bed, but if one man does not another will, therefore qualms of conscience will certainly not be allowed to interfere. The following beds were once good natural "scalps," yielding an abundant supply to the local markets, as well as large quantities for export:—Spring Bay, Southport, Oyster

Cove, Port Esperance, Recherche Bay, Cloudy Bay, Little Swanport, Ralph's Bay, Carlton, New Town Bay, Risdon Bay, Prince of Wales Bay, Barnes' Bay. Spring Bay is said by some to have been ruined by a tidal wave which covered the oysters to a depth of 4in. with mud, but if so the oyster exterminators were only forestalled by a few months. Had the bay been in the hands of a company it would have been saved from destruction.

## 2ND. ON OYSTER CULTURE.

After the destruction of the oyster beds or "scalps" in France, the government, with the desirable object of once again establishing a lucrative industry, constructed large artificial beds in various places, for the purpose of teaching oyster-farming on the most approved principles. There are now many of these beds, but the most important are those of Arcachon, Marennes, and the Ile de Ré. The artificial method of gathering the spat was accidentally discovered by M. Bœuf, of the Ile de Ré, who observed young oysters attached to stones on the foreshore of the island. The breeding season being known, fascines are suspended in the channel through which the water washing the "scalp" must pass, and the infant oyster appears delighted to remain near its parents, and clings to anything that comes in its way. The particular plan of catching the spat would, I imagine, depend to a great extent upon the natural peculiarities of the spot; sometimes rough stones are thrown up in the form of walls, and the enclosures are then termed oyster parks. Tiles may be suspended in the same manner as fascines, and drain-pipes, I should think, would answer very well. The bottoms of vessels anchored near oyster beds are sometimes found covered with infant oysters. Oysters, according to age, are named thus:— Infant oysters are those which have not long been spatting; the second year the oyster is known as "brood;" the third year as "ware;" and in the fourth year they are supposed to be full grown: they will, therefore (to re-enumerate them), be the spat or spawn, the infant oyster, the brood, and the ware. After the infant oysters are planted out, they require to be carefully watched and preserved from their enemies, of which the most notable is the star fish; their inanimate enemies are sand, mud, and weed, and in artificial beds a cleansing process is constantly going on by means of rakes or dredges.

An important fact to remember in oyster culture is, that it is essential that young oysters should begin life on a shelly or rocky bottom. In England they are careful to keep the young oysters below low water-mark on account of the frost, but here they would succeed nearly up to high water-mark. Wherever I have seen them on the shores of Australia, they

seemed to me to thrive better between high and low water-marks. Of all the artificial oyster beds in England, the most noted, and the only one of which it is my intention to write, is the Whitstable. To quote from *Chambers* :—"The Whitstable Oyster Company is a well-organised industry of the co-operative kind, the proprietors of the farm being also the labourers who work it, and it is most systematically 'worked,' both during the season and in close time. The company is possessed of a very large stock of oysters, which they purchase as "brood" from wherever it can be obtained. These young oysters are laid down to grow and fatten, and are most carefully tended and watched till they are large enough to be sent to market, it being a rule of the company to wait till they can obtain the highest possible price for their goods. Only a certain quantity is dredged each day, the sales being regulated by the state of the market. Great care is required in breeding oysters; the artificial layings at Whitstable are therefore under constant inspection, the different beds being turned over from time to time in order to the removal of dead or diseased 'natives,'—likewise for the capture and removal of some of the numerous enemies of the mollusc which are always to be found haunting the different beds. About Whitstable and Faversham the oyster grounds occupy a space of nearly twenty-seven square miles; and it has been computed that £160,000 per annum has been paid away as wages to the men connected with the various companies. The Whitstable oyster layings are managed by a jury of twelve men, who are elected by their fellows; and it is an article in the constitution of the company that no member can be elected into it—he must be born in it—so that sons succeed their fathers as workers and shareholders."

The company not only utilises its own spat, but purchases brood as well; perhaps their ground is not naturally adapted for securing the spat, but, whether or not, if the mere fattening of oysters is lucrative, they are wise to avail themselves of it. It would appear, as with sheep-farming so with oyster-farming, one run or bed may be favourable for breeding and another for fattening.

