OYSTERS AND OYSTER-CULTURE IN TEXAS.

By I. P. KIBBE, Fish and Oyster Commissioner of Texas.

The subject of oyster culture is an old one, yet its importance demands our earnest consideration. While it has been agitated in Texas for many years, experiments have been limited, though small ones have been made which have proved profitable.

About the year 1890 the Galveston Oyster Company transplanted a large quantity of oysters, removing them from Matagorda Bay to Galveston Bay. It is reported that this effort proved a failure, and that they lost not only the plant but also the spat of that season. The total destruction of this bed has never been satisfactorily explained, though several theories have been advanced—a mud deposit from the Gulf, drainage from the creosote works at Galveston. Another plausible theory is that the bed was maliciously destroyed by persons opposed to the enterprise. The fact that oyster-beds in the same bay, less than 10 miles from this bed, were not injured in any way, points to the latter conclusion.

While this experiment was unsuccessful, it is no proof that oysters can not be cultivated in Texas as well as elsewhere, for it is a fact that they have been profitably cultivated in a small way in this State for more than forty years. These results were obtained by transplanting in the spring into bayous, channels, or coves, which offer a better supply of food than the natural reef or bed. Oysters handled in this way grow much larger, fatten sooner, and bring much better prices in the market.

The Tiger Island Oyster Company, of Port Lavaca, Texas, planted over 4,000 bushels of seed oysters in March, 1897, and in November these oysters were in fine condition. More than one fourth were average-size, marketable oysters, which, if left on the reef, would not have been utilized at any time, as oysters from this reef had not been found in a marketable condition for years. The price of transplanting being less than 15 cents per barrel and the market price of good oysters being from 75 cents to \$1.25 per barrel, a good margin is left for the work of gathering and marketing.

It is claimed by some that oysters will grow in almost any locality and upon any bottom, a collector for the spat being the only essential. While this is true to some extent, my observation does not bear out this theory altogether. Food supply, as well as a limited amount of fresh water, are necessary elements. While they do well on some mud bottoms, on others they die as quickly as on sand. A deposit of foreign soil or mud will often kill out a bed, although a good bed will sometimes be entirely surrounded by a natural mud bottom. I am of the opinion that many failures can be attributed to this cause.

313

4 BULLETIN OF THE UNITED STATES FISH COMMISSION.

In changing oysters from one locality to another, depth and temperature of water should be observed as well as other natural surroundings. If any great change is necessary, it will be found that the young oysters will stand it much better than the grown.

Regarding the best artificial bottoms and collectors, I would say that these depend entirely upon the original bottom. If in deep mud and but little or no current or sea, brush, brush mats, old shoes, and leather can be used. If in current or sea, the mats would have to be anchored and the brush stuck in the bottom as a stake. Upon hard bottom oyster shells are considered the best and cheapest collectors, but will not do in soft mud unless fine shell be used as a foundation. In the planting of oysters, as in other things, the nearer we approach nature the more certainty there is of success.

Owing to the mildness of the climate and long growing seasons in this State, the oyster is very prolific. The spawn being less liable to injury from cold, a good spat for each year is more certain.

Many inquiries are made as to the maturity of a marketable oyster. Under favorable circumstances some mature in three years from the spat, but four years will ordinarily produce a good marketable oyster where favorably located on any part of our coast.

In this State the oyster has but few enemies, the drumfish being the only one dreaded. There are no starfish and but few worms or conchs.

Our present law gives to any citizen of the State the right of locating as much as 50 acres of land covered with water for an oyster-bed. The locator pays a surveying fee of \$10 and a rent of 10 cents per acre for the first five years and 25 cents per acre thereafter. As long as the rent is promptly paid he is amply protected. He is allowed to gather seed oysters from certain reefs for planting without culling.

We have along the coast of our State about forty bays, lakes, and coves. But few if any of these are without a natural oyster-bed. Hence, there is no lack of seed oysters within easy reach of good grounds.

The above facts, with the climatic advantages and over 300 miles of coast, enable Texas to offer inducements in the oyster industry equal if not superior to any other State in the Union.

PORT LAVACA, TEXAS.

314