

SCIENCE

NEW YORK, MARCH 20, 1891.

DRAKE'S REPORT ON THE GEORGIA OYSTER-BEDS.

THE United States Coast and Geodetic Survey has recently published a bulletin (No. 19) containing a report by Ensign J. C. Drake, U.S.N., and assistant United States Coast and Geodetic Survey, on "The Sounds and Estuaries of Georgia with Reference to Oyster-Culture." The author states in his preface that he had but five months for the examination, and but a limited fund at his disposal, and makes no claim for completeness of the work done under those circumstances; nevertheless the results of the examinations appear to have satisfied all the requirements, and the people of Georgia are in possession of the information necessary for wise legislation on the oyster question; and to obtain that was the principal object of the examination.

Mr. Drake reports that he examined all the ground in any way suitable for oyster-growing, the area being some seventy thousand acres. Of this, he finds some thirty thousand acres as suitable for oyster-culture, and some forty thousand acres unsuitable. His decisions in the premises are based upon the character of the bottom and density of the water. He alludes only casually to the number and character of the predatory enemies of the oyster, which is to be regretted; nor does he give much information regarding the oysters found, beyond the fact that they are not "fat," or fit for market, until late in the year. The significant intelligence, however, is that the beds are much depleted from over-fishing.

As the State possesses only some seventeen hundred acres of natural beds, and as these are already much depleted, it is not wonderful that the Legislature desired an investigation, in the first place, and followed it up by passing a liberal law encouraging the cultivation of additional areas; and it is gratifying to learn that under this law some three thousand acres (one-tenth the available area) are already in process of improvement, for, indeed, our oyster-industry is in a sad way, and we must look to the private cultivator for the future supply. Any thing that States can do, investigation accomplish, or enterprise bring about, in this field, will be gladly welcomed by a public which has seen the price of oysters increase from twenty-five cents to fifty cents per bushel in ten years, and the ratio of increase still continuing.

Nearly twenty years ago the Coast Survey began its investigations of the oyster-beds of the country. Count Pourtales was the pioneer. He was followed by Collins and Winslow of the Navy, Bradford of the Survey, and again by Winslow. The United States Fish Commission has added also to the fund of information; and Professors Goode, Ryder, and others have made many valuable reports on the condition of the industry. The Johns Hopkins University has, in connection with the State of Maryland, published the reports and studies of Dr. W. K. Brooks, and no more valuable addition to our knowledge has been made than these reports. The States of Rhode Island, Connecticut, New York, Maryland, and North Carolina have organized commissions and

surveys, and have exhaustively studied the condition of the beds, the fishery, and the general industry of their particular waters.

In the mass of literature that has come into being during the last ten years, it would be naturally expected that some differences should exist as to the condition of the beds and as to the remedy to be applied; but in the main essentials no differences do exist. All the various persons, officials, and bodies, working at different times, in different localities, and without connection, have uniformly reported that the natural oyster-beds were either extinct or fast becoming so, and that the only remedy was to encourage cultivation by private enterprise.

With such unanimity of testimony and advice, it would seem impossible that the remedy should not be applied. Unfortunately such has not been the case. It is true that a few progressive States, such as Connecticut, New York, North Carolina, and Georgia, have started on the right road; but the great oyster areas of the Chesapeake are likely to remain many years uncared for; and, while their beds are being rapidly destroyed, no provision is made to meet the enormous demand which the Chesapeake has heretofore supplied. It is possible that the legislation in North Carolina, which has been in operation several years, may have some effect by encouraging cultivation of the large tract of oyster bottom the State possesses; but, unless such cultivation is now in progress to a very considerable extent, it will not be sufficient to prevent such a falling-off of the supply as to amount to something like an oyster famine in a few years.

It would not be surprising if oysters were soon out of the reach of most people's pockets. If they do become so, we will have the consolation of knowing that we had ample warning, and the gentlemen who have conducted the investigations and made the reports for these many years can have the satisfaction of seeing their prophecies realized. The more reports we have, the better; the more extensive the investigation of the subject, the sooner will a remedy be adopted; and the community has reason to thank the Coast Survey for this last addition to our knowledge, and to congratulate Mr. Drake on his very successful prosecution of a work of so much importance.

HEALTH MATTERS.

Inoculation by Mosquitoes against Yellow-Fever.

DRS. FINLAY and DELGADO of Havana have published some statistics of their practice of inoculating persons newly arrived in Cuba against yellow-fever by means of mosquitoes which have been caused to contaminate themselves by stinging a yellow-fever patient. These observations, according to the *Lancet* of Jan. 31, have been carried on for the last ten years, and, in addition to a certain number which are still incomplete, may be said to consist of fifty-two cases of mosquito inoculation which have been fully followed up. Of these, twelve experienced between the fourth and the twenty-sixth day after inoculation a mild attack of yellow-fever, with or without albuminuria; twelve experienced no symptoms of yellow-fever either within twenty-five days after the inoculation or during three years subsequently; twenty-four experienced no symptoms within twenty-five days, but contracted a mild attack before the end of three years, either uncomplicated by