

forty years with eminent skill and fidelity. Its vast development during his term of service has been mainly due to his rare wisdom, his strong convictions, his enterprise and his zeal. Prompt to initiate reforms and fearless yet prudent in pressing them, he has by his constructive energy transformed Harvard College into a great university, and at the same time has exerted an influence on the educational forces of the nation which has largely shaped their policy, so that he stands to-day the leader in his age and generation.

Nor does Harvard alone attest his greatness. His mental precision and unusual capacity for lucid and apt discrimination have enabled him to treat public questions with singular authority and with an unerring instinct for the aspirations and needs of society. He has touched no subject without illuminating it; he has stood firmly for collegiate and civic righteousness; and so sane have been his counsels, so masterly his power of statement, that he not only commands to-day the attention of America, but he is honored by scholars and thinkers throughout the world. He has set an example to all by the simplicity of his life and by his absolute devotion to duty and the public interest. He lays down the cares of office voluntarily at the ripe age of seventy-five while "his eye is not dimmed nor his natural force abated." Indeed his temperament has mellowed with time, and he has grown young with the passing years.

This board, to every member of which association with him has been a privilege, congratulates him warmly on his long and distinguished service, and expresses the sincere hope that blessed with health he may enjoy for years to come the rest which he has richly earned and the honor freely accorded to him by a grateful community.

UNIVERSITY AND EDUCATIONAL NEWS

IN a special report to President Schurman, Director V. A. Moore, of the New York State Veterinary College, asks the board of trustees of Cornell University to petition the New York State Legislature for appropriations amounting to \$375,000 for improvements and additions to the Veterinary College. The following are the appropriations asked for in detail: (1) For maintenance for the college year 1909-10, \$40,000, an increase of \$10,000 over the present appropriation. The maintenance of this college as a teaching institution will soon require at least \$50,000 per

annum. (2) For research, experimental work and extension work, \$10,000. This should be raised, as the work becomes organized, to \$25,000. (3) For clinical buildings and equipment, \$125,000. (4) For farriery, horse-shoeing laboratory, stable for team and wagons, and fence, \$50,000. (5) For the completion of the wing at the north end and the erection of the one at the south end of the main building, as originally planned, \$150,000.

THERE are this year 403 students in the Graduate School of Arts and Sciences of Harvard University, distributed according to the divisions and departments under which their studies chiefly lie, as follows: Semitic, none; ancient languages, 26 (indie philology, none; classics, 26); modern languages, 121 (English, 80; German, 10; romance, 17; comparative, literature, 6; Scandinavian, 1; mixed, 7); history and political science, 75 (history and government, 46; political economy, 27; evenly divided, 2); philosophy, 48 (social ethics, 2); education, 10; fine arts, 6 (history and principles of the fine arts, 3; architecture, 3); music, 3; mathematics, 23; physics, 18; chemistry, 34; engineering, 1; biology, 18 (botany, 7; zoology, 11); geology, 6 (geology and geography, 4; mineralogy and petrography, 2); mining and metallurgy, 1; anthropology, 3. There are three students of the medical sciences and one of comparative philology, and four whose studies are miscellaneous.

DR. C. A. WALDO, professor in Purdue University, has accepted the chair of mathematics at Washington University, St. Louis.

AT Hobart College on the William Smith foundation, Mr. E. H. Eaton has been appointed professor of biology and Mr. F. P. Boswell assistant professor of psychology and mathematics. Mr. Ernest W. Dean has been appointed professor in chemistry.

THE Medico-Chirurgical College of Philadelphia has established a department of pharmaceutical chemistry, of which Dr. George H. Meeker is the dean. Besides the professors and instructors drawn from the other faculties of the college, there have been added to the teaching force Professor F. A. Genth, as professor of mineralogy and assaying, and Pro-

fessor Charles E. Vanderkleed, as professor of pharmaceutical chemistry.

DISCUSSION AND CORRESPONDENCE

AFTONIAN SANDS AND GRAVEL IN WESTERN IOWA

TO THE EDITOR OF SCIENCE: During the past summer investigations made by the writer for the Iowa Geological Survey revealed widespread deposits of Aftonian sands and gravels in the western part of Iowa.

The beds, where undisturbed, in some cases reach a thickness of 35 feet, and furnish fine examples of cross-bedding and interbedding of sands and gravels. They lie unconformably between the Pre-Kansan and Kansan drifts, and were evidently deposited in flooded streams during an interglacial period.

That the climate of this period was comparatively mild is shown by the presence of fossil shells of species of mollusks still living in Iowa, belonging to the genera *Unio*, *Sphaerium*, *Pisidium*, *Valvata*, *Planorbis*, *Ancylus*, etc., and of numerous bones and teeth of extinct herbivorous mammals belonging to the genera *Elephas*, *Mamut*, *Equus*, etc. The latter were found exclusively in the coarse gravels, while the former occurred chiefly in the finer sands.

At a number of points these sands and gravels were plowed and folded, and heaped up to a height of more than 100 feet above the Missouri Valley by the mass of Kansan ice which passed over them and in some cases even displaced the underlying Pre-Kansan.

The discovery is of special interest because these western gravels may now be definitely referred to the Aftonian, and because the fossils present a fauna practically new to that horizon, and throw light upon the climatic conditions which existed during the period of deposition.

B. SHIMEK

STATE UNIVERSITY OF IOWA,
December 14, 1908

SCIENTIFIC BOOKS

National Antarctic Expedition. Vol. IV., Zoology. London, British Museum, 1908. 4°, pp. 6, 279, and 65 plates. (Containing) *Solenogastres*, by H. F. NIERSTRASZ; *Aptera*,

by G. H. CARPENTER; *Schizopoda*, by W. M. TATTERSALL; *Copepoda*, by R. NORRIS WOLFENDEN; *Echinoderma*, by F. JEFFREY BELL; Echinoderm larvæ, by E. W. MACBRIDE and J. C. SIMPSON; *Myzostomida*, by R. RITTER VON STUMMER-FRAUENFELS; *Sipunculida*, by W. F. LANCHESTER; *Actinia*, by J. A. CLUBB; *Tetrazonida*, by R. KIRKPATRICK; and *Calcarea*, by C. F. JENKIN.

Under the supervision of Mr. F. Jeffrey Bell, of the British Museum, another fine volume has been added to the series describing the scientific results of the expedition to the Antarctic under Captain Scott, R.N., and his companions. A brief reference to the subject-matter of the various memoirs is all that our space permits.

A single species of *Proneomenia* was obtained in about latitude of 78° S. This is described by Nierstrasz in great detail, followed by a proposed division of the family Proneomeniidae into a large number of groups, based on the structure of the glands and radula. It may be heterogeneous, and the forms of which it is composed may be related to different members of the Proneomeniidae.

Carpenter reports the presence of a wingless insect belonging to the Collembola in moss from Granite Harbor in 77° S. latitude, though the specimens were in rather imperfect condition. Enough was made out to allow placing it in a new genus, *Gomphiocephalus*, of the Poduridae.

The Schizopod crustacea collected embraced considerably over ten thousand specimens, but of these the vast majority belong to a single species and the total number of species collected is only thirteen. The abundant material of the *Discovery* party enables Mr. Tattersall to combine under Dana's original name four subsequently described species taken from mutations due to age, or variability. Two species are cited as "bipolar" but further investigations of the deep sea may reveal them as cosmopolitan.

Of the Copepods seven proved new, and one new genus, *Paralabidocera*, is proposed by Wolfenden. Of the twenty-eight Antarctic species recognized, two are regarded as "bipolar," though many have Arctic an-