

As presented by Professor Williams geology was not a guide to making money or to the collection and labelling of natural objects. It was a method of adjusting one's thinking to great truths. The many students who came under Williams's influence learned to view the world in a new light. Space and time and matter and living organisms took on new meaning, and somehow assumed a spiritual aspect, so that knowledge was not mere acquisition of facts and methods, but a something which ennobled its possessor. Someway also the search for truths untarnished by mercenary or selfish motives tended to dissolve doubts and to land one on a solid foundation. Teaching which produces such results is a man's work.

Williams exerted a large influence through an advanced course in the philosophy of life and organisms—a course sometimes enrolling a dozen, sometimes one hundred or two hundred, as arrangement of the curriculum allowed choice on the part of students. The teachings of this course became campus discussion, and entered into the thinking of graduates, undergraduates and faculty. Its value was so obvious that after Williams returned to Cornell the course was again organized and is now one of the prominent features of the Yale curriculum.

At Yale we remember Professor Williams as a man wholly unselfish, who would not magnify his importance, who would not fight for what might be considered his rights. He was ready to use poorly equipped laboratories and class rooms and to take undesirable hours for teaching in order to advance the work of others. He freely shared his great fund of knowledge and experience and seemed more interested in the success of others than in his own success. Unselfishness and devotion to truth are the traits we remember in Williams. They characterized his personal relations, his teaching and his writing. More than any man of my acquaintance he exemplified the text: "Ye shall know the truth and the truth shall make ye free."

Williams's work lives in his writings and per-

haps even more in his students, but his death is no small loss. Unselfish teachers of truth are rare in any generation.

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### SCIENTIFIC EVENTS

#### AN INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH FOR JAPAN<sup>1</sup>

THE outbreak of the great war in 1914, which at once cut off the import, mainly from Germany, of dyestuffs, drugs and other products of daily necessity, and at one time almost gave rise to a panic in business, was responsible for producing a profound change in the mental attitude of the government officials, the business men, and, in fact, the whole nation towards science. Those who had in vain been preaching the supreme importance of cultivating science with all activity and pleading for public support now saw at once that the right opportunity presented itself, and lost no time in drawing up a definite plan for an institute of physical and chemical research—a plan which, though not ideal, was deemed to be practical and to meet the most urgent need. This, fortunately, obtained the cordial support of some of the most influential and public-spirited of the business men, particularly of Baron Shibusawa, and afterwards also of the government of which Count Okuma was at the time premier.

According to the plan, which was ultimately adopted, a fund of 5,000,000 yen (10 yen = £1) was to be raised by public subscription. Of this sum just about one half has already been promised, and is being paid in, almost wholly by those who have either commercial or industrial concerns in Tokyo and Yokohama. The other half is, with good reason, expected to be contributed within a few years by those in Osaka, Kobe and other large and wealthy cities in the southwestern districts. The plan also included an application for a government subvention, and, in accordance with the bill passed by the Diet in its 1915-16 session, the government is giving the institute a subvention of 2,000,000 yen in ten years, whilst H.M.

<sup>1</sup> From *Nature*.

the Emperor has made a gift of 1,000,000 yen for promoting the object of the institute. The total fund, supposing that the public subscription comes up to the expected sum, would thus amount to 8,000,000 yen, of which about 2,500,000 yen has to be invested in land, buildings and equipment. But since the interest accruing from the fund is calculated to exceed the annual expenditure for the first six or seven, or even more, years, when the activity of the institute can not of necessity be very great, it is expected that at the end of ten years there will be left over a fund of about 6,000,000 yen, which, calculated at 5 per cent. interest, would yield an annual income of 300,000 yen. To this extent, therefore, the institute would be self-supporting, and it is roughly estimated on this basis that the number of staffs of all grades and of mechanics, laboratory boys, etc., would be between 100 and 120 in all. But it is evident that the institute must grow in both size and activity, and that, therefore, the above income would soon be found to be inadequate to meet the necessary expenses demanded by this growth. As the institute grows in activity, however, its importance will be more and more evident, and it is believed that there would then be no great difficulty in obtaining more money.

#### THE DEPLETED HERDS OF ENGLAND, FRANCE AND ITALY

LARGER importations of meat and pork products from the United States, thus lessening the slaughtering of native animals, will be the most effective means of restoring the depleted animal herds of the United Kingdom, France and Italy. This is the information recently received from Dr. Vernon Kellogg, of the United States Food Administration, while in France on official business. Dr. Kellogg declares that the losses in cattle in France and Italy are especially serious, not only on account of the meat and milk ordinarily obtained from this source, but also on account of the loss of the services of cattle, through depletion, which are used as work animals on farms in both countries. He writes:

The most recent statistics on animal herds, indi-

cating the number now existing in allied countries, show a loss of cattle in France of 17 per cent.; in Italy of 14 per cent., with the United Kingdom showing no loss; sheep and goats, France, 41 per cent.; Italy, 1 per cent.; United Kingdom, 10 per cent.; pigs, France, 49 per cent.; Italy, 12.5 per cent.; United Kingdom, 25 per cent.; horses and mules, France, 37.5 per cent.; Italy, 25 per cent.; United Kingdom, not including animals not employed in agriculture, 4.5 per cent.

The losses in cattle in France and Italy are not only serious on account of the meat involved, but are especially serious on account of milk and also of work, as cattle are used largely in both countries as work animals on the farms. It is highly important that the herds be restored as rapidly as possible, which can be done most effectively by larger importations of meat and pork products from America to lessen the slaughtering of native animals.

The French and Belgian people now being released from formerly occupied territories are demanding and needing increased amounts of food over the former relief ration in order to restore health and strength so as to be able to work, thus making larger demands on imports from America.

I have now been in France three weeks, eating in restaurants and hotels of all grades, and I have had butter on the table once and a total of six lumps of sugar. Saccharine is universally used in coffee and tea. The smaller sugar ration is mostly reserved for cooking.

#### THE USE OF NITRATE DURING THE WAR

FACTS concerning the importation and use of nitrate during the war period, hitherto suppressed for military reasons, have been made public by C. H. MacDowell, director of the Chemicals Division of the War Industries Board.

In the fall of 1917 the Congress appropriated \$10,000,000 to be used by the Agricultural Department in importing nitrate of soda to be sold by them to the farmers at cost. This was later made a revolving fund. Under this the War Industries Board procured for the Department of Agriculture some 109,000 long tons of nitrate for shipment from Chile during the winter and spring. Owing to disturbed shipping conditions in the early spring, it was impossible to bring in for February-March arrival the tonnage expected, and with the