THE "SELECT" "BIVALVES "-CHEMISTRY OF THE "FAT" OYSTER.

A^T the meeting last month in New York of the Association for the Advancement of Science, before the chemical section, Prof. Atwater, of Wesleyan University, Conn., who is so well known as a writer on the Chemistry of food, in disussing "The Chemistry of the Floating of Oysters," gave the following :

Not every lover of the oyster knows that the size and plumpness, which are so highly prized in the great American bivalve, and which are so attractive in specimens on the half shell or in the stew as to lead the average man to pay a considerable extra price for extra size, are not entirely natural, and even those who do not know that the majority of oysters in the market are artificially swollen, are not all aware that the process by which this is done is closely analogous to that by which the food in our own bodies is conveyed through the walls of the stomach and other parts of the digestive apparatus, and poured into the blood and lymph to do its work of nourishment.

The following statements are adopt ed from a paper presented to the last meeting of the American Fishenies Association: It is a common practice of oyster dealers, instead of selling the oysters in the condition in which they are taken from the beds in sait water, to first place them for a time, fortyeight hours, more or less, in fresh or brackish water, in order, as the oystermen say, to 'fatten them,' the operation being called 'floating' or 'laying out.' By this process the body of the oyster acquires such a plumpness and rotundity and its bulk and weight are so increased as to materially increase its selling value.

The belief is common among oystermen that this 'fattening' is due to an actual gain of flesh and fat, and that the nutritive value of the oyster is increased. A moment's consideration of the chemistry and physiology of the subject will make it clear, not only that such an increase of tissue substance in so short a time and with such scanty food supply is out of the question, but that the increase of volume and weight of the bodies of the oysters is just what would be expected from the osmose of dialysis which would naturally take place between the contents of the bodies of the oysters as taken from salt water, and the fresh or brackish water in which they are floated.

If we fill a bladder with salt water and then put it into fresh water, the salt water will gradually work its way out through the pores of the bladder, and at the same time the fresh water will enter the bladder; and, further, the fresh water will go in much more rapidly than the salt water goes out. The result will be that the amount of water in the bladder will be increased. It will swell by taking up more water than it loses, while at the same time it loses a portion of the salt. It does this in obedience to a physical law, to which the terms ormose and dialysis are applicd. We should expect the same principle to apply to the oyster.

In the experiments here reported the increase in bulk and weight amounted to from one-eighth to one-fifth of the original amounts. This is about the same as is said to occur in the ordinary practice of floating or 'fattening' for the market. According to this five quarts of oysters, in their natural condition. would take up water enough in floating' to increase their bulk to nearly or quite six quarts. The flavor of oysters is often much improved by the removal of the salts in floating and they are said to bear transporting and to keep better. But when the oyster man takes 'good fat oysters,' which 'yield five quarts of solid meat to the bushel,' and floats them so that they will yield six quarts to the bushel,' he has an extra quart, and that a quart of the largestand highest-priced oysters to sell.