

*Planting.*—The sacks were slid down a trough-like incline of planks reaching from the car to a scow, on to which the seed was emptied and the loose sacks were dipped into the sea-water and spread over the oysters to protect them from the sun. The scow was then towed by motor-boat at high water to the planting-ground, already staked out at low tide, and the seed scattered by men with shovels (Fig. 1) as the scow was slowly moved back and forth over the bed.

The ground selected is on what has been called the "eastern bed" in the last report, situated south and east of the channel of the Serpentine River where it makes a semicircular curve to pass between eastern and western beds on its way to join with the channel of the Nicomekl River. The area that can be used is upwards of half a mile broad and covered with 8 or 10 feet of water at high spring tide, but exposed for about five hours at the corresponding low tide. The space required for a car-load of seed is a surprisingly small patch, so that there is room for a good deal of selection even within the limits of the eastern bed. There are parts higher and first exposed, somewhat sandy and without eel-grass, and parts that are lower or on which the water lies longer, inclined to be muddy and to some extent covered with eel-grass. The car-load referred to was put down on such a place as the last, where one sinks a little in walking, but it is firm underneath and can hardly be said to ever dry off.

The specific gravity of the water above this bed rarely falls below 1.016 and is generally between this and 1.020. The fresh water of the Serpentine spreads out over the bed at high and falling tide, but when the flats begin to be exposed it comes to be confined to the channel. At rising tide, when the water of the channel begins to overflow, mixed fresh and sea water is brought back over the bed. The fresh water of the Nicomekl is carried off without affecting the bed at falling tide, but some of it may be brought back at rising tide. Ordinarily the water from both rivers is not sufficient to lower the salinity to a greater degree than that mentioned. At times fresh water from the Fraser River is turned by tide and wind into the bay and lowers the S.G. to 1.012, 1.010, and even 1.008. This happened in July of 1913 and 1916, but not in 1914 and 1915.

The temperature of the high-tide water above the bed seldom reaches 15° C. before the first, second, or third week of May. Shallow layers left in hollows on the flats for several hours during low water, river-water coming down a warm valley or channel-water draining off flats, and the shallow edges of tidal water on beaches may attain to this temperature a week or two earlier. A degree of 20° C. in the high-tide water over the bed is touched very rarely—about once in a summer, although 19° C. is attained several times. The great mass of the tidal water is held at 16 to 18° C., but thin layers left stranded and exposed to the sun for hours during falling and rising tide may reach 25°, even 29° C. for an interval.

*Separating.*—After the seed has grown for a year it will be found to be largely composed of bunches of about half a dozen oysters with the hinge ends grown together and stuck in the mud, while the opening ends of the shells point upwards and diverge from one another. It is quite plain that the oysters in a bunch were originally held together by the same piece of cultch, although they may have grown to each other more securely since, and that the upward divergent extension was due especially to an effort on the part of the growing oysters to separate as much as possible and get to free water and food. If left in this state they will continue to grow long and narrow or some of them will die. It is part of the work of the culturist to break these bunches apart into their separate oysters and to distribute the oysters over the beds thinly (Fig. 2), so that each has room to grow in breadth and thickness as well as in length without interfering in feeding, respiration, and excretion. Where the oysters are too thickly planted some of them should be carried to spots where there are few or none. This can be done during the long low-water periods of spring tides.

*Growing.*—The seed grows to good-sized oysters in two or three years from the time of planting, depending upon the size started with and the rate of growth—the latter again being largely due to locality (temperature, salinity, food, etc.), but also to individuality and attention. They do not all grow at the same rate—even oysters lying side by side in equal conditions differ in size and shape. They have their differences of constitution and appetite as well as in other respects. Some weaken or die from hereditary causes, some happen accidents, while others are partly starved or smothered. The death-rate is usually low for the first year, but increases rapidly with the second and third years. There is an advantage in using them as fast as they grow to sufficient size.