

tained in the artesian water and on the effect of the water as it comes direct from the well on trout and other fish, have already been laid before the institute. A committee was appointed to consider the Animals' Protection Act, and to suggest amendments with the view of giving more effective protection to the native fauna of the Dominion. A conference was held with a similar committee appointed by the Canterbury Acclimatization Society, and a number of recommendations were made which received the approval of the council. It is intended to submit the proposals to other institutes for their consideration, and if they meet with approval to bring the matter under the notice of members of parliament and of the minister for internal affairs. It is hoped later to send a party to the Chatham Islands for purposes of scientific investigation.

IN reclaiming the Great Valley of California the removal and control of mining *débris* in the rivers play a very important part. It is estimated that the bed of Yuba River alone contains three hundred million cubic yards of this *débris*. By these deposits the low-water stage of this stream was raised 15 feet at Marysville between 1849 and 1881, and the stream bed near this place is now 13 feet above the level of the surrounding farm land, so that it has been necessary to build large dikes or levees along the river. For four years the United States Geological Survey has been studying this *débris* problem, as it has been called, and in connection with the study a hydraulic laboratory was built at the University of California, Berkeley, Cal., for the experimental investigation of the laws of transportation of sand and gravel by water. This investigation has outgrown the narrow limits of the laboratory, and it is proposed to continue this work on a much larger scale in connection with one of the projects of the United States Reclamation Service. In a preliminary report now in preparation the apparatus and methods employed will be described and the results obtained will be discussed in detail. The results will be expressed by formulas and represented graphically by curves. Relations connecting the

discharge, slope and load will be given for eight sizes of sand and gravel and for artificial and natural mixtures. The experiments include stream transportation, in which the stream bed is sand or gravel—a self-made bed—and flume transportation, in which the bed is wood or metal, as in sluicing. The accuracy and the applicability of the results to practical problems will be discussed and the data that have only an indirect bearing on the *débris* problem will be presented in three appendixes. If means are provided for the use of the larger apparatus and the much larger water supply that will be available in connection with the reclamation project some of the data thus far obtained will be tested and the relations connecting the factors of transportation will be extended so as to make them more directly applicable to problems of stream control and economic sluicing.

UNIVERSITY AND EDUCATIONAL NEWS

COLUMBIA UNIVERSITY has received an anonymous gift of \$350,000 for the erection of a building for the faculty of philosophy, which has charge of the graduate work in philosophy and languages. The university has also received anonymously \$15,000 for work in agricultural education.

A ZOOLOGICAL laboratory is to be erected at the University of Pennsylvania, at a cost of about \$250,000. In making the announcement on university day, Provost Harrison stated that it would be "the most complete biological laboratory yet erected."

By the will of Mrs. Mary A. Richardson, Tufts College receives \$40,000 for fellowships.

AT Columbia University William B. Fite, Ph.B. and Ph.D. (Cornell), professor of mathematics at Cornell University, and H. E. Hawks, A.B. and Ph.D. (Yale), assistant professor of mathematics at Yale University, have been appointed professors of mathematics. George B. Wendell, B.S. (Massachusetts Institute), Ph.D. (Leipzig), professor in the Stevens Institute, has been appointed professor of physics. Charles H. Burnside, of the University of Wisconsin, has been ap-

pointed assistant professor of mathematics. Dr. Charles Lane Poor, professor of astronomy in Columbia University, has been transferred to a chair of celestial mechanics.

At Cambridge University Dr. E. W. Hobson, F.R.S., fellow at Christ's College, has been elected Sadlerian professor of pure mathematics.

DISCUSSION AND CORRESPONDENCE

THE RETROSPECTIVE ANTICIPATIONS OF THE CARNEGIE FOUNDATION

TO THE EDITOR OF SCIENCE: The fourth annual report of the president of the Carnegie Foundation, the most important part of which is published in your issue of February 25, is marked by one feature which seems scarcely less sinister than the breach of faith on the part of the foundation which was discussed in my remarks printed in the same issue.

The rules for the granting of service pensions by the foundation, as promulgated in the first annual report, and as explained in the statements of the president at that time and subsequently, contained no word indicating that these pensions were to be regarded as disability pensions. In the federal charter of the corporation, moreover, as well as in many other expressions of the purpose of the foundation,¹ service, old age and disability pensions have always been specifically distinguished. The first annual report contains, further, the following statement (page 37):

To better the profession of the teacher, and to attract into it increasing numbers of strong men, it is necessary that the retiring allowances should come as a matter of right, not as a charity. No ambitious and independent professor wishes to find himself in the position of accepting a charity or a favor, and the retiring allowance system, simply as a charity, has little to commend it. It would unquestionably relieve here and there distress of a most pathetic sort, but, like all other ill-considered charity, it would work harm in other directions. It is essential, in the opinion of the trustees, that the funds shall be so administered as to appeal to the professor in American and Canadian colleges from the standpoint of a right, not from that of charity, to the end that a teacher shall receive his retiring allowance on exactly the same basis as that upon which he receives his

active salary, as a part of his academic compensation.

These early announcements of the foundation have been generally construed by the profession, in their natural sense, as implying that both service and old-age pensions were to be regarded as a form of deferred salary, earned by the previous service of the recipients, and not presupposing on the part of the recipients either destitution or disability. Acting upon this understanding, some twenty-eight gentlemen,² who were not physically incapacitated, and who apparently made no pretension to being either "pathetic cases" or "geniuses," accepted service pensions.

The trustees of the foundation have now determined to abolish all service pensions as such, and to substitute therefor a system of disability pensions. The new report of President Pritchett accordingly reads back into the past intentions of the foundation its present purpose, and makes it appear that the service pensions were, from the start, designed essentially for disabled teachers. The new report contains the following passage, which should be compared with that just quoted from the first report. The original Rule II. was adopted to make

provision for teachers, who, after long service, have become broken in health, or who, by physical infirmity, such as loss of hearing, are incapacitated for their calling. Among the most pathetic cases in the profession of the teacher, and those most embarrassing to the colleges, have been ones in which teachers have, often after faithful service, broken in health and found themselves with approaching age practically helpless.

The same rule was in a minor degree also intended to provide for "the rare cases which now and then arise when a man of real genius as a scholar might prefer to accept a smaller pension and devote himself exclusively to productive work in science or literature." The president of the foundation quotes verbatim the original service pension rule (which says nothing whatever about disability) and immediately adds the surprising comment, "the second rule thus became a complex one, covering service and disability." (It may be noted

¹ Cf. especially First Report, p. 14.

² Fourth Annual Report, p. 72.