### 3RD. DESIDERATA FOR THE RENOVATION OF EXISTING OYSTER BEDS.

There seem to be many places admirably adapted for the propagation of the oyster, and there are persons ready to risk capital if they can obtain a long lease of one or more oyster beds. The substance of the report of a committee of the House of Assembly is as follows:—"The propagation and preservation of the oyster in the natural beds would receive a stimulus if the oyster beds were sub-divided into convenient lots, and let by public auction for a term of not less than 14

years, and the present system of granting licences abolished; also, that in the event of the discovery of beds hitherto unknown, the discoverer shall have a pre-emptive right of leasing at an average price." The advice contained in this report is clear. The natural beds (if it is desirable that the oyster should not be exterminated) should be leased by auction for a period of 21 years, residence by the lessee, or his agent, being made a guarantee of good faith. A denuded oyster bed thus leased would give no return whatever for four years, therefore I argue that 21 years is not too long a lease. A liberal law is required if it is considered desirable to attract capital; the idea of sub-dividing beds, as recommended by the select committee, is, I think, a mistake. The Whitstable and Faversham oyster grounds occupy a space of 27 square miles, and I think it necessary for the growth of Tasmania that there should be larger undertakings by greater combination of effort. As regards the destruction, now almost compelled, nothing but an alteration in the law will avail, and no proclamation of oyster beds being closed for one or more years will do more than produce a temporary benefit, since the same destroying influence will still be at work. Once the beds are in the hands of private companies or individuals, self-interest will protect them,—at present self-interest is employed in running a race of destruction. In England deep sea oysters are not allowed to be sold between May 14th and August 4th, but the shoal water oysters are protected between May 1st and March 1st. The Tasmanian law makes the close season one month longer, or from October 1st; but no amount of close season will compensate for the absurd practice of letting anybody dredge oysters for 10s. a year. On the other hand a systematic working of the beds would give employment to a far greater number of men than at present earn a livelihood by the trade, and they, like the Whitstable men, might become shareholders, or take shares as part wages. It is likely that there are many deep sea oyster banks; but who would, in the present state of the law, care to find one?

#### 4TH. GENERAL REMARKS.

Although the foregoing remarks apply entirely to oysters, it may not be amiss to make a few observations about fisheries in general. In England fish of all kinds are yearly becoming dearer. Although it may be considered a matter of impossibility to exhaust the fish supplies of the boundless ocean (by those who have never given the matter thought), there is ample evidence that it is not only possible, but probable, that the fish supplies of Great Britain will fall short, though that very fact may save them from complete exhaustion.

As with oyster scalps, so with the haddock shore fishery,

so also with the herring fishery. A commission was appointed to make enquiries as to the possible exhaustion of the fisheries of Great Britain, and their report stated that our "total fish supplies have *not* diminished, and that the fish supply of the United Kingdom admits of further augmentation, the limits of which are not indicated by any evidence we have been able to obtain;" but *Chambers* remarks:—"The Commissioners unfortunately omitted to take into account the enormous augmentation of the machinery of capture. In former times a line containing 800 hooks would, as a rule, catch 800 haddocks, but now a line of 800 hooks does not (as a rule) capture an eighth of that number. The public have been deceived by false reports of the inexhaustibility of our fish supplies, and are at length beginning to find that the increased machinery which has been brought into play for the capture of fish during late years is telling with deadly effect on the shoals.

Here in Tasmania are fisheries none of which except the oyster fishery has been quite ruined. Why should we not learn from experience? No doubt there is some difficulty attached to legislation on the subject, but that is the more reason why we should earnestly consider the matter. It seems to me that any other law than the present one relating to oysters would have had a more beneficial effect; it certainly was next to impossible to have framed one having more disastrous effects. If there had been a larger amount to pay for a licence, men would either not have engaged in the business, or if they had, it would have drawn attention to the profitability of the trade. Had no licence been required, the outside public would have entered into competition with those whose path in life was more connected with the sea, and a sufficient consensus of opinion would soon have forced a sensible law to be framed. But a short residence in Tasmania has given me knowledge of a fact which I was unprepared for, viz., that though laws may be framed, there is not that determination to abide by them which is the grand characteristic of the English nation. People instead of arguing that the laws are unjust, and therefore ought not to be obeyed, should use their influence in getting them altered.

A glaring instance of disregard for the law connected with fisheries I feel justified in mentioning. Constantly during the close season for salmon and trout, one or other, or both, may be seen for sale in Hobart. It is quite possible that fish may be caught by accident, and there may have been no intentional disobedience of the law; but who is to know? The law should in such a case confiscate the fish and impose a fine. The magistrates should have no option.

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