AT A MEETING of the Cosmos club of Washington on Monday, Feb. 1, it was decided to purchase the 'Wilkes' property, on the corner of Madison Place and H Street, a few doors north of the present quarters of the club. The club proposes to build an assembly-room, to be used for receptions and for meetings of scientific societies. The resolution to purchase the property was passed unanimously, and is a move in the right direction. The present quarters are very limited, and, as the club is growing so rapidly, pressing need was felt for more room. The newly acquired property is situated in one of the most desirable localities in the city, and will afford the club many conveniences and comforts hitherto denied them.

AMERICAN FISHERY INTERESTS.

THE fisheries-treaty question, which is now the subject of so much discussion, is a very complicated one; and it is not at all surprising that the secretary of state, following traditionary policy of more than a hundred years' standing, and acting upon the long-established theory that participation in the fishery privileges of Canadian waters is of great value, should have failed to satisfy the expectations of the New England fishermen, who know so well that these privileges have long been valueless. A general impression seems to exist that our fishing-fleet no longer visits the Gulf of St. Lawrence, only because there has been a temporary desertion of those waters by the species of fish which they seek. Such, also, is the idea of the Canadians. In his recent article in the *North American review*, Lord Lorne patronizingly suggests to his 'good friends' across the line that they should not be too hasty in throwing aside the right to fish in English waters, because the fish may before long return in their former abundance.

As a matter of fact, the abundance of fish in the Gulf has very little to do with the question as it now presents itself. Since 1871, when the Washington treaty was negotiated, a complete revolution has taken place, both in the fisheries and the fish trade of the United States; and, strangely enough, this revolution was effected chiefly in the six years which intervened between the completion of this treaty and the meeting in 1877 of the Halifax convention, by which $5,500,000 were awarded to Great Britain as a compensation for a concession to our fishermen, which had ceased to be of value to them, in addition to the remission of duties on Canadian fish, which during the period of fourteen years have amounted to several millions of dollars. Our government has thus, unintentionally of course, been paying each year a large subsidy to the fisheries of British North America, and developing the Canadian fisheries at the expense of our own; and Canadian competition has become so great that our fishermen feel that they have a strong claim upon the government for some kind of protection. The fishermen therefore demand that the duty upon Canadian fish be restored, and that their own privileges shall be based upon the provisions of the treaty of 1818, which will again go into effect, if no new treaty arrangements are made. Our dealers in cured fish, on the other hand, mindful of the profits of handling the product of the Canadian fisheries, are clamorous for a continuance of the present free-trade policy.

The revolution in the American fisheries is so extensive that it can scarcely be discussed in a notice so brief as this. One of the principal changes is the adoption of the purse-seine in the mackerel fishery, by which the fish are caught far out at sea and in immense quantities by enclosing them in an immense bag of netting. Formerly they were taken solely with hooks by the 'chumming' process. This was in the best days of the Gulf of St. Lawrence mackerel fishery, when hundreds of American vessels would frequently lie side by side, throwing overboard vast quantities of oily, mushy bait, by which the schools of fish were enticed within reach. There is no reason to doubt that mackerel were as abundant then as now off our own coast, but the old method of fishing was not so well adapted to our waters. The purse-seine, on the other hand, cannot be used advantageously in the Gulf, nor is there any necessity for our fishermen to go so far from home for their fish. There does not appear to be any probability that our fishermen will ever return to the old methods. 'Chumming mackerel' is essentially a lost art.

Another feature in the revolution is the introduction of improved methods of marketing fresh fish. With the extensive refrigerating establishments now in operation, and the facilities for rapid transmission of sea-fish inland, the demand for salted fish is relatively very much less than it was fifteen years ago. Then, too, the immense competition produced by the free entry of Canadian fish has lowered the price of cured fish, until a very decided depreciation in its

quality has resulted, with a consequent decrease in demand.

The present condition of the sea-fisheries of New England is a deplorable one. Whatever is to be done for their amendment, it is to be hoped that our diplomatists will not suppose that they will profit by the privileges of free fishing in Canadian waters.

ELEMENTARY SCIENCE-TEACHING.

FROM all sides comes the advice to study science. Teach science to children, put it in the kindergarten, double the amount of it at college, and foster it at the universities. The opinion seems to be current, that, by introducing a branch of science on the school curriculum, the magic effect is to be won. To give children objects to handle, to see, to describe, and to puzzle over, is certainly an excellent discipline.

But the far-famed benefits to be derived from science do not centre there, nor is it with the methods of teaching science that fault is to be found. The methods have been carefully worked out: models, diagrams, specimens, excursions,— all are pressed into service; and, though the results of this world-wide scientific movement have been great beyond all expectation, one will readily accept the statement that elementary science-teaching — excepting to elementary learners, children just beginning their school education — is not always gratifying work. To school-children who have already received their formative training, — who have swallowed, perhaps digested to a greater or less extent, the usual doses of book-learning, — whose minds have been set in the rut of an arbitrary bookish study method, the introduction of a science course often brings more pain than pleasure.

A case in point recently came under my notice. At a school for girls, an able and interesting lecturer gave a course in physiology. The lectures were illustrated, and well-directed efforts were made to make things clear. Recently an examination was held, and perhaps it will be worth while sampling some of the more characteristic answers to the questions then asked. The stomach is put 'in the chest,' or 'is covered by a muscular bag called the pericardium,' or 'is mostly on the left side, just south of the heart.' The authority for the last statement also showed an indignant surprise at being told that her heart was nothing but a muscle. Another anatomical fact not yet recognized by the text-books is that 'the scapula has no shape.' 'Capillaries are small particles in the blood,' or 'are depressions in the arteries, and they change the fatty parts into blood.' Some feats of swallowing and digesting are described. 'The food passes from the mouth through the blood to the stomach,' or 'is attracted downwards, and then your Adam's apple slips over it:' 'it passes first to the small, then to the large, intestine.' The surgery is also peculiar. When an artery is partly cut, you are advised 'to cut it open so as to prevent the loss of too much blood,' or 'to cut it entirely so as to allow it to coagulate.' The terms, too, are caught up inexactly and without definite ideas: 'vains,' 'venus,' 'gaul,' 'color-bone,' 'clerical' (for 'cervical'), 'ablutions' (for 'albumen'), 'humerous' (for 'humerus'). By a peculiar association of ideas, the young lady responsible for the last innovation states that this bone is commonly called the 'crazy' bone.

On the whole, the answers were very good. Those given above are purposely selected for their peculiarity. The girls too, with some exceptions (mostly from twelve to sixteen years of age), took great interest in the subject. Nor is the school to blame. The early training of these girls was entirely opposed to these new methods of teaching. It is not the science that is strange to them; but there is a struggle going on in their minds parallel to the battle between the 'new' and the 'old' educationalists in the reviews. This leads to a confusion of thought, a muddled-headedness, which perhaps is the most characteristic feature of the above answers. The whole moral can be summed up in one phrase. It is not in the direction of science-teaching, but of scientific teaching (and that, too, from the cradle onward), that the future of education is to develop.

With the above experience fresh in mind, I came upon a second example of elementary science-teaching, of a most ingenious kind. It is nothing less than an attempt to give to children an account of the physiology of the brain (Frank Bellew, *St. Nicholas*, February, 1886). The 'firm of Big Brain, Little Brain & Co.' tends to the business affairs of the body. The cerebrum is the administrative department. There the head of the firm, old Big Brain, sits at his desk surrounded by papers and all the appliances of a modern business-office. At one side is a telegraph-key to bones; on the other, pigeon-holes and register cases. Below him, on one side, is Little Brain, (the cerebellum), a little elf tending to the machine; on the other, the ganglia, or gang of five clerks on high stools. These put down the accumulated expenses of Big Brain, and do the book-keeping. One of the little band is in the office receiving an order from Big Brain. In the middle is the Bridge (Pons), keeping up a continual clatter of telegraph-keys, transmitting messages from one part of the brain to